

All metals news

Source: dashboard.fastmarkets.com/m/da10775c-892f-445c-8859-684bd11352cd

Top stories

Al billet premium 'extremely tight,' hits peak

By Orla O'Sullivan - Friday 14 January

The aluminium 6063 extrusion billet premium in the United States rose to an all-time high on Friday January 14 on "extremely tight" domestic supply and with producers paying more under 2022 contracts for additives such as silicon and magnesium.

Fastmarkets' fortnightly assessment of the aluminium 6063 extrusion billet premium, delivered Midwest US was 27-34 cents per lb on Friday, up from 24-28 cents per lb on December 31.

Fastmarkets' price for silicon, ddp US widened down by 25 cents to \$4.50-5.00 per lb on Thursday January 13 from its record high of \$4.75-5.00 per lb the previous week. Despite this decline, the price is still more than four times what it was a year ago.

The silicon increase was felt even more strongly in primary foundry alloy A356.2 (PFA), which also hit an all-time high on January 14. The PFA premium gained 62.50% in its monthly assessment of January 14, compared with billet's 17.31% gain in the two weeks to Friday.

"It's not just the adders," one source said, citing short supply and good demand.

A trader source said he saw more demand for billet than for P1020, which also rose - nearly regaining its peak price - in Friday's assessment.

The aluminium extrusion billet premium is charged on top of that "Midwest Premium" for P1020 material.

"Billet premiums on the West Coast are through the roof," according to the trader source, who had noticed premiums starting to climb in mid-December.

Liberty restarting Georgetown, Peoria rod mills

By Robert England - Friday 14 January

The wire rod mill at Liberty Steel's Georgetown, South Carolina, plant will resume production on Tuesday January 18 after sitting idle since spring 2020, an informed steel industry source told Fastmarkets on Friday January 14.

Further, Liberty Steel has obtained transformers from East Chicago, Illinois, that are being shipped by rail to its wire rod mill in Peoria, Illinois, where they will be installed to power the plant's meltshop, allowing operations to resume there in early February, the source said.

"The transformers should be on site within a week or so. That's the target, and the mill is tracking to that schedule," the source said.

Liberty declared *force majeure* at its Peoria facility on December 6, when the failure of two primary transformers prevented the restart of the meltshop following a maintenance outage.

Liberty's Peoria facility, one of the largest wire rod mills in the United States, has capacity of 700,000 tons of steel per year.

When Liberty Peoria resumes operations, it will ship billet to Liberty's Georgetown mill to be heated and shaped into 10,000 tonnes per month of finished wire rod.

Liberty has been able to provide billet to the Georgetown facility so that it can start wire rod production next week, the source said.

The city of Georgetown had given Liberty a deadline of February 1, 2022, to restart operations at the facility, or the land use would be rezoned from heavy industrial to mixed use for potential tourist attractions on the property, which is adjacent to Georgetown Harbor.

The Georgetown mill previously belonged to ArcelorMittal, which closed it in 2015. [Liberty purchased the mill from ArcelorMittal in 2017](#) and restarted operations in 2018.

Fastmarkets' monthly price assessment for [steel wire rod \(low carbon\) industrial quality, fob mill US](#) was at \$64-69 per hundredweight (\$1,280-1,380 per short ton) on December 21, up by 2.31% from \$63-67 per cwt on November 16 and up by 9.02% from \$59.50-62.50 per cwt on October 19. The next assessment is January 18.

Al PFA premium spikes 63% to all-time high

By Orla O'Sullivan - Friday 14 January

The aluminium primary foundry alloy (PFA) premium in the United States has soared by 62.50% in the monthly assessment, reaching its highest level ever since Fastmarkets began that assessment in August 2015.

The premium rose sharply on reported renewed demand and higher 2022 charges for additives, especially silicon.

Fastmarkets assessed the [aluminium primary foundry alloy silicon 7 ingot /T-bar premium, dlvd dup over P1020A Midwest US](#) at 17-22 cents per lb on Friday January 14, up from 11-13 cents per lb on December 10, 2021, and its first price increase since April 2021.

The PFA premium is charged on top of the US Midwest aluminium premium, which [also rose on Friday](#).

The [aluminium P1020A premium, ddp Midwest US](#) reached 31.50-34.50 cents per lb on Friday, its highest since peaking at 34.75-36.00 cents per lb in October 2021 and just 2.375 cents shy of that record at the midpoint.

PFA sales in 2022 were heard at upward of 20 cents per lb, up from sales at 17 cents per lb at the start of the assessment period, in mid-December.

PFA producers said they have now raised their offers to 28 cents per lb, reporting more demand than they can meet. That's largely due to labor shortages, worsened by the surge of the Omicron variant of Covid-19, they said, echoing [recent remarks by secondary aluminium alloy producers](#).

Higher silicon prices under 2022 contracts are the main factor in the 2022 PFA price increase, however, they said.

That explains why the price for this primary aluminium alloy has risen faster than those for others, such as extrusion billet, for example, one alloy maker

said.

"Billet has far less silicon," he said, with just 0.60% silicon content versus 7% for the A356.2 PFA that Fastmarkets assesses.

The US silicon price **came down from its all-time high** in the latest assessment.

Fastmarkets' price for **silicon, ddp US** widened down by 25 cents to \$4.50-5.00 per lb on Thursday January 13 from its record high of \$4.75-5.00 per lb the previous week. The silicon price had held at that peak since December 16, and even with this decline is more than four times what it was a year ago.

Fastmarkets assessed the silicon price at \$1.10-1.14 per lb on January 14, 2021.

CRC, galv tags slide; buyers waiting it out

By Dom Yanchunas - Friday 14 January

Prices for cold-rolled and galvanized steel sheet in the United States declined for a second week after service centers reported that they are well-stocked and not eager to procure more spot material while pricing continues to fall.

Fastmarkets' weekly price assessment for **steel cold-rolled coil, fob mill US** weakened to \$97.50 per hundredweight (\$1,950 per short ton) on Thursday January 13 from \$98.50 per cwt (\$1,970 per ton) on January 6. The CRC assessment has lost \$2.50 per cwt, or 2.50%, thus far in the new year.

Fastmarkets' price assessment for **steel hot-dipped galvanized coil (cold-rolled base), fob mill US** dropped to \$96 per cwt (\$1,920 per ton) on Thursday from \$97.50 per cwt a week earlier. That price is down \$2 per cwt, or 2.04%, thus far in January.

Inputs were collected in a range of about \$91-109 per cwt for cold roll, with the majority of data below \$100 per cwt. For galvanized base, inputs ranged from about \$90-109 per cwt, with most sources reporting data around \$95 per cwt or below.

Cold roll and galvanized prices "are coming down" toward the "low \$90s," a Great Lakes service center source said.

One mill source said offer prices were still well above \$100 per cwt. Lead times were reported to be approximately four to six weeks.

The galvanized base prices were assessed below CRC for the third straight week after market participants noted that mills produced more coated material and less CRC in the fourth quarter 2021 while the automotive chip shortage was reducing procurement of cold roll.

"It's a basic demand/supply balance," a midwestern distributor said. "With automotive pretty much dead in the water right now, the mills freed up more capacity to devote to galvanized."

It was only a month or two ago that galvanized goods seemed to be in short supply, partly due to continued strong demand in construction, home-appliance and other manufacturing segments. Service centers ordered tonnage wherever they could find it, and those volumes are arriving now, according to market participants. Therefore, distributors mostly feel comfortable with current stocks and are not willing to pay record prices. The midwestern distributor said the higher CRC pricing is bound to be temporary as mills readjust their product-line proportionality.

Spreads between hot-rolled coil and the value-add items continue to be approximately double their normal historic differential. Fastmarkets' daily **steel hot-rolled coil index, fob mill US** was calculated at \$76.04 per cwt (\$1,520.80 per ton) on Thursday. At that level, CRC was \$21.46 per cwt higher than hot roll. The cold-roll-substrate galvanized base was \$19.96 per cwt

above HRC.

Fastmarkets' price assessment for **steel hot-dipped galvanized coil (hot-rolled base), fob mill US** was unchanged \$88 per cwt (\$1,760 per ton) on Thursday. That assessment had plunged by \$8 per cwt, or 8.33%, in the prior week's assessment.

Abby Verret in Seattle contributed to this report.

US mill-, smelter-grade Al scrap prices rise

By Kirstyn Petras - Friday 14 January

Mill-grade aluminium scrap prices rose on Thursday January 13 for the fourth consecutive week due to increases in the Midwest transaction premium and London Metal Exchange price, according to sources.

"Markets are firm based on supply, [slower winter flow] and rising cost," one seller said.

Fastmarkets' assessment of the **aluminium scrap segregated low copper alloy clips 5052, mills specialty consumers' buying price, fob shipping point US** rose to \$1.42-1.45 per lb on Thursday, up from \$1.40-1.42 per lb on January 6.

The price has risen 12.55% since December 16, when it was assessed at \$1.25-1.30 per lb.

The **specialty consumers' buying price for aluminium scrap painted siding, delivered consumer US** similarly rose to \$0.99-1.02 per lb, up from \$0.97-1.00 per lb on January 6.

The assessment of the **specialty consumers' buying price for mixed low copper clips, delivered consumer US** narrowed up to \$1.00-1.03 per lb on Thursday from \$0.99-1.03 per lb the previous week.

Prices for **aluminium scrap segregated low copper alloy clips 3105, mills specialty consumers' buying price, delivered consumer US** were stable at \$1.01-1.04 per lb on Thursday.

As a result of the rising LME price and Midwest transaction premium, one source said, "primary prices have continued to increase as there still is good demand."

Fastmarkets' assessment of the **aluminium P1020A all-in price, delivered Midwest US** rose to \$1.6435-1.661 per lb on January 13 from \$1.6075-1.6275 on January 6. The **aluminium P1020A premium, ddp Midwest US** was 30.50-32.25 cents per lb on Tuesday January 11, unchanged from the previous assessment on January 7.

The London Metal Exchange's three-month aluminium contract also registered increases during the week, closing the official session at \$2,970 per tonne (\$1.35 per lb) on January 13, up from \$2,923.50 per tonne (\$1.33 per lb) on January 6.

Smelter grade aluminum prices also increased week on week, with sources citing export demand, Covid-19 staffing and truck driving shortages, and strong automotive demand.

"On the secondary side consumers are trying to hold the line but I feel they will be unsuccessful and will have to increase prices shortly," a market source.

One buyer said they had been buying at "some higher numbers."

Fastmarkets' assessment for **aluminium scrap mixed low copper clips, delivered Midwest secondary smelters** was rose 2.67% on Thursday to 75-79 cents per lb, up from 73-77 cents per lb on January 6.

The assessment of the **aluminium scrap non-ferrous auto shred (90% Al)**

buying price, delivered to Midwest secondary smelters also rose to 80-84 cents per lb, up from 78-82 cents per lb the week prior. Meanwhile, **zorba 95/3 min, basis delivered US facility** widened upwards to 63-65 cents per lb, from 63-64 cents per lb January 6.

Fastmarkets' assessment of the **aluminium scrap used beverage cans (UBCs), domestic aluminum producer buying price, fob shipping point US** increased for the fifth consecutive week, rising to 95-98 cents per lb January 13, up from 93-95 the week prior. The price has risen 16.27% since December 9.

Some prices were steady week on week; Fastmarkets' assessment for **aluminium-copper radiators, delivered to Midwest secondary smelters** was unchanged at \$2.00-2.10 per lb on Thursday. **High grade** and **mixed grade turnings, clean and dry** were also flat at 69-73 cents per lb and 58-62 cents per lb, respectively.

SECONDARY ALUMINIUM PRICES (cents per lb, delivered to Midwest)		
Secondary Smelters' Scrap*	1/13/2022	01/06/2022
Mixed low-copper clips	75-79	73-77
Mixed high-copper clips	74-77	71-75
Mixed high-zinc clips	65-69	64-68
1-1-3 sows	75-77	73-75
Siding	72-75	71-74
Mixed clips	68-71	66-70
Old sheet	70-73	69-72
Old cast	70-73	68-72
Turnings, clean and dry (high grade)	69-73	69-73
Turnings, clean and dry (mixed grade)	58-62	58-62
Aluminium-copper radiators	200-210	200-210
Non-ferrous auto shred (twitch)	80-84	78-82
Zorba (95/3)	63-65	63-64
Used beverage cans	95-98	93-95
Mills, Specialty Consumers' Scrap*	1/13/2022	01/06/2022
Segregated low-copper alloy clips (5052)	142-145	140-142
Segregated low-copper alloy clips (3105)	101-104	101-104
Mixed low-copper alloy clips	100-103	99-103
Painted siding	99-102	97-100

Source: Fastmarkets

Snap reshuffle at Chiho raises questions about scrap metal giant's future

By Julian Luk - Friday 14 January

The majority shareholder at Chiho Environmental Group - one of the world's biggest scrap metal recycling businesses - has removed most of the company's senior management team, without notice, raising concerns over the future of the Hong Kong-listed company.

Several of Hong Kong-based Chiho Environmental Group's most senior management figures have recently been dismissed by its majority shareholder, billionaire Tu Jianhua, raising concerns among its trading partners, staff and shareholders.

Chiho describes itself as an investment holding company principally engaged in metal recycling businesses, which include Europe-based Scholz Recycling and US recycler Liberty Iron & Steel. Market participants are therefore watching closely to see whether the reshuffle leads to any shifts in strategy by a company that buys and processes large quantities of critical scrap metal.

Rafael Heinrich Suchan, the Chiho chief executive overseeing 200 scrap metal yards via its control of Scholz and Liberty Iron & Metal, was voted out on Friday January 7 at an extraordinary general meeting, according to a regulatory filing.

In the filing, Chiho said it received a request from Tu to "remove" Suchan as CEO due to concerns about the "merit of certain proposed transactions the negotiation of which was led by Suchan." The statement did not provide specific details of these "proposed transactions."

As well, Tom Bird - a well-known figure in the industry and currently president of the Bureau of International Recycling (BIR) - was also dismissed from his position as Chiho's chief trading officer, as was chief operating officer Daniel Huang, Fastmarkets understands.

Bird returned to Chiho in 2021 to take care of the trading divisions of Chiho, which controls Scholz Recycling and Liberty Iron & Metal.

As of January 11, the management staff that had been made redundant had yet to receive any written explanation for their dismissals, they claimed, with one even alleging to have learned indirectly from overseas colleagues about his removal.

Fastmarkets' email requests for comment were sent to Chiho Environmental Group on January 10, January 11 and January 13, specifically about the management changes. Phone calls made on January 13 during Chinese office hours to Loncin Holdings and Chiho were unanswered.

The latest redundancies were preceded by the resignation of Martin Simon as chief financial officer on December 14, which Chiho said in a regulatory filing was because "he was of the view that he was no longer able to exert his influence over the management or decision making of the company."

Still, the company said in the same filing Simon had confirmed he had no disagreement with the Chiho board and there was no matter relating to his resignation that needed to be brought to the attention of its shareholders or to the Stock Exchange of Hong Kong.

Day-to-day operations continue at normal at Chiho but staff are said to be upset and confused by the departure of experienced leaders, sources close to the company told Fastmarkets.

"Scholz is a company with a long tradition that makes a significant contribution to environmental and climate protection through the recovery of metals," Kilian Schwaiger, head of trade & raw material policy at Verein Deutscher Metallhändler (VDM) - the Association of German Metal Merchants - told Fastmarkets.

"The recent events reported in the press have also caused irritation among some local market participants. We will have to wait and see how things develop further," he added.

"We sell things to them into Asia... they are still paying, and invoices come on time. There seems to be no immediate issue," an Asia-based supplier of Chiho said on January 8.

Four people are now listed on the Chiho website as executive board members, including Tu. The three others are chairman Li Linhui, who was appointed on December 13; Yao Jietian, who also joined on the same date; and Miao Yu, who joined the board in December 2020.

Li was vice president and general counsel in Loncin Holdings, an intermediate holding company controlled by the Tu family, and served as an assistant to Tu at Guangxi Liugong Group and Guangxi Liugong Machinery, where he was also general counsel.

He was a director of Loncin Motor Co in 2018-2019 and a director of Shanghai Fenghwa Group from 2017 to 2019; and is currently a managing partner of Guohao Lawyers (Nanning).

Miao is president of USUM Investment Group, which is also chaired by Tu. He was formerly investment and financing director at China General Consulting



and Investment from 2017 to 2019 and was senior vice president of Tensant Securities from 2015 to 2017.

Yao, meanwhile, formerly worked as an investment analyst at USUM Investment Group. He is also on the board of Scholz Recycling.

Swing to H1 profit before owner's businesses seek bankruptcy protection

Prior to the reshuffle, Chiho had swung to a profit of HK\$226.3 million (\$29 million) for the first half of 2021 from a year-earlier loss of HK\$278.7 million, according to its interim earnings report.

Over the first six months in 2021, Chiho sold 2.3 million tonnes of recycled metal products worldwide, of which 85% were ferrous products sold in Europe. Wholly owned subsidiary Scholz is one of the biggest ferrous scrap suppliers in Germany.

The biggest contributor to Chiho's income - accounting for 87% of turnover - is its European businesses run by Scholz Recycling's scrap yards in Germany, Austria and Poland, which mainly handle ferrous scrap.

"In 2021, we were able to reap the fruits from the restructuring efforts and from the transformation that we initiated in the previous year," Suchan said on LinkedIn on January 9. "Our business has improved significantly, reaching record highs in terms of revenue and profitability, while our working capital usage has become much more efficient."

Tu, a self-made billionaire, earned his fortune initially in the sale of automobiles, motorbikes and auto parts in China in the 1980s under the "Loncin" brand.

Seeing enormous potential in the recycling of old motors in the city of Taizhou in Zhejiang province, he acquired a majority share in Chiho in 2015.

After Chinese authorities in 2019 banned the import of category 7 scrap, which includes used motors and insulated cables, many Taizhou-based scrap dismantling operations either closed or relocated to Southeast Asia. Chiho's business in China shrank dramatically.

Like many other privately held businesses in China, Tu's Loncin empire has diversified, expanding into the property and the hotel sector as well as the financial services sector in recent years.

Through Loncin Holdings, Tu holds majority stakes in four listed companies: Loncin Motor and Fenghua, which are listed in Shanghai, and Hanhua and Chiho which are listed in Hong Kong.

But while metals recycling enjoyed renewed attention from funds in the shift of focus to "green" investment opportunities, the Chinese property sector has plunged into crisis caused by overdevelopment, shrinking demand and a crackdown on credit.

Loncin Holdings defaulted on a bond in May last year, saying in a filing to the Shanghai Clearing House (SCH) that it was unable to pay interest of 636

Base metals

Aluminium billet premiums rise; market bullish across the globe

By Alice Mason, Renato Rostás, Orla O'Sullivan, Imogen Dudman, Liz Ng - Friday 14 January

Premiums for aluminium billet continued to rise in the week ended Friday January 14 on high input costs and tight supply, with regions competing to attract units.

million yuan (\$99.9 million) because of a "serious liquidity crunch [due to] changes in macro policy and over-investment."

As of the end of June 2021, Loncin Holdings' total liabilities stood at 34.221 billion yuan, according to an interim report filed to the SCH. Its overdue debt reached 14.6 billion yuan by the end of last year, SCH records also show.

Chinese authorities ordered a freeze in Loncin Holdings' shares in Loncin Motor and Hanhua and a partial freeze on Fenghua shares to protect creditors' rights, according to a regulatory statement on August 31 made to the SCH.

Then late in September last year, Loncin Holdings and 12 of its subsidiaries filed a collective request to the No 5 Intermediate People's Court of Chongqing Municipality for bankruptcy restructuring, indicating that these companies are not able to repay their debts from their existing assets, another regulatory document showed.

The [bankruptcy restructuring request](#) was approved and published on China's National Enterprise Bankruptcy Disclosure Information Disclosure Platform on December 30.

Against this backdrop, Suchan highlighted on LinkedIn the "great challenges" he and his management team faced last year in balancing Tu's needs with those of the company, minority shareholders, financing partners and other stakeholders.

Chiho's share price on the Hong Kong bourse dropped by 14.29% to HK\$0.78 on January 11. This compares with HK\$1.07 at the beginning of 2022. Chiho's 483.3 million shares are publicly floated.

China's steel imports fall by 30% in 2021, but exports rise 25%

By Tianran Zhao - Friday 14 January

China's steel imports decreased substantially in 2021 but exports increased from 2020 levels, according to Chinese customs data released on Friday January 14.

December exports: 5.03 million tonnes, up by 3.6% from [December 2020](#), up by 15.2% from [November 2021](#).

2021 exports: 66.90 million tonnes, up by 24.6% from 2020.

December imports: 1 million tonnes, down by 27.2% year on year, down by 29.7% month on month.

2021 imports: 14.27 million tonnes, down by 29.5% year on year.

Europe

European billet premiums rose due to high energy costs and soaring P1020 premiums.

Fastmarkets assessed the [aluminium 6063 extrusion billet premium, ddp Italy \(Brescia region\)](#) at \$1,500-1,550 per tonne on Friday, up from \$1,470-1,540 per tonne the previous month.

While many billet consumers are well stocked and had settled long-term contract business before the new year, "those who are short on billet and need to buy will have to pay," one European trader said.

Fastmarkets assessed the [aluminium 6063 extrusion billet premium, ddp](#)

North Germany (Ruhr region) at \$1,500-1,550 per tonne on January 14, up by 2% from \$1,470-1,520 per tonne one month prior.

"[High Rotterdam P1020 premiums] have also pushed up value-added products across the board, and while there are offers on primary [aluminium] available, there are a lot of bids coming in too," a second trader said.

Rotterdam premiums have been soaring over the past week. Supply tightened due to previously announced production cuts, and billet producers entered the market looking to obtain cold metal for remelt.

Fastmarkets assessed the **aluminium P1020A premium, in-whs dp Rotterdam** at \$430-460 per tonne on January 14, up by 48.3% from the previous month.

"It waits to be seen how much demand Europe has as it opens back up for business. Currently, customers are happy to take fixed, so there are obviously concerns for premiums to continue their rally. From my side, demand is already strong," the second trader said.

With billet supply tight as a result of high production costs and growing demand for units from the automotive industry, several offers were reported at \$1,600 per tonne and above across the continent, with many participants confident that these levels will be achievable over the coming weeks.

"We are having a strong Q1 and are seeing many more additional spot inquiries for good tonnage levels," one European billet producer told Fastmarkets.

Fastmarkets assessed the aluminium 6063 extrusion billet premium, ddp Spain at \$1,500-1,550 per tonne on January 14, up from \$1,430-1,500 per tonne on December 31, 2021.

Brazil

Despite persistent spot illiquidity, the billet premium in Brazil was up on a fortnightly basis after being flat for more than three months.

Fastmarkets assessed the **aluminium 6063 & 6060 extrusion billet premium, cif Brazilian main ports** at \$700-720 per tonne on Friday, with the range narrowing upward from \$680-720 per tonne on December 31 - a level maintained since October 22.

The lack of activity and overall interest in the spot market had kept the premium stable. Although the quiet continued in the fortnight ended Friday, the majority of offers were issued at \$700 per tonne and above, with all market participants saying anything below that level would be unfeasible.

Customers were reportedly well-stocked under their annual contracts, with some having postponed deliveries from 2021 into 2022.

"Maritime freight is a huge concern at the moment too," a trader source said.

Said a second trader source: "I tried to negotiate better conditions and bring billet from Europe or the Middle East. It turned out the lowest premium I could sell at was \$1,400 [per tonne on a ddp basis] against \$700-800 [per tonne ddp] offers for domestic material in Brazil."

Market participants were also skeptical about the Brazilian economy, expecting activity to slow in the second half of the year amid a presidential election and the World Cup in October-November.

Thailand

Fastmarkets' monthly assessment of the **aluminium 6063 extrusion billet premium, cif Thailand** rose to another record high, at \$465-500 per tonne, from \$465-485 per tonne on December 17.

The premium has been setting records since April, just after the quarterly main Japanese ports (MJP) benchmark premium settled at \$148-149 per tonne, its highest in six years. This boosted the upcharge on billet.

Most buyers reported being offered an upcharge of \$280-300 per tonne on

their aluminium 6063 extrusion billet.

Fastmarkets has settled its **aluminium P1020A (MJP) quarterly premium, cif Japan** in the first quarter of 2022 at \$177 per tonne over the London Metal Exchange cash price.

Sources reported increasing market activity in the second half of December, but that has since died down.

With fresh volumes already secured during annual negotiations, spot trading remains scant.

United States

The billet premium in the US rose to a new all-time high on Friday amid "extremely tight" domestic supply and with producers paying more under 2022 contracts for additives such as silicon and magnesium.

Fastmarkets' assessment of the **aluminium 6063 extrusion billet premium, delivered Midwest US** was 27-34 cents per lb on Friday, up by 17% from 24-28 cents per lb on December 31.

"It's not just the adders," one source said, citing short supply and good demand.

A second source, a trader, said he saw more demand for billet than for P1020. The **aluminium P1020A premium, ddp Midwest US** also rose - nearly regaining its peak price - in Friday's assessment.

The aluminium extrusion billet premium is charged on top of the P1020 Midwest premium.

"Billet premiums on the West Coast are through the roof," said the trader, who had noticed them starting to climb in mid-December.

PFA premiums set record highs in Europe, US on fresh demand, high silicon costs

By Alice Mason, Orla O'Sullivan - Friday 14 January

Aluminium primary foundry alloy (PFA) premiums in Europe and the United States rose on Friday January 14, with the new year bringing fresh demand to the market.

Europe

Fastmarkets assessed the **aluminium primary foundry alloy, silicon 7 ingot premium, ddp Germany** at \$850-900 per tonne on Friday, up from \$750-850 per tonne on December 10.

Participants cited increased demand from the automotive sector into 2022 and higher raw materials costs as the key reason for the increase.

"I think a lot of the automotive companies are gearing up for a better year and are looking to stock up on materials," a consumer said.

Fastmarkets' monthly **aluminium primary foundry alloy, silicon 7 ingot premium, ddp Eastern Europe** was also assessed at \$850-900 per tonne on Friday, up from \$750-850 per tonne on December 10.

"The primary aluminium premiums are going crazy and that for sure is supportive of the PFA premiums, I think its going to be an interesting first quarter for the market as everything about aluminium feels bullish right now," a trader said.

Fastmarkets assessed the **aluminium P1020A premium, in-whs dp Rotterdam** at \$430-460 per tonne on Friday. The premium is already 9.88% higher than where it ended 2021 at \$390-420 per tonne.



High energy costs, smelter cuts and strong demand for primary aluminium continued to push premiums up across Europe.

Fastmarkets assessed its daily aluminium P1020A premium, in-whs dup Rotterdam at \$350-360 per tonne on January 14, up from \$300-320 per tonne the week before, but some offers were even heard as high as \$400 per tonne.

Despite liquidity still being low on a spot basis for PFA, offers were increasingly bullish this pricing session.

Participants said producers with PFA were now offering at close to \$1,000 per tonne; this is in stark contrast to [offers heard at the \\$650-per-tonne level](#) at the end of 2021.

"There is no reason for us to sell below \$900 per tonne, but realistically we hear a lot of offers at \$1,000 per tonne now and even higher," a producer said.

Silicon prices also remain high in Europe, supporting premiums. Fastmarkets assessed silicon grade 4-4-1 99% Si min, in-whs Rotterdam at €5,000-6,500 (\$5,707.50-7,419.75) per tonne on Friday, widening down from €5,500-6,500 per tonne the week before.

Fastmarkets is currently [inviting feedback on its proposal to discontinue the aluminium primary foundry alloy silicon 7 ingot premium, cif dup over P1020A Turkey](#). The consultation is open until Friday February 4.

US premium gains 63% in first move since April 2021

The aluminium primary foundry alloy premium in the United States soared by 62.50% in the monthly assessment, reaching its highest level ever since Fastmarkets began that assessment in August 2015.

The premium rose sharply on reported renewed demand and higher 2022 charges for additives, especially silicon, marking its first price increase since April 2021.

Fastmarkets assessed the aluminium primary foundry alloy silicon 7 ingot /T-bar premium, dlvd dup over P1020A Midwest US at 17-22 cents per lb on January 14, up from 11-13 cents per lb on December 10, 2021, and its first price increase since April 2021.

The PFA premium is charged on top of the US Midwest aluminium premium, which [also rose on Friday](#).

The aluminium P1020A premium, ddp Midwest US reached 31.50-34.50 cents per lb on Friday, its highest since peaking at 34.75-36.00 cents per lb in October 2021 and just 2.375 cents shy of that record at the midpoint.

PFA sales in 2022 were heard at upward of 20 cents per lb, up from sales at 17 cents per lb at the start of the assessment period, in mid-December.

PFA producers said they have now raised their offers to 28 cents per lb, reporting more demand than they can meet. That's largely due to labor shortages, worsened by the surge of the Omicron variant of Covid-19, they said, echoing [recent remarks by secondary aluminium alloy producers](#).

Higher silicon prices under 2022 contracts are the main factor in the 2022 PFA price increase, they said, with 7% of the alloy composed of silicon.

The US silicon price [came down from its all-time high](#) in the latest assessment, but still stands at more than four times what it was a year ago.

Fastmarkets' price for silicon, ddp US widened down by 25 cents to \$4.50-5.00 per lb on Thursday January 13 from its record high of \$4.75-5.00 per lb, where the price had held since December 16. Fastmarkets assessed the silicon price at \$1.10-1.14 per lb on January 14, 2021.

People on the move

By Rijuta Dey Bera - Friday 14 January

A roundup of personnel changes in the metals world.

Alcoa Corp — Renato Bacchi is being promoted to executive vice president and chief strategy officer, effective February 1, and **Kelly Thomas** will join Alcoa on February 14 as executive vice president and chief commercial officer, the Pittsburgh-based aluminium producer announced on Friday January 14. Thomas and Bacchi succeed Alcoa executive vice president and CCO **Tim Reyes** in those roles; Reyes will retire from the company effective February 1. Bacchi, who currently serves as senior vice president of corporate development and treasurer, will oversee global strategy, corporate and business development, energy, non-operated joint ventures and the company's transformation business, which is focused on managing curtailed and closed assets globally, including redevelopment activities. In her new role, Thomas will lead all commercial strategies across Alcoa's global bauxite, alumina and aluminum markets with overall responsibility for sales, procurement, marketing and supply chain.

US Midwest Al premium rises, nears peak

By Orla O'Sullivan - Friday 14 January

The United States' Midwest aluminium premium rose on Friday January 14, almost returning to its all-time high amid growing spot trade concluded at higher levels.

Fastmarkets assessed the aluminium P1020A premium, ddp Midwest US at 31.50-34.50 cents per lb on Friday, up by 5.16% from 30.50-32.25 cents per lb on Tuesday.

The premium peaked at 34.75-36.00 cents per lb in October 2021 - the highest level since Fastmarkets' began assessing the market in January 2003 - and subsequently dipped to 25.50-28.50 cents per lb in the first half of December.

"Replacement costs for the [Midwest premium] are about 33 cents per lb, so it had to go higher," one trader said on Friday.

Many market participants previously indicated the [December levels were unsustainably low](#) before a tug of war between US aluminium market bulls and bears seemed to end in favor of the former.

The consensus is that [domestic supply is tight](#), and many consumers - including some of the largest - are short of their annual P1020 requirements for 2022.

Multiple other aluminium prices and premiums are based on the Midwest premium.

A couple of aluminium premiums charged on top of the Midwest premium also rose on Friday.

The primary foundry alloy silicon 7 ingot /T-bar premium, dlvd dup over P1020A Midwest US, increased by 62.50% in the month to January 14 - [an all-time high](#); and the 6063 aluminium extrusion billet premium, delivered Midwest US, gained by 17.31% in the two weeks to Friday.

Copper TC/RC reaches \$60/6 mark for first time since Oct

By Sally Zhang, Julian Luk - Friday 14 January

Copper concentrates treatment charge/ refining charge reached \$60 per tonne/ 6 cents per lb for the first time in three months.

Spot trading remained minimal, with limited buying appetite from smelters ahead of Lunar New Year. Bids at high \$60s did not materialize.

A tender of Carmen concentrates was assessed at high 40s for first-quarter shipment.

COPPER CONCENTRATE TC INDEX (cif Asia Pacific, \$/tonne)

New price	Previous price	Change	% Change
60	58.7	▲1.3	▲2.21

COPPER CONCENTRATE RC INDEX

(cif Asia Pacific, US cents/lb)

New price	Previous price	Change	% Change
6	5.87	▲0.13	▲2.21

Source: Fastmarkets

Logistics in Kazakhstan of base metals largely resumed normal after disruptions led by protests last week, sources said.

Key coverage this week:

Teck gets strike notice at Highland Valley Copper

Tianjin's mass Covid-19 testing hammers commodity port ops, transport

Saudi Arabia to auction major copper, zinc deposit soon- Reuters

Kamoa-Kakula to produce 290,000-340,000 tonnes of copper in 2022

Taseko says **Gibraltar** mine produced 112mln lb of copper in 2021

Snap reshuffle at Chihio raises questions about scrap metal giant's future



The screenshot shows the 'Copper Concentrate Index Report' page from 20 November 2021. It features a header with the Fastmarkets MB logo and navigation links. Below the header, there is a main content area with several tables and sections of text. One section discusses the impact of COVID-19 testing on Tianjin port operations, mentioning a 10-day shutdown. Another section covers the Kamoa-Kakula copper project's production targets for 2022. The page also includes a sidebar with links to other market reports and a footer with contact information.

Europe, US lithium prices rally on strength in domestic China, nickel sulfate prices track futures market up

By Dalila Ouerghi - Friday 14 January

An overview of the new energy materials markets and their price moves in the week to Friday January 14.

ENERGY TRANSITION RAW MATERIALS - 14/01				
Metal	Date of latest price assessment	Latest price	% change from previous assessment	Rationale
Cadmium				
Cadmium 99.99% min, cif global ports, cents/lb	14/01/2022	130-140	0	The price range for Cadmium min. 99.99% MB free market was unchanged, and interest in the material remains strong in Asia.
Cobalt				
Cobalt standard grade, in-whs Rotterdam, \$/lb	14/01/2022	34-34.40	0	Cobalt metal prices held steady amid thin trading and stable assessments.
Cobalt 99.8% Co min, ex-works China, yuan/tonne	14/01/2022	500,000-515,000	▲ 0.7	Spot prices rose due to higher local future prices and increase in international benchmark metal price. Spot market was active in the second half of the week because buyers feared further price rise and supply shortage due to production pause of some producers.
Cobalt sulfate 20.5% Co basis, exw China, yuan/tonne	14/01/2022	104,000-105,000	▲ 0.5	Prices stabilized at current level. While most sellers insisted on higher offers due to rising production costs, buyers remained cautious and did not accept those high offers.
Cobalt hydroxide index 30% Co min, cif China, \$/lb	14/01/2022	29.71-29.71	▲ 1.4	The cobalt hydroxide index rose week on week amid higher assessments in a quiet market but with firm offers due to tight supply and ongoing logistic delays.
Cobalt hydroxide payable indicator, min 30% Co of China, % payable of Fastmarkets' standard-grade cobalt price (low-end)	14/01/2022	88-90	0	The cobalt hydroxide payable indicator held steady over the pricing session with business reported within the current range and assessments mostly stable.
Graphite				
Graphite flake 94% C, -100 mesh, fob China, \$/tonne	13/01/2022	760	0	The flake fines market remained stable with downstream buyers finishing their procurement activities before China's Lunar New Year holiday, January 31 - February 8.
Graphite spherical 99.95% C, 15 microns, fob China, \$/tonne	13/01/2022	3,100-3,300	0	Spherical graphite prices have been stable since the middle of November with sound demand from the downstream anode sector.
Lithium				
Lithium carbonate 99.5% Li2CO3 min, battery grade, spot price range exw domestic China, yuan/tonne	13/01/2022	330,000-360,000	▲ 9.5	Spot battery-grade lithium carbonate price in China continued to rise amid even tighter spot availability and firm demand from strong LFP battery momentum and consumers' topping up inventories in the year end.
Lithium hydroxide monohydrate 56.5% LiOH H2O min, battery grade, spot price range exw domestic China, yuan/tonne	13/01/2022	265,000-280,000	▲ 11.2	China's battery-grade lithium hydroxide price moved up amid tight availability and rising battery-grade lithium carbonate price.
Lithium carbonate 99.5% Li2CO3 min, battery grade, spot price of China, Japan & Korea, \$/kg	13/01/2022	42-45	0	The seaborne battery-grade lithium carbonate price held steady amid a quiet market, and spot units remained tight.
Lithium hydroxide monohydrate 56.5% LiOH H2O min, battery grade, spot price of China, Japan & Korea, \$/kg	13/01/2022	36-38	0	Seaborne battery-grade lithium hydroxide held steady amid a quiet market while spot units remained thin.
Lithium carbonate 99.5% Li2CO3 min, battery grade, spot price ddp Europe and US, \$/kg	13/01/2022	38-39	▲ 7.1	Battery-grade spot lithium prices jumped week on week in Europe and the United States, tracking ongoing strength in domestic China and the seaborne Asia market.
Lithium hydroxide monohydrate 56.5% LiOH H2O min, battery grade, spot price ddp Europe and US, \$/kg	13/01/2022	36-40	▲ 7.0	Battery-grade spot lithium prices jumped week on week in Europe and the United States, tracking ongoing strength in domestic China and the seaborne Asia market.
Spodumene min 6% Li2O min, cif China, \$/tonne	06/01/2022	2400-2600.00	▲ 8.7	The range moved up in line with higher assessments, with rare spot units available.
Manganese				
Manganese 99.7% electrolytic manganese flake, in-whs Rotterdam, \$/tonne	14/01/2022	7,100-7,400	0	Manganese flake remained flat on thin trading. European sentiment has languished despite production cuts in China.
Manganese ore index 37% Mn, cif Tianjin, \$/mtu	14/01/2022	4.51	0	The market was stable, with large volumes of liquidity reflecting a market currently in balance, with portside prices at an equivalent level to seaborne.
Nickel				
Laterite ore with 1.5% Ni content, cif China, \$/tonne	14/01/2022	81-83	0	1.5% Ni ore price was stable during the pricing session, underpinned by the strong LME nickel price.
Nickel premium, 99.80% purity, briquette, duty free, of Shanghai, \$/tonne	29/12/2021	400-500	▲ 28.6	The spot market has been quiet while the availability of ores has still been low during the rainy season in the Philippines.
Nickel premium, 99.80% purity, briquette, duty free, of Shanghai, \$/tonne	29/12/2021	400-500	▲ 28.6	As the duty-free premiums are mostly secured by long-term contracts, the liquidity in the spot market has still been low.
Nickel sulfate min 21%, max 22.5%, cobalt 10ppm max, exw China, yuan/tonne	14/01/2022	36,000-37,000	▲ 2.8	Long-term contracts negotiation for 2022 is almost over with premiums around \$500-600/t, Fastmarkets heard.
Nickel sulfate price moved up during this pricing session amid a surge in the LME nickel price. Market sentiment turned cautious in response to the higher price, leading to an inactive spot market.				
Soda ash				
Soda ash, natural and synthetic, dense and light, large contracts, delivered Europe, €/tonne	30/12/2021	280-340	0	Soda ash export prices eased back slightly in China as energy issues lessened, and prices in Southeast Asia increased to narrow the gap with the Chinese FOB basis. In Europe, prices remained stable, though anticipation for supply tightness in 2022 continues.
Tellurium				
Tellurium 99.99-99.999% Te min, in-whs Rotterdam, \$/kg	14/01/2022	60-75	0	The price for Tellurium 99.9-99.99% was unchanged in thin trading.
Vanadium				
Vanadium pentoxide 98% V2O5 min, in-whs Rotterdam, \$/lb V2O5	14/01/2022	8,50-9	0	Vanadium pentoxide remains steady now, but trade remains limited with most of the market focused on vanadium alloys, there is potential for the market to go up along with the metal, market sources said.

Yingchi Yang and Sybil Pan in Shanghai; Carrie Shi in Beijing; and Fola Malomo, Cristina Belda Janie Davies and John Stibbs in London contributed to this report.



Electralloy hiking base prices 5-10%

By Thorsten Schier - Friday 14 January

Electralloy will raise base prices on all products by 5-10% effective with non-contract orders beginning on Monday January 17, the stainless and specialty alloys producer said in a letter to customers on Thursday January 13.

All applicable surcharges will remain in effect.

"We are facing very strong inflationary cost increases in all areas of our business, and it is necessary that we adjust our pricing to keep pace with these inflationary drivers," Oil City, Pennsylvania-based Electralloy said. "We are committed to doing our very best to minimize the impact of these increases while maintaining world-class customer service and product quality."

Electralloy serves the aerospace, power generation, nuclear forging, military, automotive, marine, agriculture and chemical markets with specialty alloys.

Sufficient supply, smelters' purchase reluctance takes zinc TCs to highest since Sept 2020

By Ana de Liz, Yiwen Ju - Friday 14 January

The upward trend in zinc treatment charges (TCs) continued in the fortnight to Friday January 14, with several headwinds combining to propel zinc TCs to their highest level in 16 months.

Fastmarkets assessed **zinc spot concentrate TCs, cif China**, at \$90-120 per tonne on Friday January 14, up by \$12-20 per tonne from \$78-100 per tonne on December 31.

A trader in Europe noted "a distinct lack of interest in zinc concentrates", due mainly to smelters in China having ample sufficient stocks to keep their operations running until at least the Lunar New Year holidays at the end of the month and the negative arbitrage affecting imports.

"[Smelters in China] also expect **lower production from Europe's smelters** and the expectation is for the availability to rise, so they are not anticipating any purchasing," a second trader in Europe said.

Market sources in China pointed out that smelters could start to buy materials for March-April following the Lunar New Year holiday, although the lingering import losses could still keep them side-lined from seaborne market.

"I'm not buying until at least after Lunar New Year, and if the arb[itrage] terms are still not favorable then I'll just turn to domestic market," a producer source noted.

The gap between seaborne and domestic was in a range of 1,500-1,800 yuan (\$236-284) per tonne, Fastmarkets heard this week.

The approaching holiday, together with thinner byproduct gains from sulphuric acid, has led to some smelters to anticipate their maintenance period, and also contributed to the lack of spot interest.

Amid low liquidity, particularly on the purchasing side, a number of bids and offers were heard, primarily above \$100 per tonne, with the \$90-100 per tonne range reserved for the best material, such as that from Antamina in Peru.

"If offers can reach the \$100-per-tonne level, I think the actual transactions can only be higher than this. Regardless of this, smelters' buying appetite

remains low," a trader in north China said.

Meanwhile, "there has also been a trend of traders trying to push higher [TC] levels for tonnages that were not received last year from miners who could not produce as much," one source on Latin America pointed out, something which also contributed to the uptick in trader purchasing levels.

Whither base metal markets in 2022?

By Myra Pinkham - Friday 14 January

As a new year begins, the global Covid-19 pandemic, China's economic policies and global geopolitics continue to make the task of base metal market forecasters tough. Myra Pinkham asked experts to review the past certainties of 2021 and consider the uncertainties of 2022 and to give their views on the outlook.



Base metals could be facing something of a tug of war in 2022, with the big question being how much the positive impact on demand from the green energy transition will compensate for certain other more moderating factors. This comes after what many industry observers describe as a very positive year – even an exceptional year – in 2021, marked by multi-year and even in some cases record high prices.

But that is certainly not to say that the base metals markets did not also face some challenges last year, Andrew Cole, principal metals analyst for Fastmarkets MB, said, including some that were at least partly responsible for those high prices.

Gregory Shearer, head of metal research at JP Morgan, agreed, noting that due to a combination of supply disruptions and logistics and supply-chain issues, inventories were very tight, and supply struggled to catch up to what he described as very robust post-recessionary base-metal demand growth.

Another contributor was soaring energy prices, which were a double-edged sword. Cole said that those prices were positive for companies that have been able to avoid them, including companies that use low-cost alternative energy, such as hydropower, to produce their metal, but that other producers have been hurt by the high energy prices, with aluminium producers dependent on fossil fuels suffering the most from the high energy costs, resulting in the idling of some smelters.

"The base metals market entered 2021 on an upbeat note, with prices showing a lot of upward momentum that had carried through the year," John Mothersole, director of IHS Markit's pricing and purchasing service, observed. According to Christian Georges, head of metal and mining equity research for Société Générale, that occurred since it had become apparent that the downturn in 2020 related to the Covid-19 pandemic was different from what the market went through during the global financial crisis.

"It was actually surprisingly strong," Matt Aboud, senior vice president for



strategy and business development for Century Aluminum, declared, given all the uncertainty about what impact spikes in Covid cases would have. "While people had expected it to be a recovery year, they thought that demand would remain below pre-pandemic levels. But they were proven wrong," he said. "Even with its headwinds, 2021 was a very powerful year – truly a V-shaped recovery."

That was especially the case in the first half of the year, helped by monetary and fiscal stimulus spending around the globe, which resulted in high demand for most base metals, said Ryan McKay, a commodities strategist for TD Securities, who noted that even though in the second half of last year there was a little cooling of demand, base metal prices continued to stay fairly strong, and in some cases continued to go higher because of an extremely disrupted supply chain.

Copper's high

Copper, a flagship of the base metals complex, recorded an all-time record high price of nearly \$10,500 per tonne on the London Metal Exchange in May, and the other base metals experienced multi-year highs, including aluminium, which exceeded \$3,000 per tonne. Mothersole noted that while they have come back down a little since mid-year, most base prices are still at 10-year highs.

While the details vary by metal, Cole said that most base metal prices have been taking two steps forward and one back for most of 2021 and that he is somewhat bullish that the general uptrends will continue into this year, albeit with a bit of volatility as certain macroeconomic and geopolitical uncertainties play out.

And there is also the looming question of whether base metals, as well as some other commodities, are heading for another supercycle. While their forward curves started to adjust in 2021 and are looking more like they did in 2000-2018, Michael Haigh, head of commodities research and strategy for Société Générale, said it is still a bit early to say if they are entering another supercycle. "But of all the commodities, it seems that base metals would be most likely to do so," he said.

As usual, the base metals story over 2021 and into this year has been largely about China, which, Mothersole pointed out, is not surprising given that China is responsible for about 50% of consumption or production for most base metals. He noted that while the biggest impact is how the Chinese economy is performing, it has also been an export engine that has been relied on by the rest of the world to help global economies to get through the pandemic by being a reliable supply base. "But recently that has been changing," Mothersole noted, with the Chinese mandates to reduce electricity use impacting a range of heavy industries, including base metals.

Shearer said that in 2021 the star performer in the base metals complex had been nickel, which had seen close to 16% year-on-year demand growth due to both the surprising strength in Chinese stainless steel production and emerging battery demand.

Geordie Wilkes, head of research for Sucden Financial, pointed out that due to some of the new battery technologies being developed, and given that the conversion process from low-grade nickel is so energy intensive, there is a shortage of the Class 1 nickel that is used in electric vehicle and energy storage batteries. He also noted that Chinese nickel ore inventories have been drawing down to the point that there is a need for additional nickel pig iron to produce some of these products. "But there have been several Chinese investments in Indonesia to address that," he also pointed out.

Meanwhile, global copper demand growth was less steep last year – but still a healthy number of about 8.8% according to Cole, who noted that while it is not as affected by energy shortages as some other base metals, copper is very sensitive to China's economy and Chinese industrial production and that construction-sector growth peaked in the first quarter of 2021 and has slowed since then.

Carlos Risopatron, director of economics and environment for the International Copper Study Group (ICSG) pointed out that, in addition to its supply-demand dynamics, one reason for the high copper price peak was

speculative activity and that with copper prices going so high so fast, it actually had a somewhat moderating effect upon demand, with some fabricators slowing down their use of refined copper toward the end of the year, and instead using more copper scrap.

But while copper's price has eased from its highs, with some investors rotating out of copper into such other base metals as aluminium, zinc and nickel, Cole noted that copper prices had been oscillating sideways, refusing to go below \$9,000 before they spiked to about \$9,500 per tonne in mid-December on the news that, due to logistics issues, MMG was suspending copper production at its Las Bambas copper mine in Peru (now restored). Mothersole pointed out that even prior to that announcement, concerns about Chilean and Peruvian production, given geopolitical uncertainties in those two countries, had been a contributing factor to the recent strength in copper prices.

Overall, however, after slow growth over the past several years, Risopatron said that global copper mine production was up 2.1% in 2021. Also, according to Shearer, due to a "slew" of projects that were green-lighted in 2017-18, there could be another 3% growth in 2022 and 5% growth in 2023.

Risopatron said that there has also been a push for additional copper foil capacity to meet its growing demand in batteries for electric vehicles. To date, most of that growth has been in China, although there are plans for new capacity to be built elsewhere as well over the next three to four years.

Aluminium deficit

Despite the headwinds affecting the global automotive market, demand for aluminium rebounded by about 9% last year, according to Shearer, who said that aluminium has been the most transformational base metal on the supply side, with China starkly reversing earlier moves to increase production in the third quarter of 2021 due to its policies to limit energy consumption.

Wilkes said this came amid unprecedented struggles with electrical power there. He noted that in Yunnan province, where smelters are largely hydropowered, there had been drought conditions last year, which resulted in power rationing. Meanwhile flooding in other regions of China caused coal, and therefore electricity, prices to spike, affecting smelter profitability. "With that, as well as the rationing of electricity and emission controls in China, a lot of aluminium smelter capacity was taken offline, resulting in about a 390,000-tonne aluminium deficit in 2021," Wilkes said, adding that it could grow quite significantly globally this year – possibly surpassing 1 million tonnes.

That deficit is also the result of strength on the demand side, Aboud said, including pent up demand from the lockdowns in 2020, the huge influx of stimulus worldwide, consumers spending from savings and from businesses repairing their balance sheets and finding money to make capital improvements.

The push for electrification is another contributing factor, Shearer said, observing that while light-vehicle production is down year on year, automakers are prioritizing the use of the microchips that they do have available (given last year's shortage) to produce battery electric (BEV) and higher end vehicles, both of which are more aluminium intensive than more "run of the mill" internal combustion engine (ICE) models. Shearer also noted that BEVs have about 1.5 times more aluminium, as well as about four times more copper, than ICE vehicles.

While there is some give and take, given that there are a lot of aluminium castings in engines, Aboud said that aluminium is a winning material for electric vehicles, as it is lightweight and therefore helpful to increase an electric vehicle's range. Like copper, it is also used in the cables for EV charging infrastructure. While they are gaining market traction, McKay pointed out that EVs still account for a small share of the total auto fleet and that they are, therefore, not a table turner yet for aluminium and other base metal demand. Nevertheless, Georges said that by the second half of 2021 all the rhetoric about the energy transition and electrification was supportive of such base metals as copper and aluminium, especially with China becoming more willing to commit to the energy transition.



Shearer said that there has already been an acceleration in the energy transition that will continue through the next decade and propel base metal demand, noting that in 2022 it will contribute to about 40% of the anticipated copper demand growth. But he said that through 2025 this green demand will just largely function as an offset to the slowing of traditional Chinese demand.

Cole said that zinc was the base metal price that struggled the most in 2021 – at least until it jumped up in October when energy shortages impacted its production, given that it is the second most energy-intensive base metal to produce behind aluminium. Joao Jorge, director of market research and statistics for the International Lead and Zinc Study Group (ILZSG), partly attributed its weakness earlier in the year to slower Chinese economic growth, particularly in its construction and real estate sectors, and especially given that China accounts for more than 50% of zinc's production and consumption. But he noted that in the first half, that weakness was countered by increased global auto demand, albeit that was compared to the first half of 2020 when many auto plants were in lockdown.

Jorge noted that with the huge increase of secondary lead smelter production capacity coming online over the last few years, China is well supplied with lead, although it is tighter elsewhere, with the US, for example, reliant on lead imports.

Trends for 2022

In general, the trends seen for base metals last year should continue at least through early 2022, Cole said, predicting that this year will be another one of strong economic growth, which, in turn, should continue to drive base metal demand. But he said it is not clear-cut what this "bullish backdrop" will actually mean for prices, given that at the same time central banks starting to taper their monetary policies, the Chinese economy is starting to slow and there are certain geopolitical issues, the macroeconomic picture is rather mixed. "We are bullish, but not so super bullish that we will see higher prices given that there are risks on the horizon outside of supply-demand fundamentals that could change things," he said.

Some other industry observers, such as Mothersole, are actually predicting a price correction for the base metals complex this year, but, "it isn't that we expect prices to collapse anywhere like they did during the first half of 2020," he said.

Georges said that while mining profits might decline in 2022, that is only because in 2021 they had been so exceptional. "It won't be a bad year," he said.

Shearer said it is also possible that the dynamics will vary half-by-half, given that the current low inventory position is likely to continue to be supportive during the first half. But what happens beyond that will depend upon China. "We are expecting Chinese GDP growth to be only about 4.7% in 2022, and we aren't expecting to see a broad-based turnaround from the tightening of China's real estate policies." Because of this, he said, Chinese copper and aluminium demand growth is likely to only be about 1% in 2022.

The outlook also depends on supply, and McKay said that the current attractive prices and other factors, including a waning of Covid-19 issues, should, on net, result in greater supply with a lot of smelter capacity that was idled during the pandemic, particularly for aluminium but also for copper and zinc – other than the capacity that has been constrained by high-energy costs – coming back online. He forecasts that aluminium production capacity will increase by about 4.5% in 2022 and that copper and zinc capacity will be up by 3-3.5%, while nickel will be up about 7%.

Georges said that, near term, with the high energy costs, there could be some further idling of smelter capacity beyond such moves as have recently been seen at some European zinc smelters. "But one big question for 2022 will be the tug of war between the slowing growth environment in China and the emerging energy transition," Shearer said.

Cole agreed, saying that the impact of the energy transition upon base metals is hard to quantify. He said that while at the moment the biggest impact has been on sentiment, there are some base metals – particularly

nickel, copper and aluminium – that are already very exposed to this green revolution, especially with the support it is receiving from certain governmental policies, prompting more investments in EVs and new battery technologies.

Jorge said that lead demand could eventually be affected by the push for more EVs, but that the impact will be moderated by the fact that the replacement-battery market is more important than that for new auto battery units, that EVs still use lead auxiliary batteries, and that the energy storage systems needed for intermittent sources of renewable energy, such as wind and solar power, still often need to utilize lead batteries.

"Any real change relating to this green transition is still a few years down the road," Cole said, especially given that the current high inflation could slow the rate of transition because the raw materials needed to keep pace with some of the governmental targets might not be readily available due to supply-chain issues.

"The decarbonization push is here, and it will continue," Aboud said, noting that in addition to changes in the energy mix, it could be accomplished by finding ways with a lower carbon footprint to produce raw materials. For aluminium, this includes new technologies under development, such as inert-anode carbon-free electrolysis and carbon capture. He noted that Century Aluminum and certain other producers have pilot projects to enable carbon capture at aluminium smelter sites.

Overall, it is expected that there will be a better balance of supply and demand in the base metals market in 2022, barring any unexpected events. "If there is any wobble in the market – either because of Covid or another demand disruption – that could affect speculative interest," Haigh admitted. "But given that the underlying fundamentals are so robust, I don't think there will be a large downward adjustment or that prices will stay down for very long."

Base metals annual supply-demand balance and price forecasts (kt, \$/t)		
	2021	2022
Aluminium		
Supply	67,026	69,003
Demand	67,850	70,441
Balance	-825	-1,438
Balance as % of market	-1.2%	-2.0%
Price	2,468	2,813
Copper		
Supply	25,043	26,327
Demand	25,613	26,782
Balance	-571	-455
Balance as % of market	-2.2%	-1.7%
Price	9,319	10,202
Lead		
Supply	12,492	12,507
Demand	12,341	12,563
Balance	151	-56
Balance as % of market	1.2%	-0.4%
Price	2,193	2,293
Nickel		
Supply	2,591	2,927
Demand	2,758	2,984
Balance	-166	-57
Balance as % of market	-6.0%	-1.9%
Price	18,414	21,451
Tin		
Supply	413	423
Demand	425	428
Balance	-13	-5
Balance as % of market	-3.0%	-1.2%
Price	32,573	39,274
Zinc		
Supply	13,975	14,293
Demand	14,092	14,423
Balance	-117	-130
Balance as % of market	-0.8%	-0.9%
Price	2,998	3,173

Source: Fastmarkets

This article was first published in the January 2022 issue of the Metal Market Magazine

Saudi Arabia to auction major copper, zinc deposit soon, Reuters reports

By Julian Luk - Friday 14 January

Saudi Arabia intends to auction three mining licenses for its mineral deposits, including the major copper-zinc deposit of Khnaiguiyah, in the next few months, according to a report by news agency Reuters.

The bidding process for the copper and zinc deposit, believed to contain 26 million tonnes, could start by the end of this quarter, or early in the second quarter, the kingdom's mining minister, Bandar Al Khorayef, told Reuters on Wednesday January 12.

The bidding process will take around six months, the official said on the sidelines of a mining conference in Riyadh.

Exploration and production from Khnaiguiyah would add to the supplies of copper concentrate from the Middle Eastern country.

Canada-based Barrick Gold is one of the few foreign companies that could mine copper in Saudi Arabia, and has a 50% stake in the Jabal Sayid project.

In June 2020, Saudi Arabia passed a new mining law to shorten the approval process for foreign mining investment in an attempt to diversify away from a reliance on oil revenues.

SHFE nickel price reaches new all-time high on possible short squeeze

By Yingchi Yang - Friday 14 January

The price of nickel on the Shanghai Futures Exchange (SHFE) shot up during trading on Friday January 14 and closed at a new all-time high amid a potential short squeeze on the exchange's nickel contract, underpinned by bullish downstream market dynamics.

The active rolling nickel cathode SHFE price closed at 167,000 yuan (\$26,238) per tonne on Friday, up by 3,800 yuan per tonne from a closing price of 163,200 yuan per tonne on Thursday. This was the highest since the contract was launched in 2015.

Many market participants pointed out that a short squeeze was sending nickel prices to an all-time high because of the low availability of deliverable full plate nickel.

Short squeezing reflected a rush to cover short positions on the cash month, either by buying back the position or delivering physical metal onto the exchange.

"The arbitrage window was previously closed for few months so traders' import interest was really low, leading to a low supply of nickel full plate in the Chinese domestic market," a Shanghai-based trader told Fastmarkets.

"Besides," she added, "with the domestic stainless steel market recovering since the beginning of this year, they also need to pile-up some stocks before the lunar new year [holiday, January 31-February 4]. Demand for nickel full plates is growing, leading to a tightness [in nickel full plate] in the spot market."

Fastmarkets assessed the nickel, min 99.8%, full plate premium, cif Shanghai, at \$330-350 per tonne on January 11, up by \$20-30 per tonne (7.9%) from \$300-330 per tonne a week earlier.

The low inventory of nickel globally also supported the surging price on the SHFE, Fastmarkets heard.



"It is hard for people to find nickel full plates due to the low stocks, and even the brokers are silent now because they can't find any in the LME warehouses, especially for deliverable full plate materials," a second trader said.

Nickel stocks in LME warehouses totaled 98,364 tonnes on January 12, down by 2,131 tonnes from 100,494 tonnes a week earlier. The inventory level was at its lowest for more than two years, since November 2019.

Nickel stock in SHFE warehouses stood at 4,711 tonnes on January 14, down from 4,895 tonnes a week earlier.

Fastmarkets' research team has forecast that there will be a 78,000-tonne supply shortfall for nickel in 2022.

From the downstream side, bullish sentiment in both the stainless steel and new energy vehicle (NEVs) markets in China was favorable for the metal's fundamental outlook, Fastmarkets heard.

With decarbonization a top priority for China, stainless steel - due to its durability and full recyclability - stands out as a sustainable material that is **set to become more popular in the coming years**, and this will bring more demand for nickel materials such as nickel pig iron.

Fastmarkets assessed the price of **nickel pig iron, high-grade NPI content, 10-15%, spot, ddp China**, at 1,360-1,390 yuan per tonne on January 14, up by 60-70 yuan per tonne (5.0%) from 1,300-1,320 yuan per tonne a week earlier.

Meanwhile, the outstanding performance of NEVs continued, and the consequent growing demand for nickel sulfate - for use in batteries - will further underpin the nickel price.

In December alone, China's NEV sales increased by 11.1% month on month and by 113.9% year-on-year to 531,000 units, while output rose by 6.7% month on month and by 120% year-on-year to 518,000 units, according to data from the China Association of Automobile Manufacturers (CAAM) released on January 12.

China's automobile sales were expected to maintain their growth in 2022, increasing by about 5% from 2021 to 27.5 million units, while NEV sales will rise by 42% to 5 million units, accounting for more than 18% of market share, CAAM added.

Fastmarkets assessed the price of **nickel sulfate, min 21%, max 22.5%; cobalt 10ppm max, exw China**, at 36,000-37,000 yuan per tonne on January 14, up by 1,000 yuan per tonne from 35,000-36,000 yuan per tonne a week earlier.

India's Vedanta Aluminium tops industrial purchase of renewable energy in 2021

By Carrie Bone - Friday 14 January

Indian producer Vedanta Aluminium was the largest industrial consumer of renewable energy (RE) in 2021 via procurement on India's power exchanges, as part of its transition to low-carbon operations, the company said on Thursday January 13.

The company announced it had procured nearly 2 billion units of RE power in 2021 for consumption at its aluminium smelter in Jharsuguda, Odisha, via the Indian Energy Exchange (IEX) and Power Exchange India Ltd (PXIL).

The purchases have reduced its greenhouse gas (GHG) emissions intensity at the plant by more than 1,540 kilo tonnes of CO₂ equivalent (KtCO₂e) in the year.

Vedanta Aluminium's Jharsuguda unit is India's largest renewable energy buyer on Green Term Ahead Market (G-TAM) platform at IEX.

The company plans to achieve net zero carbon by 2050 and is India's largest manufacturer of aluminium, producing half of the country's aluminium at 1.97 million tonnes in the full-year 2021. Its operations boast aluminium smelters, a refinery and power plants in the country.

"We have stepped up our endeavors along key three pillars, continuously improving energy efficiency of operations, increasing the quantum of renewable energy in our energy mix, and replacing fossil fuels with greener and cleaner alternatives, all powered by emerging green technologies. Becoming India's largest industrial consumer of RE in 2021 reflects our persistent endeavors to increase the share of green power in our energy mix and accelerate our transition into low-carbon operations," said Rahul Sharma, chief executive of Vedanta Aluminium.

Vedanta's subsidiary, Bharat Aluminium Co, has led the renewable energy trading session, procuring 59% of the traded RE certificates (RECs) in November 2021 alone, and a total of over 2.8 million RECs in the year, making it India's largest buyer.

"As the leading industry participant in the green market, Vedanta Aluminium Business has indeed set a very strong precedence for the Indian manufacturing industry to step up green energy consumption towards reducing their carbon footprint," said Rohit Bajaj, senior vice president at IEX.

The global aluminium market has adopted an increased focus on environmental, social, and governance (ESG) and low-carbon targets, with the European aluminium sector **supporting the launch of low-carbon differentials during 2021**, while Russian producer Rusal announced the first phase of its low-carbon aluminium plant in December.

China's NPI price up amid recovered domestic stainless steel market; ores stable

By Yingchi Yang - Friday 14 January

China's nickel pig iron (NPI) price increased in the week ended Friday January 14 amid a recovery in the downstream stainless steel market while nickel ores prices remain stable, sources told Fastmarkets.

Fastmarkets assessed the **nickel pig iron, high-grade NPI content 10-15%, spot, ddp China** at 1,360-1,390 yuan (\$214.1-218.8) per tonne on January 14, up by 60-70 (5.0%) yuan per tonne from 1,300-1,320 yuan per tonne a week earlier.

China's NPI price continued to rebound for the third consecutive week after it hit a five-and-a-half-month low on December 17.

"[Steel mills showed a] good acceptance of the increased price of NPI [because of] their increased profits," an NPI producer told Fastmarkets. "Along with the recent strong nickel prices on the Shanghai Futures Exchange (SHFE), [this] underpinned the upward trend of NPI."

Fastmarkets assessed the price of **stainless steel cold-rolled coil 2mm grade 304 domestic (Wuxi)** at 7,500-17,700 yuan per tonne on Wednesday January 13, up by 100-200 yuan per tonne from 17,400-17,500 yuan per tonne a week earlier.

The price of active rolling **SHFE nickel cathode** closed at 167,000 yuan per tonne on Friday January 14, up by 3,800 yuan per tonne from a closing price of 163,200 yuan per tonne on Thursday, the highest since the contract was launched in 2015.

If the NPI price continues to increase, market sentiment may become cautious, multiple stainless steel mill sources told Fastmarkets.

Upstream, prices for nickel ore were stable with low availability in the spot market, Fastmarkets heard.



"The nickel ores' price seems to be the last one to follow the upward trend of LME nickel price and we did see that the fob prices of ores increased a bit, but so far the cif price is still stable," a trader told Fastmarkets.

"The low availability of the nickel ores amid bad weather conditions in the Philippines also led to an inactive spot market," the trader added.

Fastmarkets' price assessment for [laterite ore with 1.5% Ni content, cif China](#) was \$81-83 per tonne on January 14, unchanged for the eleventh month.

Fastmarkets' corresponding price assessment for [nickel ore 1.8% basis, 15-20% Fe water content: 30-35% Si:Mg ratio<2, lot size 50,000 tonnes, cif China](#) was \$115-118 per tonne on the same day, unchanged from a week earlier.

SHFE base metals inventories mostly down; tin stocks surge by 69%

By Sally Zhang - Friday 14 January

Deliverable stocks of base metals in Shanghai Futures Exchange-registered warehouses mostly fell in the week to Friday January 14. Copper and tin stocks rose, however, with the latter leading the gains in percentage terms.

SHFE tin stocks totaled 2,905 tonnes this week, up by 1,182 tonnes (or 68.6%) from last Friday, according to the exchange's weekly stock report. The largest inflow of tin was recorded at Nanchu warehouses in Guangdong, where stocks rose by 437 tonnes to 440 tonnes against a mere 3 tonnes a week earlier.

A jump in the SHFE tin price prompted cargo-holders to deliver material onto the exchange, participants told Fastmarkets, which explains the increase in SHFE stock levels.

"The SHFE tin price was rising, attracting deliveries, but overall stocks remain low," a Shanghai-based trader said.

The [January tin contract on the SHFE](#) was 320,980 yuan (\$50,444) per tonne on Friday, up by 12,730 per tonne (or 4.13%) from 308,250 yuan per tonne a week earlier.

Other base metal stock changes

- Copper stocks up by 1,148 tonnes (3.9%) to 30,330 tonnes.
- Aluminium stocks down by 4,259 tonnes (1.4%) to 310,600 tonnes.
- Zinc stocks down by 1,239 tonnes (1.9%) to 63,097 tonnes.
- Nickel stocks down by 148 tonnes (3.0%) to 4,711 tonnes.
- Lead stocks down by 4,396 tonnes (4.9%) to 84,751 tonnes.

LME base metal prices mostly up; nickel opens 2.6% higher

By Callum Perry - Friday 14 January

Base metal futures on the London Metal Exchange were mostly higher at the 9am open on Friday January 14, with nickel once again leading the rally.

While many will be keeping a keen eye on the signs that central banks globally are getting more hawkish, at present signals remain supportive of prices.

"Overall, the inflationary outlook and generally strong economic activity bode well for the outlook for demand, and while shipping disruptions remain, supplies are likely to remain tight," Fastmarkets head of base metals and battery research William Adams said in a note.

The three-month nickel price continued its week-long strong performance, which has seen the metal gain 9.4% since the 5pm close on January 10.

Nickel increased by a further 2.6% at the 9am open on Friday to \$22,760 per tonne, from \$22,176 per tonne at the previous 5pm close. Current price levels are the highest since August 2011.

"It looks as if a storm may be brewing in the nickel market," Kingdom Futures director Malcolm Freeman said.

"For some time now, the LME stock has been falling very steadily to the point that free metals stand at some 45,000 tonnes or about one week's global consumption," he added.

Global stock levels in LME warehouses stand at 98,364 tonnes, with 45,438 tonnes on warrant. A further 2,874 tonnes were canceled on Friday.

The current tight supply situation may have driven consumers to turn to LME warehouse stocks more aggressively to cover their positions, which in turn has forced [premium levels higher](#) in the physical market.

"We suspect that the tightness in the class 1 market has prompted battery/precursor makers to unload nickel briquette [the main LME nickel type and one of the feedstocks to produce sulfate] out of the exchange sheds to secure their supply," ING senior commodity strategist Wenyu Yao said in a note on Thursday.

Elsewhere, the three-month aluminium price also continued its strong week-long uptick, though only posting a modest 0.4% increase to open at \$2,964.50 per tonne, from \$2,952 per tonne at the previous close.

Stocks of the light metal continued to be drawn down from LME sheds, with a further 11,775 tonnes canceled on Friday, largely from Port Klang, Malaysia.

Total on-warrant stock levels are at 501,175 tonnes.

Three-month copper opened at \$9,959 per tonne, stable from \$9,958.50 at the close on Thursday, but has recorded a modestly choppy day so far.

The three-month tin price was the second-best performer on Friday morning, rising 1% to \$40,910 per tonne, from \$40,511 per tonne at the previous close. Only 23 lots were traded however.

The United States dollar index was at 94.76 on Friday, compared with 94.99 at a similar time on Thursday.

China's auto output rises in December after falling for 7 months

By Yingchi Yang, Carrie Shi, Zihuan Pan, Zihao Li - Friday 14 January

China's automobile output in December rose on a year-on-year basis for the first time in eight months, though sales slowed down, amid an easing of a global shortage of semiconductor chips, the China Association of Automobile Manufacturers (CAAM) said this week.

Carmakers in China produced 2.91 million automobiles in December, up by 2.4% from the same month a year earlier. December's output is also 12.5% higher than [November](#), the association said on Wednesday January 12.

But sales dipped by 1.6% year on year to 2.79 million units last month despite being 10.5% higher than in November, according to CAAM data.

For the whole year of 2021, China's automobile output totaled 26.08 million while sales amounted to 26.28 million units.

These represent increases of 3.4% and 3.8% respectively from 2020, snapping annual declines that began in 2018.

New energy vehicles (NEVs) continued to perform, with 2021 full-year sales jumping nearly by 160% to 3.52 million units, CAAM data showed. That brought NEVs' market share to 13.4%, suggesting the sector has weaned itself from policy support and become market-driven, the CAAM said.

In December alone, China's NEV sales increased by 11.1% month on month and rose by 113.9% year on year to 531,000 units, while output grew by 6.7% month on month and surged by 120% year on year to 518,000 units.

China's automobile sales are expected to maintain their growth in 2022, increasing by about 5% from 2021 to 27.5 million units, while NEV sales are forecast to rise by 42% to 5 million units to account for over 18% of market share, Fu Bingfeng, the executive vice president and secretary-general of CAAM, said at a press briefing on 2021 developments in China's automotive industry on Wednesday.

This suggests that China's goal of having 20% of new cars sold to be electrified might be realized earlier than the planned 2025, Fu added.

Fastmarkets reviews how prices for key raw materials for the automotive sector in China developed over the past month.

CRC prices slip to 10-month low

Upstream, Fastmarkets' weekly price assessment for **steel cold-rolled coil, domestic, delivered eastern China** was 5,420-5,450 yuan (\$850-855) per tonne on January 7. This is up by 20-50 yuan per tonne from a 10-month low of 5,370-5,430 yuan per tonne a week earlier but down by 30-50 yuan per tonne from 5,450-5,500 yuan per tonne on December 10.

Spot CRC prices in eastern China fell to their lowest in about 10 months in late December, with market sentiment subdued by expectations of supply increases in January. The prices regained some ground in early January amid costlier raw materials and an improved outlook for demand.

"Spot CRC trading activity have been weak with downstream users shifting to a wait-and-see mode after some sellers raised their offers slightly on an improved demand outlook and stronger cost supports. Potential inventory increases amid weakening demand, however, could exert downward pressure on prices. Spot CRC prices are expected to fluctuate within a small range in the short term," a Shanghai-based industry analyst said on Wednesday.

Major Chinese steelmaker Baoshan Iron & Steel **kept its CRC base prices unchanged month on month for February domestic bookings**.

Lithium, cobalt strengthen further

Prices for key battery raw materials including lithium and cobalt strengthened further in the past month on increasing downstream demand from the EV battery sector.

Tight supply of battery-grade lithium carbonate continued to choke the market, with several major lithium producers putting their facilities on annual maintenance and seasonal production cuts for brine in Qinghai province's salt lakes.

Consumers actively topped up their inventories of battery-grade lithium carbonate in December in preparation for production during the January 31-February 6 Chinese New Year holiday.

As a result, battery-grade lithium carbonate prices experienced strong gains every week of December, which also buoyed the battery-grade lithium hydroxide market. This is because the latter can be used as alternative feedstock for the production of battery-grade lithium carbonate.

Fastmarkets' price assessment for **lithium carbonate, 99.5% Li₂CO₃ min, battery grade, spot price range exw domestic China** was 330,000-360,000 yuan per tonne on Thursday, up by 30,000 yuan per tonne from 300,000-330,000 yuan per tonne a week earlier.

The price stood at 210,000-220,000 yuan per tonne on December 2.

Fastmarkets' price assessment for **lithium hydroxide monohydrate, LiOH.H₂O 56.5% LiOH min, battery grade, spot price range, exw domestic China** was 265,000-280,000 yuan per tonne on Thursday, up by 25,000-30,000 yuan per tonne from 240,000-250,000 yuan per tonne a week earlier.

The price was at 185,000-205,000 yuan per tonne on December 2.

Prices for cobalt sulfate, another key raw material for batteries, maintained an upward trend in China last month and so far in January amid support from downstream demand and rising production costs due to costlier raw materials.

Fastmarkets' price assessment for **cobalt sulfate 20.5% Co basis, exw China** was 103,500-104,500 yuan per tonne on Wednesday, up by 1,500 yuan per tonne from 102,000-103,000 yuan per tonne on January 7. The prices are up by 8,000-9,500 yuan per tonne from 94,000-96,500 yuan per tonne on December 10.

"Downstream buyers have kept purchasing cobalt sulfate amid continuous growth of the EV sector, though they remain cautious about higher prices. We have no choice but to raise offers, and the key reason is because of rising production costs. Prices for raw materials such as cobalt hydroxide keep rising, which brings more pressure," a cobalt producer source said.

Fastmarkets' weekly **cobalt hydroxide index 30% Co min, cif China** was at \$29.30 per lb on January 7, up by \$1.25 per lb from \$28.05 per lb on December 31. The index stood at \$26.01 per lb on December 3.

Prices for nickel sulfate in China's domestic market experienced some softening in December amid increased supply of mixed hydroxide precipitate (MHP), a key raw material.

The additional supply came to the market from new MHP projects run by Chinese miner Lygend Mining and Chinese battery materials producer Huayou Cobalt, with the former beginning trial production at a second MHP nickel autoclave at its Indonesian project in late October and the latter making a similar move - also at its facility in Indonesia - in December.

Imported nickel intermediates - mainly MHP - into China totaled 46,732 tonnes in December, up by 45.6% from 32,091 tonnes in November, according to the Chinese customs data released on December 20.

Meanwhile, generally weak buying interest at the year-end also led to a quiet spot market for nickel sulfate, with most market participants mainly focusing on annual contract negotiations for 2022 in the last month of 2021.

Fastmarkets' price assessment for **nickel sulfate min 21%, max 22.5%; cobalt 10ppm max, exw China** was 35,000-36,000 yuan per tonne on January 7, widening upward by 500 yuan per tonne from 35,000-35,500 yuan per tonne on December 10. The assessment had fallen to 34,000-35,000 yuan per tonne on December 31.



CHINA AUTO MARKET CHANGES

(December 2021)

	Output			Sales		
	units (mln)	year-on-year change	month-on-month change	units (mln)	year-on-year change	month-on-month change
Overall auto (Dec)	2.91	▲ 2.40%	▲ 12.50%	2.79	▼ 1.60%	▲ 10.50%
Overall auto (Jan-Dec)	26.08	▲ 3.40%	N/A	26.28	▲ 3.80%	N/A
Passenger vehicles (Dec)	2.53	▲ 8.40%	▲ 13.20%	2.42	▲ 2.00%	▲ 10.50%
Passenger vehicles (Jan-Dec)	21.41	▲ 7.10%	N/A	21.48	▲ 6.50%	N/A
Commercial vehicles (Dec)	0.38	▼ 25.30%	▲ 7.70%	0.36	▼ 20.10%	▲ 10.50%
Commercial vehicles (Jan-Dec)	4.67	▼ 10.70%	N/A	4.79	▼ 6.60%	N/A
Electric vehicles (Dec)	0.52	▲ 120.00%	▲ 6.70%	0.53	▲ 113.90%	▲ 11.10%
Electric vehicles (Jan-Dec)	3.55	▲ 159.50%	N/A	3.52	▲ 157.50%	N/A

Source: China Association of Automobile Manufacturers

Chinese alumina prices rebound, bullishness to persist in short term

By Yiwén Ju - Friday 14 January

Chinese alumina prices rebounded in the week to Thursday January 13, after more than two months in decline since the end of October, with restocking activity by smelters ahead of likely output curbs increasing demand for the aluminium feedstock.

Fastmarkets' weekly price assessment for **alumina, metallurgical grade, exw China**, was 2,700-2,950 yuan (\$425-464) per tonne on Thursday, up by \$75 per tonne from \$2,650-2,850 per tonne a week earlier. Prior to that it had been on a gradual decline since peaking at 3,900-4,150 yuan per tonne on October 21.

Aluminum smelters traditionally secure quantities of alumina feedstock ahead of the Chinese New Year when logistics operations are halted, but this year's boost to demand has been heightened by concerns over likely constraints on alumina output during the Winter Olympics in February. Accordingly, bullish sentiment has begun to dominate - at least in short term.

"I've heard that Shandong province will halt its [alumina] output entirely next month because of the Winter Olympics, and emissions curbing production cuts are still ongoing in Henan province," an alumina trader said.

Some alumina refineries in north China have cut down production since December, in response to the local government calls to reduce emissions and that is also adding to the current supply tightness, Fastmarkets understands.

"The set of curbs should be lifted with the end of the winter heating season and the Olympics event. Hence, I see the recent pick-up [in demand] as only temporary - lasting until late February at the latest," a second alumina trader said.

Since December, alumina producers in Shandong, Shanxi and Henan provinces in north China have reduced their output, following local government orders to combat air pollution.

Among these, Shandong province has slashed alumina production by half, a source told Fastmarkets.

Alumina output Shandong province was 25,297,000 tonnes in the year to November of 2021, accounting for roughly 36% of the country's total production of 71,153,000 tonnes over the period, according to the latest data from China's National Bureau of Statistics.

But while the disruptions to production have mainly happened in north China, the uptrend in the alumina price has also begun to have an impact in the south, where the price climbed above 2,700 yuan per tonne on Monday, up from 2,650 yuan per tonne a week earlier, sources said.

"[Alumina refineries] in south China are, in contrast, less disrupted and better supplied, thus materials have been trucked to the north, which is in need, triggering an upside [in alumina prices] there as well," an analyst said.

The trucking cost from south to north China is generally around 200-300 yuan per tonne, the analyst added.

Regardless of the upward drivers, **three alumina refineries in China are set to complete ramp-ups in output by the first quarter of 2022**, prompting concerns about a surplus in the long run.

Taseko says Gibraltar mine produced 112mln lb of copper in 2021

By Yasemin Esmen - Friday 14 January

Canadian miner Taseko's Gibraltar mine in south-central British Columbia produced 112 million lb (50,802 tonnes) of copper in 2021, with 29 million lb produced in the fourth quarter, it said on Thursday January 13.

It said it sold 105 million lb of copper last year, along with 2 million lb in production and sales of molybdenum at the copper-molybdenum open-pit mine.

"Despite major disruption to the highway and rail infrastructure in southern [British Columbia] from severe rainstorms in November, we were still able to realize 24 million lb of copper sales in the fourth quarter," Stuart McDonald, Taseko's president and chief executive officer, said.

Heavy rain, flooding and a mudslide in mid-November 2021 had caused logistical disruptions between British Columbia mining operations - including Taseko's Gibraltar mine - and west coast terminals.

"Transit times for rail shipments are gradually improving and we expect to reduce copper inventories at Gibraltar in the first quarter of 2022," McDonald said.

Gibraltar produced 34.5 million lb of copper in the third quarter.

The decrease in the fourth quarter was a result of lower grades and recoveries from ore mined in the upper benches of the pit, the miner said.

"Increased oxidization and pyrite content in this ore has been resulting in lower recoveries, which we believe is a short-term issue that will be resolved. Ore quality will also improve as mining progresses deeper into the pit," McDonald said.

Taseko experienced another negative weather impact in the fourth quarter when extreme snowfall and low temperatures in December impacted mine equipment and mill availabilities, which resulted in decreased mill throughput. Improved weather conditions since have helped stabilize it.

Meanwhile, the United States Environmental Protection Agency continues to advance its review process for the underground injection control (UIC) permit in Taseko's Florence copper project in the US state of Arizona, the company said.

"The US Environmental Protection Agency [...] has recently advised [Taseko] that [it expects] to start the public comment period for the draft UIC permit in February," McDonald said.

Minor metals

Magnesium prices drop in China after Tianjin Covid disruptions pushes exporters out of market

By Janie Davies - Friday 14 January

An overview of the aerospace materials markets and the latest price moves.

AEROSPACE RAW MATERIALS - JANUARY 14, 2022				
Metal	Date of latest price assessment	Latest price	% change from previous assessment	Rationale
Chromium				
Chromium aluminothermic 99% min, in-whs Rotterdam, \$/tonne	1/14/2022	11,700-12,850	▼2.0	The price range for chromium aluminothermic moved downward after multiple deals were recorded at lower levels.
Chromium aluminothermic 99% min ex-US warehouse \$/lb	1/13/2022	4.85-5	0	The US chromium metal market remained static again this week; consumers continued to hold out on the sidelines in the first half of January.
Cobalt				
Cobalt alloy grade, in-whs Rotterdam, \$/lb	1/14/2022	34-34.40	0	Cobalt metal prices across alloy and standard grade held steady amid thin trading and stable assessments.
Cobalt 99.8% Co min, ex-works China, yuan/tonne	1/14/2022	500,000-515,000	▲0.7	China's cobalt metal price continued to trend upwards amid light availability of spot units and a higher international benchmark cobalt price.
Hafnium				
Hafnium, max 1% Zr, in-whs global locations, \$/kg	1/14/2022	900-1,100	0	The price range for hafnium was unchanged in thin trading.
Magnesium				
Magnesium 99.9% Mg min, fob China main ports, \$/tonne	1/14/2022	7,200-7,300	▼13.7	Export prices fell following a weakened domestic market.
Magnesium 99.9%, exw China, yuan/tonne	1/14/2022	41,000-43,000	▼18.4	Domestic prices fell and weak market demand suggests buyers did not purchase material because they couldn't deliver the cargo to Tianjin port due to city-wide mass Covid testing; domestic demand from downstream alloy plants in Henan also declined because the covid-19 situation.
Magnesium 99.9%, in-whs Rotterdam, \$/tonne	1/14/2022	8,550-9,050	0	The price for Magnesium MB remained unchanged; traders are waiting for information about developments in the Port of Tianjin in China.
Rhenium				
Rhenium APR catalytic grade, in-whs dup Rotterdam, \$/kg	1/14/2022	995-1,100	▲5.3	The price range for rhenium APR narrowed upward after the lower end of the range was no longer considered to represent a tradable level.
Rhenium metal pellets 99.9% Re min, in-whs dup, Rotterdam \$/lb	1/14/2022	360-600	▼9.4	The price range for rhenium metal pellets narrowed downward in thin trading.
Tantalum				
Tantalite, basis 25% min Ta205, cif China, \$/lb Ta205	1/14/2022	82-85	▲1.8	Increasing demand from the electrical sector and high logistical costs supported the market.
Titanium				
Titanium ingot 6Al-4V, fob shipping point US, \$/lb	1/10/2022	8-8.50	0	Prices held quarter on quarter in thin trading.
Titanium plate alloy AMS 4911, fob shipping point US, \$/lb	1/10/2022	27-28	0	
Vanadium				
Vanadium pentoxide 98% V2O5 min, fob China, \$/lb V2O5	1/13/2022	8.55-8.83	▼1.8	The vanadium pentoxide price edged lower because many traders are destocking to recoup funds as the Chinese New Year approaches.
Vanadium pentoxide 98% V2O5 min, in-whs Rotterdam, \$/lb V2O5	1/14/2022	8.50-9	0	Vanadium pentoxide remained steady but trade was limited, with most of the market focused on vanadium alloys; there is potential for the market to go up along with the metal, market sources said.

Source: Fastmarkets

Jessica Long, Zihao Li and Ruby Liu in Shanghai, Fola Malomo, Dalila Ouerghi, Jon Stibbs and Cristina Belda in London; and Chris Kavanagh and Thorsten Schier in New York contributed to this article.

Delayed publication of minor metals price assessments on Friday January 14 - London

By Fola Malomo - Friday 14 January

The publication of Fastmarkets' price assessment for minor metals on Friday, January 14 was delayed due to an error in the review process.

Fastmarkets published the following prices later than their scheduled time of 2-3pm London time in its pricing database MInD on January 14: MB-SI-0001 Silicon grade 4-4-1 99% Si min, in-whs Rotterdam, €/tonne; MB-MG-0001 Magnesium 99.9%, in-whs Rotterdam, \$/tonne; MB-CR-0001 Chromium aluminothermic 99% min, in-whs Rotterdam, \$/tonne; and MB-SI-0004 Silicon grade 5-5-3 98.5% Si min, in-whs Rotterdam, €/tonne.

The published prices were not affected and went out as intended at a slightly

later time.

For more information, to provide feedback on the delayed publication, or if you would like to provide price information by becoming a data submitter to these prices, please contact Fola Malomo by email at: pricing@fastmarkets.com. Please add the subject heading 'FAO: Fola Malomo Re: Fastmarkets' Minors-Friday prices.'

To see all Fastmarkets' pricing methodology and specification documents, go to <https://www.fastmarkets.com/about-us/methodology>.

Trade log: Cobalt hydroxide payable indicator, min 30% Co, cif China, % payable of Fastmarkets' standard-grade cobalt price (low-end)

By pricing@fastmarkets.com - Friday 14 January

The Cobalt hydroxide payable indicator, min 30% Co, cif China, % payable of Fastmarkets' standard-grade cobalt price (low-end) trade log including business, bids and offers reported to Fastmarkets.

Fastmarkets publishes trades logs for its key price assessments and indices to bring more transparency into the markets it covers and the pricing process it applies.

Fastmarkets assessed Cobalt hydroxide payable indicator, min 30% Co, cif China, % payable of Fastmarkets' standard-grade cobalt price (low-end) at **88.00-90.00 on Friday January 14, 2022**.

- Sale at 89.00 for standard tonnage
- Offer at 90.00
- Offer at 91.00
- Bid at 88.00
- Prices indicated at 85.00
- Prices indicated at 88.00
- Prices indicated at 88.00
- Prices indicated at 88.00-90.00
- Prices indicated at 88.50-89.00
- Prices indicated at 88.00-90.00
- Prices indicated at 89.00
- Prices indicated at 88.00-90.00
- Prices indicated at 89.00-89.50

Any data submitted under a Data Submitter Agreement (DSA) will not be published.

To see all Fastmarkets' pricing methodology and specification documents, go to <https://www.fastmarkets.com/about-us/methodology>.

Fastmarkets uses its expert judgment to exclude outlying or unrepresentative numbers, and discount or discard prices that it believes may otherwise be questionable and/or unreliable.



Trade log: Cobalt alloy grade, in-whs Rotterdam, \$/lb

By pricing@fastmarkets.com - Friday 14 January

The Cobalt alloy grade, in-whs Rotterdam, \$/lb trade log including business, bids and offers reported to Fastmarkets.

Fastmarkets publishes trades logs for its key price assessments and indices to bring more transparency into the markets it covers and the pricing process it applies.

Fastmarkets assessed Cobalt alloy grade, in-whs Rotterdam, \$/lb at 34.00-34.40 on Friday January 14, 2022.

- Offer at \$34.15 for small tonnage
- Offer at \$34.75 for large tonnage
- Prices indicated at \$34.00-34.40
- Prices indicated at \$34.00-34.40
- Prices indicated at \$34.00-34.50
- Prices indicated at \$34.00-34.40
- Prices indicated at \$34.10-34.60
- Prices indicated at \$34.15-34.50

Any data submitted under a Data Submitter Agreement (DSA) will not be published.

To see all Fastmarkets' pricing methodology and specification documents, go to <https://www.fastmarkets.com/about-us/methodology>.

Fastmarkets uses its expert judgment to exclude outlying or unrepresentative numbers, and discount or discard prices that it believes may otherwise be questionable and/or unreliable.

Trade log: Cobalt standard grade, in-whs Rotterdam, \$/lb

By pricing@fastmarkets.com - Friday 14 January

The Cobalt standard grade, in-whs Rotterdam, \$/lb trade log including business, bids and offers reported to Fastmarkets.

Fastmarkets publishes trades logs for its key price assessments and indices to bring more transparency into the markets it covers and the pricing process it applies.

Fastmarkets assessed Cobalt standard grade, in-whs Rotterdam, \$/lb at 34.00-34.40 on Friday January 14, 2022.

- Sale at \$34.25 for small tonnage
- Prices indicated at \$34.00
- Prices indicated at \$34.00-34.40
- Prices indicated at \$34.00-34.40
- Prices indicated at \$34.00-34.50
- Prices indicated at \$34.00-34.40
- Prices indicated at \$34.10-34.60
- Prices indicated at \$34.15-34.50
- Deal heard at \$34.50 (discarded – old activity)

Any data submitted under a Data Submitter Agreement (DSA) will not be published.

To see all Fastmarkets' pricing methodology and specification documents, go to <https://www.fastmarkets.com/about-us/methodology>.

Fastmarkets uses its expert judgment to exclude outlying or unrepresentative numbers, and discount or discard prices that it believes may otherwise be questionable and/or unreliable.

Learning from leaders

By IM Staff - Friday 14 January

The cover profiles published in Metal Market Magazine provide real-life examples of good business leadership, management and strategy given by leaders with extensive practical experience of running international companies.

Only the full published interviews give details of each individual leader's route to the top and their company's strategy at the time of original publication, but the summaries of the past year's cover profiles collected together here provide a valuable and inspirational range of some of the key experiences and insights on leadership and management included in 2021.

Service center growth

In reflecting on his 40-year career with O'Neal Industries, Inc (ONI) of Birmingham, Alabama, Holman Head thought about all the changes that metal service centers faced and his response to them.

Considering four decades of profound change in nearly all facets of how a successful business operates – and his many roles in managing that change – Head said, "I feel like Forrest Gump," the fictional lead in an American movie of the same name about facing – and successfully managing – life's twists and turns.

"Like Forrest, I too have been in the right place at the right time in many aspects of my life. He embraced hard work and integrity to become successful in many different roles, and I think for the most part, I did too," said Head (January 2021 issue of Metal Market Magazine).

Head successfully tackled multiple positions in his years with ONI before he retired on September 30, 2020 as president and chief operating officer. ONI is a large family-owned network of metals service centers and component and tube manufacturing businesses which celebrated its centenary last year, having been founded by Kirkman O'Neal in 1921.

Head started his career with O'Neal Steel in 1980, two years after he graduated from Washington and Lee University in Lexington, Virginia. His decision to attend the prestigious university was heavily influenced by his mother.

"I have frequently done things in my life that were what other people wanted or expected. Many got me out of my comfort zone, but all of them have helped me grow. One of those was going to Washington and Lee," he said.

The skills taught there have served Head well.

"One of the advantages of a liberal arts education is developing both as an individual and acquiring critical thinking skills. It was a period of tremendous personal growth that has served me well during the course of my career," Head reflected.

Armed with his Bachelor of Arts degree in economics, Head moved to Birmingham, where he worked in outside sales for Vulcan Materials Corp, selling aggregate and crushed stone.

Two years after Head joined O'Neal Steel in 1980 in inside sales, the year 1982 was a major turning point in the US metals industry while companies used a laser focus to identify and reduce costs.



A two-year move within O'Neal Steel to its district office in Memphis, Tennessee put Head back in front of the customers through his role in outside sales, which "really taught me how to listen to and communicate with many different kinds of people. I also learned how to communicate with people in a group and recognize that while everyone was hearing the same thing at the same time, not all people were understanding at the same time. Sometimes the timing of the message is even more important than the content," he explained.

When Head returned to Birmingham in 1984 to work in marketing, O'Neal Steel was rapidly changing. Thinking about the tremendous change in how companies conduct business since the early 1980s, Head quickly pointed to the evolution and integration of information technology (IT) as the most impactful trend that changed both the face of O'Neal Steel and the entire service center sector.

"When I started, O'Neal Steel had a huge mainframe computer with a room full of tape drives. There were no word processors or personal computers, and fax machines were barely making a mark. As technology advanced, those who understood its power and could invest reaped great benefits from increased productivity, improved asset management and better competitive knowledge.

"Information technology also increased transparency throughout the supply chain, which eliminated waste and forced extreme discipline on operating cost. In 1980, we quoted on the phone using price pages. Today, a significant percentage of O'Neal Steel's line items go through the ecommerce site PRONTO™. That same system notifies the customers when they are the next delivery stop. ONI is utilizing big data to drive improvements. We're able to measure and analyze things in ways we've never been able to do in the past," Head explained.



Strategic acquisition

Evolving and leading-edge technology helped O'Neal Steel expand organically in the 1980s and 1990s in the Southeast and then into the Midwest and Southwest of the United States. But company leadership within O'Neal Steel saw opportunities for strategic acquisitions to expand its products and services for metals consumers.

In 1997, the company acquired Metalwest, O'Neal Steel's first stand-alone subsidiary, followed the next year by the development of a weldment operation in Monterrey, Mexico, now known as O'Neal de México, the first business outside the US. Further US and international acquisitions have followed in this millennium. Late in 2005, for example, the major acquisition of TW Metals expanded the geographic reach worldwide to Europe and Asia.

After growing into many separate and unique companies, in 2008 the shareholders formed the parent company, ONI, to better manage the growth of the business and to provide some corporate support functions for the subsidiary companies, such as mergers and acquisitions, financial reporting, legal, corporate compliance and tax services. Each ONI company continued to manage its own core functions such as sales, operations and purchasing.

As the company grew, so did Head's responsibilities, advancing through vice president of purchasing and product development, senior vice president of the southern region, and then president and chief executive officer of O'Neal Steel. He saw value for his company and for its customers through the creation of O'Neal Manufacturing Services.

"We created O'Neal Manufacturing Services as a way to capture work for OEMs [original equipment manufacturers] that they had previously outsourced. We had the capital to invest in highly specialized equipment and were able to generate enough business to operate three shifts a day seven days a week, whereby the OEMs may only need to run their machines for one shift a week. The OEMs avoided the cost of the specialized machinery, and we were able to efficiently provide them with value-added services. In addition, we had businesses with similar equipment and were able to shift the volume between businesses when needed," Head explained.

Additional acquisitions included Vulcanium Metals in 2013, the British firm of Locate Supplies Ltd, made by the ONI affiliate TW Metals, and G&L Tube of Cookeville, Tennessee, in 2018. Consolidation in the distribution side of the metals industry has been fueled by the steady decline over 40 years in producers owning distributors.

Head recalled that "in the 1980s, many mills owned service centers. Our customers wanted to buy stock material and process it all the way through a finished product."

"Today, I don't believe any domestic mills are truly in the distribution business, and they do see value in the service centers, which are in their top two customer segments. Producers want to focus on making the material and not distributing it. Our OEM customers want to assemble parts, focusing on engineering and design. The gap between the two creates a great market for service centers," he said.

More to be done

As much as the industry has advanced through consolidation and innovation, there is more to be done in Head's view.

"Despite tremendous consolidation over the last 40 years, the service center industry is still highly fragmented," he observed. "It is increasingly difficult to get an adequate return on invested capital. There has always been a debate as to the value the service center provides in the metals supply chain. In the 1980s, the story was cost of possession. Then came value-added processing. I believe the trend of improvements in IT will continue with the impact of big data and artificial intelligence. The trend in less vertical integration will continue."

"The service centers that win in the future are those that can provide value to both our customers and suppliers. That value will come from continually harnessing changing technologies. Though technology provides for less interpersonal interaction, I do believe that people find a way to do business with people they want to do business with. Those relationships help sell and communicate the value provided," Head concluded.

Building a mining company

Masan High-Tech Materials CEO Craig Bradshaw succeeded in his early career in mining as a trouble-shooter fixing underperforming parts of businesses, but for the past ten years he has relished the opportunity to help to build a new mining company (February 2021 issue of Metal Market Magazine).

Masan High-Tech Materials is a large manufacturer of mid-stream tungsten products, which operates the Nui Phao polymetallic mine and a state-of-the art processing plant in Thai Nguyen province, Vietnam. The company is a major global supplier of advanced tungsten materials used in many



industries, with its own production facilities in Germany, Canada and China.

"It was sheer chance that I began a career in mining, which has spanned over 30 years and four countries," Bradshaw said.

His first job after leaving university was as a graduate accountant for Mount Isa Mines, a company that was later taken over by Xstrata and is now part of Glencore. He spent the first 12 years of his career at Mount Isa Mines, where he was exposed to many different parts of the mining business.

"For 12 years I was lucky enough to get involved in every aspect of the business from exploration, mining, flotation, smelting, refining, sales, marketing, and logistics in copper, silver, lead and zinc, and that gave me a good platform to continue to work and build a career," he recalled.

Following his time at Mount Isa Mines, Bradshaw joined Toll Holdings – a transport and logistics company. "At the time several businesses that they had acquired were poorly performing, and my job was to go in, have a look at the business and either shut it down, fix it up or merge it with other parts of the business to get better financial performance."

After three years working for Toll Holdings in Australia, he was sent to Thailand to review the company's oil and gas logistics business there. After two years working in Thailand and fixing that business, he ran into a friend who was working for Oxiana, which had a copper and gold project in Laos. They were looking for a commercial manager to be based out of Laos, working at their remote copper and gold operation, he recalled.

Bradshaw spent the next three years working as a commercial manager and then as a general manager for the business there, while his boss at the time moved on to take the role of CEO of Masan Resources, now Masan High-Tech Materials. Six months later he called Bradshaw to ask him if he wanted to come to Vietnam as operations director to start up a new project, a new company.

"And so, I did," Bradshaw recalled. He initially worked on the Nui Phao project under the previous CEO and succeeded him in August 2017.



World-class polymetallics

Bradshaw noted that Nui Phao, a polymetallic tungsten, fluorite, bismuth, copper and gold ore mine located in the North of Vietnam, is the world's largest tungsten mine outside China, the world's second-largest fluorspar mine, and the largest producer of primary bismuth.

"Back when I started it was all rice paddies and buffalos," he recalled. "We spent the next couple of years building it, building a team together, commissioning it." Bradshaw celebrated his ten-year anniversary at Nui Phao

at the end of February 2021.

The move to Nui Phao gave him the chance to step away from his previous roles of fixing troubled businesses and to begin something new.

"The attraction here was the fact that this project was a greenfield and it was the opportunity to build something from scratch as a start-up for the first time," he recalled. "It was a different sort of challenge, a different experience and, an opportunity indeed when someone puts a clean sheet of paper in front of you and says, 'Build it how you think it should be built in terms of the people, the culture, the way we go about things, the way we think about things.'"

For Bradshaw, Nui Phao and Masan Resources have been the biggest highlights of his career so far.

"Ten years ago, we started with nothing and now we have a company that is providing 750 different tungsten products and employing about 2,100 people globally. We have come a long way in ten years as a company and as a group of people. When you look at that you do feel a great sense of satisfaction with what we have achieved here."

Long-term strategy

With the acquisition of Germany's HC Starck Global Tungsten Powders, completed in June 2020, Masan Resources changed its name to Masan High-Tech Materials to reflect the evolution of the company and its future direction, Bradshaw said.

He said that investing downstream was always a part of Masan's business strategy. "Some time ago we mapped out a strategy of what we want to do and where we want to go, and we didn't see a future in purely selling commoditized tungsten, fluorspar, copper or bismuth to the world."

"If you purely do that, when your existing mine runs out, you are out of business. That might be 20 years down the track, but you do not want to wait years to build a sustainable business, you need to be getting on with building a long-term sustainable, perpetual business much earlier than that."

The acquisition has opened a lot of opportunities for the company, not just in tungsten but also in other metals and minerals, he explained.

"The technology that HC Starck has, the quality of the people they have, the ideas and thinking that exists within their business, but was never fully capitalized upon under previous ownership models, is extremely exciting for us. Meshing that technology, innovation and capability with what we already have in Vietnam we expect to deliver positive long-term benefits for our customers and the company. The integration of the businesses also enables us to bring additional skills and capabilities into Vietnam and that's certainly something that is encouraged by the Vietnamese government in terms of value added in Vietnam and servicing industry as it further develops in Vietnam," he added.

"Our future is not just as a resources company. It is not just as a tungsten company," he explained further. "It is looking at strategic, critical minerals and high-tech materials and thinking about how we position ourselves to participate and ensure a long-term supply of those critical, strategic and high-tech materials in Vietnam, but also through the rest of the world."

"We like to partner with people and companies who have similar views of industries and businesses to us," Bradshaw added.

Another step towards Masan's long-term strategy was signing an agreement with Japan's Mitsubishi Materials to develop a high-tech tungsten materials platform, following the acquisition of HC Starck's tungsten business.

"Our customers will benefit the most, because this partnership will strengthen our ability to supply quality and innovative products and solutions," he said.

The agreement positions Masan High-Tech Materials and HC Starck to build a mid-stream tungsten Asian franchise, which is the missing piece of our



strategic puzzle, Bradshaw added.

Sustainability

"The success of the company also lies in the strategy of developing Vietnamese people, with strong experience and passion for work, to excellent world-class experts," Bradshaw said.

Over the past 20 years, the company has contributed to the formation of a generation of Vietnamese miners capable of operating state-of-the-art technologies in the field of high-tech material extraction and processing.

"The company also maintains a wide range of community development and economic restoration programs as part of our on-going commitment to safeguarding the ecosystem of the local people and stakeholders", he added.

"We hold the view that resources must be used effectively with carefully planned activities to bring out economic value while mitigating effects on the environment and benefiting the local community in the long term, thus creating common prosperity for all. This is how we ensure sustainable development at Masan High-Tech Materials," Bradshaw emphasized.

Be curious

Bradshaw's advice to any newcomer entering the mining industry now would be to always be curious and to recognize the importance of teamwork.

"Be curious, ask lots of questions and understand that business is about people – it's not about machines, trucks, it's not about equipment, it's about people and if you get a right structure with the right people, aligned to a shared vision of outcome then you will be successful," he said. "And being part of that is rewarding, being part of a team that is successful is rewarding."

One of the things that has served Bradshaw well in his career is his genuine interest in businesses, processes and people, he stressed. "I do tend to ask a lot of questions and I found it to be quite useful in terms of my own knowledge and interest, but also very successful in terms of, in particular, when people are facing a particular problem, or being overwhelmed with a challenge."

"If you are good at asking questions and breaking things down into manageable bite-size pieces that people can then action, that they can drive forward with towards the outcome, then as an executive, you're adding value to the team," he said.

"The difference between the businesses and projects that fail and the businesses and projects that succeed is the people. If you can get the right structure and the right people doing the right things, then lots of things are possible," he concluded.

Leading copper recycling

In her early career, La Farga CEO Inka Guixà had not considered working for the business founded by her father and grandfather, but in her late-20s she accepted an invitation to join the company and assist in its expansion.

Barcelona, Spain-born Guixà was the second of five children – three girls and two boys. Her father Oriol, an engineer, had been working at La Farga since just after her birth, and he was one of the founders of the recycled copper continuous casting company, based on a business with a very long heritage. But a career at the same company for Guixà was not on the cards then, she recalled (March 2021 issue of Metal Market Magazine).

Guixà is a graduate in Business Administration and Management from Esade in Barcelona, and she has a Master's degree in Business Administration (BA & MBA). She also participated in an exchange program in Vancouver, Canada, at the University of British Columbia.

"I liked the feel of trade marketing, so I joined brewery company Damm Group, and was there for around two years. But at a certain point I thought I needed more. The opportunities the company were able to give me were not

coming at the speed I wanted," she said.

She decided to join a strategic consultancy, Antares Consulting, in order to experience the whole spectrum of its business.

"I went from junior consultant to project manager in less than two years, and really enjoyed it, but I have to admit at the end there was something that I hadn't expected: I was on the path towards being a little bit burnt out," she added.

One of her former senior managers called her about a position he had, encouraging her to work with him. She consequently joined Novartis Farmacéutica in a department that focused on internal consulting.

"Its objective was to analyze the sales department and determine the best strategy to manage the sales force in order to achieve a better result. I really enjoyed the role," Guixà said.

Everything changed one day when, age 28, she and her boyfriend, now her husband, were invited to dinner with her parents.

"They said, 'Inka, we're looking for someone in La Farga to expand the business and we think it might be the right moment for you to join.' It was quite shocking and really unexpected. I'd gotten involved with the board around 18 months previously, but I saw it as normal because we were a family business and had responsibility as shareholders, but nothing else," she said.

She made the decision in partnership with her boyfriend to accept the role; Guixà understood that as a couple, professional and personal success required a balanced, joint approach. "We knew it was something I couldn't decide by myself; it was a family project. So, we decided together," she added.



Joining La Farga

Guixà joined La Farga in 2009, when it already had a heritage over two centuries old and had a long history in copper. When Guixà joined, she began her role as the expansion manager in its newly formed international business, which was focused on growth outside Spain plus the sale of the company's recycling technology abroad.

After a series of negotiations, investment overseas quickly followed in the form of a railway products joint venture in China. Guixà's team simultaneously started looking for a business in the US, laying the groundwork for the eventual creation of SDI La Farga, its joint venture with Steel Dynamics, which produces recycled copper wire and rod.

"Managing the sale of technology at that time allowed me to understand the



position La Farga had in the copper recycling business as well as redefine our approach to the sale of that technology," she recalled. "I worked very closely with my father and our great relationship really helped a lot. I had the opportunity to see different kinds of approaches to negotiations, which was really beneficial for me professionally."

In 2013, Guixà became general director of planning and strategic management.

"From that position I had the chance to deal with the different areas within the organization, identify the strengths and weaknesses, implement new procedures as well as define the mission of the company for the following years. It was quite a run," she noted.

Although La Farga is a family-owned business, Guixà said company interests are placed ahead of family. "We understand that between family and business, what we need to protect is always the business and not the family," she said. "The family is at the service of the company and not the other way around."

At a certain point, it was clear that Guixà could succeed her father and the executive team began to lay the ground for the transition. In 2017, he became company president and she became CEO.

"In a family business everyone talks about the importance of succession, but the clue is you need to have somebody able to say, 'Okay, my turn is over, I need to step aside and let someone else have a go,' despite still having the passion, ability, energy to do the job themselves. My father has done an amazing job of understanding the point at which he should do this – I take my hat off to him," she acknowledged.

"The transition is finished, without any issues. I still talk to him all the time about the business. I am very different – he is 100% an engineer, and I am not, but in that sense, we complement each other perfectly," she said.

21st Century challenges

In her new role, she set about adapting La Farga to 21st century challenges such as digitalization, globalization and sustainability.

"Preparing for succession meant not only preparing myself; it also meant preparing the organization for what succession meant. That meant determining what La Farga would look like in the future and what challenges it would face as a company," she added.

"We knew what we wanted La Farga to be in the future, and we had the fundamentals to achieve it; the challenge was how to make it sustainable in the long run while keeping the values that define us and make La Farga unique," she recalled.

Despite its international growth, Guixà said La Farga tries to maintain the philosophy of being a family, including giving its staff room to develop – herself being a case in point.

"Normally companies give what I call 'small suits' when they promote someone – they make sure the person will succeed and the amount of risk they take is very little. The suit already fits," she said. "Our way of seeing it is that to promote people and help them grow as professionals, we need to give challenges and provide 'bigger suits' that don't fit perfectly the first time they're worn. The challenge is to eventually fit the suit."

La Farga's agility as a family business has also allowed it to drive innovation, something Guixà said is in the company's DNA and requires taking risks. Citing an example when the company had to decide the fate of a plant, Guixà said the standard choice would be between closing it and investing the money elsewhere, or taking a chance and trying to develop a new technology that could help it succeed. A typical board, she noted, would opt for the safe bet.

"In our case, if you present something innovative and can explain why you'd succeed and what its benefits are, we go for it. Taking those kinds of risks allows you to identify new opportunities and sometimes new technologies,

ideas, and developments. This is something in our case that defines us," she added.

Sustainability

The whole copper value chain understands it needs to try to do its part in the decarbonization process, Guixà noted.

"This means ensuring the whole product it is selling, the process used to make it, the raw materials consumed to produce it, and the second life it is given after it being used in the market, are sustainable. Making the production process more sustainable is a good first step, but we need to make the actual product fully sustainable, and that will be the real challenge," she added.

This will require governments to step up and mandate the increased use of secondary copper where possible, and promote the circular economy and urban mining, in which raw materials are reclaimed from spent products, buildings and waste.

"The obligation we have as an industry is to give life to that copper; it cannot be lost. We really need to promote this. But promoting this requires regulations, and that we put our energy into understanding and developing technology in order to be able to recirculate as much as possible," she added.

"Global trends of industrialization, decarbonization and electrification are supportive of a vision of long-term copper demand," Guixà said.

"We need to see how regulations evolve, but if we're able to implement the right policies, there's a bright future for copper," she added.

Her advice to new starters in copper? The industry is "very captive; it really engages you and has a lot of passion in it. I would advise anyone joining it to be themselves – it's the only way," she said.

"Think about what your objective is, what you really want, and go for it. Whether you succeed or not, at least you will be you," Guixà concluded.

DRI technology development

Midrex Technologies, owned by Kobe Steel Ltd of Japan, sets great store by the development of the major direct-reduced iron (DRI) and hot-briquetted iron (HBI) production plants that it designs, supplies, and helps to maintain globally. President & CEO Stephen Montague is passionate about the importance of people in his company's success and the attitude and focus needed to have a positive impact in a decarbonizing steel industry.

He appeared as a modest, self-effacing leader during a mid-March interview with Metal Market Magazine. "I'm a blue-collar man in a white-collar job," he said with a smile and went on to recall that his first job with Midrex Technologies, back in 1987, came about as a financial necessity.

"I was in college and working for a metal fabricator, but that wasn't working out," he said. Unhappy with the job, he decided to leave.

"For a 19-year-old, that was a traumatic experience because I needed the money. When I left that job, I didn't know what I was going to do. I was blessed to have an opportunity at Midrex to become a draftsman for the summer, and that got me started," he recalled.

Montague started working at Midrex during the summers while he was in college. "I did that for a couple of summers but bluntly, I needed a change and ran out of money," he said.

"I left school and Midrex hired me full time. I worked for 2-3 years, learned a lot, and had some good managers," he recalled.

Taking their advice and a leave of absence, he returned to school and took "about a year" to finish his Bachelor of Science degree in mechanical engineering at North Carolina State University.

Returning to Midrex, which has its headquarters and R&D Technology Center in Charlotte, NC, it was not long before he got a taste for the excitement and



challenges of working on-site at a plant location.

"I've always considered myself a technical person – not your PhD type but someone having a good aptitude for understanding the technical side – and that led me to really understanding how plants operate," he explained.

"When you have to work through issues and troubleshoot problems, your mind starts to see ways that things could be done better and before you know it, you're in technology development or R&D," he added.



MIDREX TECHNOLOGIES

Life-cycle satisfaction

Montague said that the highlights of his career have come through the life-cycle satisfaction that planning and delivering plant projects offers.

"You start with the dream, you design it, you build it, you start it up, you operate it, you see the mistakes, and then you fix them... and of course, there are the people you encounter along the way – that is the pay-off," he said.

He likes seeing how the pieces fit together, and he appreciates that "Nothing is really linear, you go around and around."

One of the earliest opportunities to experience that satisfaction came from a one-year posting to work on a project in India in 1994-95.

"There was a lot of trust placed in me," he recalled. "I was a twentysomething responsible for the commissioning and start-up of a new MIDREX® plant in a place where at that time there was literally just a rice paddy between the river and the mountain. Now when I go back to JSW Dolvi they make about 5 million tonnes of steel each year, and you have to search to find the DR plant among all the other equipment."

Montague acknowledged that his current day job is pretty calm compared with working in the field, but he draws motivation from such memories: "When things really get tough and you wonder why you are doing the things you are, it is those real-life events and stories of the people you have met and worked with along the way that push you a little harder."

Reaching his present role as president and CEO was a further 23-year journey along a path that encompassed both technical and commercial roles, including engineering, operations, technology development, and sales. He was promoted to president and COO in 2016, and was named CEO the following year.

DRI and decarbonization

"I think the role of DRI is changing and the importance of DRI is evolving as everyone is moving towards decarbonization," said Montague.

"It is critical that we really look at ways to move ahead together, as an industry," he observed. "I look at the trends and we are absolutely going to see the growth of electric steelmaking. We are already seeing that in China, as well. We have to push for lower emissions and find ways to make high-quality steel lighter and stronger."

"If you start to put those pieces together, they really point to DRI. I don't know how you get there with scrap alone – there is not enough of it, and even if you could get it, it is not always of the quality you need. It really is a driving force behind DRI use," he declared.

He thinks that decarbonization is the biggest challenge to face the iron and steel industries in decades.

"In my career, I have experienced the steel business cycles. Having to manage through them and now Covid-19 has been hard. But looking at the challenges ahead to decarbonize the industry, it is going to be an even harder journey. It is not like a light switch that you just flip and everything is okay – it will require companies to transform how they think and their production facilities and everyone must be prepared to help. That is a role that DRI is going to play."

Montague does not underestimate the scale of the task ahead: "There is an enormous transition that steelmakers are going to have to undergo – it's a journey. I think DRI is part of this journey for steelmakers. Our aim is to help with that journey through providing a technology that uses a wide range of iron ore feed and lower CO₂ energy sources. We will continue using high-Fe feed materials in MIDREX plants, as is traditionally done for EAF steelmaking, and begin using lower-Fe feeds to make a product that is more suitable for a blast furnace or even for a new kind of melter – one that is electric-based but optimized for lower-Fe DRI."

"All the while knowing that when hydrogen becomes available, we start using it. If hydrogen is not available, we use natural gas, but we do it in a location where there is going to be affordable 'green' electricity in the future to produce hydrogen. We can bring carbon dioxide emissions down 50-60% relative to BF/BOF by making high-quality steel from a blend of scrap and DRI. When we transition to hydrogen, just think how much better we can do over time," Montague said, adding, "Why not start moving that way with the technology that we already have?"

He sees a solution where a lot of steelmakers could benefit from not just importing iron ore but by moving toward electric steelmaking and importing low CO₂ metallics produced in favorable locations at scale with MIDREX technology, using the energy source that is available today and operating with a wide range of iron ore quality, knowing that they have the flexibility to change to hydrogen as it becomes available.

"Could steelmakers benefit from clubbing together to share the offtake from these larger plants that produce at scale in the right locations? You bet!"

"There are some very special locations, even today, where you can align direct reduction with renewable electricity sources to generate hydrogen and start moving towards 'green' steel," he stressed.

He said the company's vision is simple. "We have a technology platform that is ready to produce DRI using natural gas today, hydrogen if it is available, and increasing amounts of hydrogen as it becomes available in the future. We have the ability to make hot DRI available on-site for electric steelmaking and to make merchant HBI to ship to steelmakers. This lower CO₂ direct reduced iron is relevant not just to an EAF but also on a merchant basis, in the case of HBI, to the blast furnace and BOF to help with their transition," he explained.

There has to be an investment in low CO₂ metallics, he said. "From that point of view, you have to invest in a technology that allows you to make the right products today, at the desired quality, at a reasonable price, and with a lower CO₂ footprint, but also having the ability to get to zero carbon dioxide emissions over time. That is what Midrex offers," he explained.



He is clear about Midrex's management philosophy.

"We have two bottom lines: people and profits. If you just focus on the money side and do not take care of the people – and I mean our teammates, our customers, our community, and their families – then what have you gained? At the same time, you can't take care of people if you don't make a profit."

"It may surprise you, but at Midrex our stated purpose is to love and serve others. It is a recognition that most people will talk about serving customers and the notion of service, but the attitude you bring to how you serve is just as important as the act itself. We are a service company and that's where we really put our focus – serving people," he explained.

Building recycling in China

GEM chairman Kaihua Xu has worked on building a path for recycling in China since the mid-1990s.

Founded in December 2001, GEM Co, Ltd has become one of the leading battery recyclers and battery materials producers in China.

The company contributes to 10% of recycling of electronics wastes and 10% of discarded batteries in China, as well as 5% of automobile recycling in the country. The volume of cobalt it recycles has exceeded the primary cobalt mining yield in China, and its volume of recycled nickel is at a level equivalent to 8% of nickel from primary mining in China.

In addition, it supplies over 15% of global nickel-cobalt-manganese (NCM) and nickel-cobalt-aluminium (NCA) precursor materials. GEM, which stands for green eco manufacture, has also become the business philosophy and entrepreneurial faith for Xu (May 2021 issue of Metal Market Magazine).

Studying in Central South University, Xu chose to research recycling of tin from toothpaste tubes as his college graduation project in 1985.

"If I can extract tin from toothpaste tube wastes and produce the recycled tin into stannous sulfate, it will help to cut China's dependence on imported cargoes," Xu recalled.

The project was successful and inspired Xu to pursue recycling as his academic direction, while his interest in this area was further strengthened following the successful application of innovations in producing high-purity iron powders from recycled steel scraps.

The second half of the 1990s saw China starting to rely heavily on imported metallurgical raw materials. "Some of the Chinese cities with rich metallurgical resources became depleted; for instance, Daye in Hubei province, which was once the place of origin for the country's copper refining and manufacturing," Xu said.

He also noted that besides imports of overseas resources, a few giant refineries in China started to secure raw materials by acquiring or investing in mining projects outside China, but not all of them were successful.

Xu asked himself then whether there was a third path, and his answer was recycling. "We had a strong feeling in mid-1990s that China's own resources can't satisfy the country's manufacturing and economic development, [therefore,] we need to build a path of recycling," he said.

Xu went to Tokyo University in 2001 as a visiting scholar in the Yamamoto research lab, and the experience contributed to the change in his career path.

"The deepest impression I had was that Japanese research institutes didn't spend a lot of time and energy in researching metallurgical refining, instead, they focused on researching recycling, or in other words, utilizing urban mining," Xu said.

In addition, many giant enterprises in Japan were also dedicated to research and investment in recycling, he added.

"It shocked me when China was still relying on imports of ores and concentrates, Japan had already developed its recycled resources to replace

primary feedstock," he said. "I came to realize it should also be the way that China needs to take."

Ryoichi Yamamoto, a scientist dedicated to eco-innovation and Xu's tutor in Tokyo University, told Xu the green industry would be the largest industry among all, noting that the limitation of Earth was the limitation of the environment.

"On top of all, Yamamoto told me that scholars needed to commercialize their innovations instead of just doing research at campus." This brought a few reflections to Xu and pointed to a clear direction of what role he could play in the path of recycling in China.



Establishing GEM

Xu, together with two of his college friends, decided to establish a company to roll out the philosophy of green and eco, which they named as GEM.

"It represents a green aspiration," he said. GEM is the first company in China to put forward the concept of "resources are limited, recycling is unlimited," and started to implement urban mining.

GEM was founded in Shenzhen, a vibrant hub of consumer electronics in southern China. Xu said one of the reasons they chose to set up the company in that city was that it was a place where entrepreneurs could establish their business with minimal initial investments due to local government support, and what they lacked at that time was money.

The introduction by the EU of restrictions in 2003 on the use of several hazardous substances in consumer electronics, including lead, cadmium and mercury among others provided an opportunity. As a result, Xu and his business partners decided to research and commercialize lead-free solder in consumer electronics.

Even though GEM quickly developed a technological solution and obtained the patent at an early stage for lead-free solder in China, commercialization proved very difficult. "Commercializing this technology needed a lot of investments. Besides, the business required a high occupation of capital, but the payment period for electronics manufacturers was quite long," Xu said.

Making matters worse, the other two business partners decided to quit and pursue their academic careers instead. "I was really struggling and could barely afford the water and electricity fees for the operations, and even employees' salary," he recalled.

Despite those challenges, Xu persevered. Instead, he insisted on finding and developing a feasible recycling model.

"I had to stick to my initial aspiration. There needs to be someone who practised those recycling innovations in manufacturing in order to solve the



bottleneck of resources and the environment," Xu said. "We were seeking light in the darkness."

Turning points

A turning point came after Xu changed the business direction from lead-free solder manufacturing to battery recycling in 2003.

"I had to solve two problems – first, to find a business pattern that can generate cash; secondly, to find venture capital to invest in the operations," he said.

GEM started to recycle nickel and cobalt from battery wastes, which did not cost a lot to purchase, and then produced nickel and cobalt powder from them. The new opportunity was coupled with a policy tailwind when the Chinese government put forward the concept of the recycling economy in 2004, which helped GEM to obtain financial support from both government and venture capitalists. In that year, GEM got its first venture capital of five million yuan, which enabled the company to set up a new recycling and manufacturing plant in Hubei province, Xu recalled.

In 2009, China proposed the concept of low carbon emissions for the first time, which in turn put GEM in the spotlight in the capital market after it was listed in 2010.

"Being listed was a watershed for our business. After GEM was listed, the company set up 16 recycling parks in China," Xu said. "Before the company was listed, our sales revenue totaled 300 million yuan, but in 2019 it grew to more than 14 billion yuan."

Economic supply chain

In the past ten years, GEM has set up a practical business model and seamless supply chain.

Technology innovations have been the focus for GEM since recycling of electronics requires quite advanced technologies, he noted, adding that the company has invested 2.5 billion yuan in research and development in the past five years.

"To process scrap in an efficient and environmental-friendly way, you need technologies to reduce the harm to the surrounding environment to a minimal level. In addition, you also need technologies to recycle the valuable resources from scrap and produce them into value-added products," he said.

GEM has managed to identify a business and supply chain that is economically feasible and enables profit-making. The business and supply chain that GEM has established involves the solutions for two problems – namely, allocations of resources and energy conservation – which happen to be the essence of carbon neutralization, a mission that is prioritized and reiterated in China in recent years, according to Xu.

The company has built up an enclosed supply chain – including recycling nickel and cobalt resources from wasted batteries and producing NCM and NCA battery materials – a chain he described as the EV battery life value chain. "GEM has been prioritizing feeding on recycled resources instead of primary resources," he said.

With the expansion of the company's capacity to process scrapped batteries, the business is expected to cut its dependence on primary resources considerably in the following ten years. "At the current stage, the primary nickel and cobalt resources purchased by GEM accounts for 60% of the company's total feedstock; but by 2025, the share of primary resources is expected to drop to 40%; and by 2030, GEM can mostly be independent of primary resources, realizing an enclosed supply chain for nickel and cobalt," he said.

"We are working with global OEMs to recycle EVs. In the future, the EV battery supply chain will become a closed cycle," he said.

GEM is setting up a large-scale processing hub for scrapped EVs and EV batteries in Wuxi, Jiangsu province, aiming to build up recycling in the Yangtze River Delta, one of the regions in China which has seen the quickest

adoption of EVs, he said, adding that the hub is expected to operate in 2022. The hub has annual capacity to recycle 100,000 units of EVs and process 100,000 tonnes of EV batteries.

The company's target is huge.

"GEM aims to recycle 30% of global EV batteries by 2030, contributing to global carbon neutralization," he said.

Xu said that after meeting the targets he set for the company by 2030, he would retire. "I would continue to do innovation research on recycling since I have my own national-level research and development center and post-doctorate training platform to cultivate related talents," he said. "I am happy to return to research and contribute more innovations."

"Recycling is unlimited, innovation is also unlimited," he concluded.

International steel strategy

With responsibilities across Tata Steel's diverse international portfolio of steelmaking assets, CEO and managing director T V Narendran has a wide-ranging view of, and experience in, the global steel industry. He told Metal Market Magazine (June 2021) about the company's strategy to thrive in a changing world for major steel producers.

"We will always be guided by the principle laid down by our founder Jamsetji Nusserwanji Tata that the 'community is not just another stakeholder but the very purpose of our existence.' We faithfully put that into practice in all that we do," he said.

"Consider this – we in India traditionally had consumption-led growth and so steel-use growth in most years was less than our GDP growth rate. But now with the focus being on infrastructure building, I am seeing more investment-led growth and that is more steel intensive. I shall, therefore, be expecting steel consumption growth to mirror GDP growth or higher than that. This was the case with China for most of the past two decades," he noted.

He is also positive about global steel demand outlook in the context of governments from the US to China seeking to "spend their way out of trouble through big spending in infrastructure."

The way that Tata Steel went on adjusting production, domestic sales and exports month by month during 2020-21, depending on the severity of the global Covid-19 pandemic, is an example of the agility of a Narendran-led management.

Narendran said that Tata Steel's priority will at all times be to make maximum supplies of steel to the domestic market. "But in case there is demand fall here, we have the option to export," he added.

Besides his group's commitment to give preference to the domestic market, Narendran also has to contend with many import restrictions in the US and the European Union. He also cannot ignore the eagle-eye that New Delhi is keeping on steel and cement prices because they have a major cost impact on infrastructure development. Tata Steel has a target to raise crude steel production in 2021-22 to 18.3 million tonnes through mill debottlenecking.



Global experience

Narendran is a distinguished mechanical engineering alumnus of the National Institute of Technology, Trichy, India, and he has an MBA from the Indian Institute of Management Calcutta. He is also an alumnus of the CEDEP-INSEAD institution for executive development in France.

He joined Tata Steel as an executive on completion of his MBA in 1988. Over the years he was given assignments that ranged from international and domestic marketing to the handling of long and flat products, as well as managing NatSteel in south-east Asia, which was the steel group's first overseas acquisition, made in 2004.

Exposure to operations and marketing as well as a stint as principal executive officer to former managing director B Muthuraman prepared him to move to take up that role himself on November 1, 2013.

At 48, Narendran became the youngest managing director of Tata Steel, the crown jewel of India's largest conglomerate which also has a major presence in IT, automotive and retail sectors. On taking up the leadership role, Narendran set out to make Tata Steel a "global cost leader" through digitization of processes and functions, enhancing employee productivity, and improvement in logistical and supply-chain efficiencies alongside capacity expansion. The goal is to be "future ready, structurally, financially and culturally."

At the same time, Narendran is negotiating the challenge of holding on to an Indian steel market share of around 20% by expanding capacity, both organically and through acquisitions.

Planning and initial work for a greenfield steel mill at Kalinganagar in Orissa's Jajpur district began well before Narendran was made managing director. But his success in convincing the local community of the good that the steel plant would do in the region and speeding up project implementation enabled the commissioning of the 3 million-tonne-per-year mill in November 2015. Named the Kalinganagar plant, it is designed to produce hot rolled coil. It has a 4,300-cubic-meter blast furnace and a 5.8 million tpy capacity sintering unit.

Beyond commissioning, Narendran ensured that the mill achieved its rated capacity in a short time and that work started on second-phase expansion that will make Kalinganagar an 8 million tpy unit. But the challenge that he has given himself is to finally expand it to 16 million tpy. The available land, infrastructure and logistics will enable the Kalinganagar plant to become the country's largest single-site steel plant.

This project, together with the scope for significant capacity expansion at a mill in Orissa acquired in May 2018 and since renamed Tata Steel BSL (TS BSL), will give Tata Steel enough capacity for flat steel production in India.

Given these circumstances, Narendran's decision is to bid for future assets for long steel production.

His purchase of the steel business of Usha Martin Limited (UML) through a Tata Steel subsidiary, now called Tata Steel Long Products Limited (TS LPL), in 2019, and also his plans to bid for two public sector undertakings (PSUs) earmarked for privatization are seen as a strategy to secure a major profile in the long steel business. At Tata Steel's over 10 million tpy Jamshedpur plant, long products have a share of 3 million tpy. TS LPL has crude steel capacity of 1 million tpy, but its finishing capacity is only 650,000 tpy. The subsidiary's new management is ramping that up to 700,000 tpy through debottlenecking.

Narendran's immediate priority is to give a push to a capacity expansion by 5 million tpy of the Kalinganagar plant, after "we took a pause last year because of the pandemic." He is now poised to step up capital expenditure in view of a better market environment and a good outlook for steel prices. But he will not in any way "compromise on deleveraging the company." During 2020-21, the net debt of Tata Steel was pared by close to \$4 billion, and now he is targeting yearly debt reduction of \$1 billion.

"We should be completing the Kalinganagar expansion by 2023-24," said Narendran. But the 2.1 million-tpy cold rolling mill and the 6 million-tpy pellet plant "should be ready in the next financial year."

Other major features of the expansion are installation of a 5,800 cubic-meter blast furnace and raising the capacity of the hot strip mill to 6.5 million tonnes from 3 million tonnes. The expansion will enable Kalinganagar to make high-value-added cold rolled galvanized and annealed products, further strengthening Tata Steel's presence in automotive, general engineering and white goods sectors.

Narendran is confident of making Tata Steel a 25 million-tpy group by 2025. Beyond that, he will be working to take combined capacity at the company's present three sites to 40 million tpy – Jamshedpur to 14 million tpy, Kalinganagar to 16 million tpy and Angul to 10 million tpy.

In parallel with building new capacity through organic and inorganic growth, Narendran is working to protect Tata Steel profits at all times. "We have a multi-fold approach to reducing our vulnerability to the steel cycle," he said.

"First, we must remain among the most cost-efficient steelmakers in the world. This will ensure that we are the last group standing in a down-cycle and generate significant free cash flows during the up-cycle. Second, our focus will be on maintaining leadership in high-end segments such as automotive and oil and gas. Third, we will go on leveraging our brands and distribution and service center network to make deep inroads into B2C and B2ECA (emerging corporate accounts representing mainly small and medium enterprises)," he explained.

Innovative outlook

Narendran also has a strategy in place to make the company "bigger and stronger" in downstream businesses such as tube, wire and tinplate. "As we go forward, we will be seeking a good balance between capital-intensive and knowledge-intensive materials," he said.

This explains Tata Steel's growing investment in building a portfolio in graphene, fiber-reinforced polymers and ceramics. Narendran is targeting up to "30% of our revenues coming from services and solutions and new materials by the decade end."

He believes that Tata Steel should leverage the innovative potential of start-ups by way of collaborations and partnerships and he says a new "platform called 'Innoventure' has been created to take the idea forward. Though it is still at an early stage, we have started working with start-ups in several areas. We identify a problem, invite start-ups to make a pitch offering a solution and then decide who to work with." This trailblazing initiative has also become a model for some other corporations in India.

Narendran is keen to "embed circularity in Tata Steel business strategy." He wants the commissioning of the company's first 500,000 tpy steel recycling



plant at Rohtak in Haryana in July 2020 to be followed up by building similar scrap-processing units in other parts of the country. The group already has rich recycling experience in south-east Asia. Narendran wants to use that for "shaping the way recycling is done in India."

Narendran says the company is making "tremendous progress" both in Europe and India on the comprehensive digital transformation of steelmaking. "This digitization journey will not only take cost efficiency to another level through analytics and predictive maintenance, but it will also give our customers and suppliers a superior experience in working with us," he said.

"We are also banking on digitization for safety improvement, emissions reduction and quicker product development and project execution. We will remain engaged in leveraging technologies available today and which are in process of development," he explained.

South African mining champion

Kudumane Manganese Resources CEO Thembelani Gantsho is passionate about the opportunities for South African mining. He has first-hand experience of funding and operating a new mine and sees great potential for the nation's mining industry (July-August 2021 issue of Metal Market Magazine).

Since breaking ground in May 2012 and shipping its first ore in April of the following year, Kudumane Manganese Mine has established itself among South Africa's larger manganese miners, producing 1.8-2 million tonnes of ore per year.

Operated by Kudumane Manganese Resources (KMR) in South Africa's Northern Cape Province, 80 km northwest of Kuruman, the 250 million tonne resource project includes an open pit mine, mobile crushing and screening plant and chemical analysis laboratory. It ships its ore from the ports of Durban and Port Elizabeth, counting China, India and Russia among its export markets.

Kudumane Manganese Resources is headed up by a former investment banker who swapped investment banking "glamour" for the grit of manganese ore, a darling of South African mining that imparts strength in steelmaking. A finance graduate of Cape Town University in the mid-noughties, CEO Thembelani Gantsho has a varied resume with stints at blue-chip banking and mining giants, having alternated between those sectors for a few years.

"One gets lured by the glamour of investment banking. And it is lovely to watch a mining project from the ground up and navigate the difficulties of funding," he said.

After starting his banking career at Barclays-affiliated South African bank Absa Capital, Gantsho was eventually headhunted into Xstrata Alloys, a unit of mining giant Xstrata, which went on to merge with trader-miner Glencore in 2013. In his two years at Xstrata, he looked after platinum in a business development and strategy role, setting the foundations for a mining career.

"That's where I cut my teeth in mining. I enjoyed it; it was great fun," he said.

He was later headhunted back to Absa and is candid about finding his way back again to resources and a longer-term career at a miner, working his way up from head of sales, marketing and logistics to the helm of the company.

"I did it for a while and banking was not for me, I guess. Stroking egos to get business for the banks, I didn't really enjoy it," said Gantsho.

"The mining industry has given me vast opportunities to travel the world, meet international players and network. It's the opportunities that it has given me that have kept me stable in this company," he said.

Gantsho readily reviews his career development, but it is clear that what really impassions him is discussing the wider manganese market and, even more so, the future of South Africa's mining industry.

While his financial mind is always ticking, he balances miners' funding considerations and profit margins against how they fit into South Africa's wider strategy and future, which comes with other responsibilities.

"Once you're done, you need to leave a lasting legacy. We must leave an impact and make sure the community is better off. The benefit must not just be to the owners and the area must not be a barren land with the community in abject poverty," he warned.

"KMR's shareholders have set aside up to 10% of the economic benefit derived from the business for the benefit of our employees and local community. This goes beyond our current requirements but embraces the spirit of the latest Mining Charter," he said.



South African mining

Alongside his commitment to corporate social responsibility, he recognizes a need for South African mining to attract fresh capital, having lost some of its appeal in recent years. He sees these priorities as inextricably linked and in line with the South African Mining Charter.

The proportion of investment in Africa that goes to South Africa has shrunk drastically in less than a generation, Gantsho pointed out.

"Over a decade to a decade and a half ago, South Africa used to get the lion's share of Africa's mining capital investment. However, this has shrunk to below 5% based on Africa's latest mining capital internment figures. This is both for new and prospecting projects," Gantsho said.

"We have a sense that mining is a sunset industry, but there is lots of opportunity for it to be a sunrise industry. For mining to grow, you need to invest in prospecting. South Africa creates great opportunities, but capital has dried up," he said. He blamed the capital drought on frequent changes to the regulatory framework, which continue to spook investors despite the country being relatively stable politically.

South Africa's Mining Charter aims to radically improve black economic empowerment (BEE), community benefits and competitiveness under a number of transformation goals. It has been revamped twice, most recently in 2018, and although the government frames the charter's evolution as progression and agility, many, including Gantsho, believe the changes have meant uncertainty for investors, even though the intention is right.

"It's to do with regulatory uncertainty; constant changing of the rules. We are on our third iteration of the Mining Charter; even ministers have admitted some flaws and that creates uncertainty. The essence of the Charter is needed; it drives transformation and we need not be apologetic about that. But there needs to be stability in the rules," he said.



The kind of fears some investors have around political instability in some emerging economies and potential loss of assets should not apply to South Africa, Gantsho added. "When capital is deployed, it's protected. You're not going to have assets taken by government," he said.

AML's support

Gantsho helped bring Kudumane into existence in partnership with Dr Mandla Gantsho, former chairman of Sasol, Kumba Iron ore and Impala Platinum and a relative of Thembelani's, as well as Hirotaka Suzuki, founder of Hong Kong-headquartered Asia Minerals Limited (AML), the majority owner of KMR.

AML provides technical and marketing services for the mine, which also has a BEE partner, Afris Capital.

"I partnered with Dr Gantsho. He knew funding and I knew mining. We invested in Kudumane Manganese Resources and I moved up the ranks. Then we partnered with Mr Suzuki of AML and the relationship has gone from strength to strength," he said.

"We found an asset we fell in love with. It came up and we got to understand it and its applications. Once you understand it, it's easy to fall in love with it," he added. "You get to see the whole value chain; opening the pit up, doing your first shipment. We had no Transnet allocation, we had to find solutions. I started with no experience in logistics, but we had a great team. We found operators ready to work with us and there was a big push to get Transnet onboard."

Securing Transnet allocation is always a huge step for South African miners, who have to share the country's constrained capacity and often complain that they would export much greater volumes by rail if they could. Gantsho said achieving rail allocation was something he did through perseverance.

"Being in their face all the time until you build those relationships," he said.

Seeing the project through its early days has given Gantsho a great appreciation for AML's support, which came at a time when the risk profile of junior miners was unattractive to many investors.

"In the beginning when the operation started, AML still came to the party and funded from their own cashflows and they've been rewarded. The funding was a challenge from the banks, but our partner stepped up and allowed us to do it without the debt from banks. Due to the risk profile at the time, mining was not sexy for banks unless you were a major," Gantsho said.

"I applaud AML; they bet everything on developing KMR, having invested in excess of \$150-million and that investment has paid off. It is thanks to Mr Suzuki's visionary leadership that AML ventured into manganese mining and that's how KMR came to be," he added.

In handling Kudumane's ore marketing, AML has not been among those who Gantsho believes are pushing volumes at any cost, he said, adding that a solid client base has been established without such practices.

"I've enjoyed the partnership with AML and I appreciate the mentality of AML; not chasing volume and clients are with us whether the market is down or the market is up. They don't look to play the market; even when the temptation is there, they exercise restraint. It's not about what the market is doing it's about what the business needs," he said.

Gantsho believes his experiences rising in the company have also made him a better leader, better able to understand the challenges of his workforce. He is also more confident in letting them grow into their roles.

"My experience in logistics allows me to understand the challenges the guys have, and I am able to advise and provide solutions. You see the mistakes you made at the beginning. I'm privileged enough to have had direct involvement with elements of the business and allow them to be their own boss and not stifle their decisions," Gantsho concluded.

Building a global business

Satish Pai, chief executive officer of Hindalco Industries, built his own career in many roles around the globe and he is determined to see the major business he leads continue to thrive and grow in international markets (Metal Market Magazine September 2021).

Born in Bombay in 1961 into a middle-class family, Pai was the eldest of three sons. His father, who was an engineer, moved around with his job, which meant the family had also lived in Delhi. But it was Calcutta that had a huge impact on the young Pai.

"I spent most of my formative years in Calcutta, which is a very cultural place with strong political roots. Art, politics, music were a big part of my life growing up and it has made me who I am," he said.

Pai's mother was the driving force behind his education, pushing him to study hard and instilling in him the drive to succeed from an early age. He had attended St Lawrence High School, a Jesuit school for boys in Calcutta. It was one of the few schools in a large Indian city with a big playground, supporting Pai's passion for sport, which is something that has continued throughout his life. He was captain of his school soccer team, played cricket and studied karate, all the while managing to keep up with his "very academic" group of friends, he said.

After being accepted to the highly competitive Indian Institute of Technology (IIT) program, Pai opted to attend the IIT campus in Madras, Tamil Nadu. "I wanted to be independent and get away from home," he said. Pai embarked on a five-year mechanical engineering degree. Pai was once more the soccer captain there, and regularly played basketball, cricket and other sports.

"When I look back as a manager now, the team-building nature of sport taught me a lot of managerial skills that are important in my career and life," he said.

As he was about to enter his fourth year of the degree, Pai made a very savvy decision. His five-year degree was the last the IIT would run, and he was due to graduate at the same time as the inaugural four-year batch of students.

"I got worried that if two groups graduated in the same year, the competition for jobs would be intense," he said.

So Pai and a couple of his friends decided to take extra credits during their vacation months. It meant that he was able to graduate after four-and-a-half years instead of five, putting him six months ahead of the rest of the pack.

"I had respectable grades, a good sports record, and I was looking for the next step – a decent job," he added.

As he graduated early in December 1984, global oil and gas services conglomerate Schlumberger arrived in Madras to recruit graduates who could start immediately. It was, Pai said, one of the most sought-after jobs in engineering, in part because it gave its employees the opportunity to travel the world. He applied successfully.

"That's when things changed for me – it could have been very different," he added.



Success at Schlumberger

Pai succeeded in multiple roles at Schlumberger, taking up many international postings. His first trip outside India took him to Taiwan, before a move to training school in Brunei; after finishing the program, he was sent to Phitsanulok, Thailand, where he met his future wife, Wanvimon.

During a period of depressed oil prices in the mid-1980s, he did a short stint back in Brunei, before transferring to India and spending the next couple of years working on remote oil rigs across the country. His bosses from that period of his career were real mentors and "helped make me who I am as a manager today."

One of them recommended he become a petrophysicist, which was a break that Pai welcomed, taking him off the oil rigs and moving him to Paris to study at log analysis training school. It meant Pai could settle in one spot for a while, so he asked Wanvimon to marry him. After Paris, the newlyweds moved to Oman, where Pai worked as a log analyst, a multi-disciplined position that put his new training to full use.

After a while, Pai was on the move again when he was offered a role in human resources and moved to Houston, Texas for a job in a software company the group had recently acquired. "Today I tell people it was the most impactful job I've done in my career," Pai said.

Now in the US, he worked for three years with Rex Ross, whose company GeoQuest had been acquired by Schlumberger. He credits Ross for teaching him the basics of recruiting, training and compensation, skills that he discovered were a rite of passage within Schlumberger if you had management aspirations.

After his time in HR, Pai's family moved in 1996 to Russia, where he was in charge of the group's software division for Russia and the CIS. "I travelled all over Russia and to surrounding countries: Turkmenistan, Azerbaijan, Ukraine, Belarus... Russia was a lot like Calcutta at the time – some of the best mechanical engineering brains in the world and surrounded by art and culture," he reminisced.

His posting after that was in Aberdeen, Scotland, where his new role was to run Schlumberger's software for the UK, but Pai had only been there for a year before his career changed again. "I was noticed by management," he said.

It was 1999-2000, the dot. com boom, and the UK government wanted to create an online portal to sell oil and gas assets online. Pai led the team to bid for that business and created within Schlumberger an acquisition and development services company called IndigoPool.

"I went to Houston, started a little company for the group, began to do

presentations on Wall Street in New York, and suddenly had the spotlight on me. As IndigoPool president, the Schlumberger CEO got to know me, and then my career took off," he added.

Further senior management roles followed over the next decade, eventually taking Pai back to Paris. He ran Schlumberger Information Solutions, became the group's Vice President Technology, then President Europe, Caspian and Africa, Vice President Worldwide Operations and finally Executive Vice President Worldwide Operations. The only role left was, it seemed, Schlumberger CEO.

But it wasn't meant to be. "I was in the running for the CEO position. There were two of us; the company chose the other person. I was 50 years old, didn't get the top role, and so had to decide, what do I do? I was too old to rock and roll but too young to die!" he smiled.

"I stayed for two years to help support the new CEO and meanwhile started to look for new opportunities," he said.

Hindalco called

Pai got a call from the HR director at Hindalco, part of Indian conglomerate Aditya Birla Group. The pair met, and Pai was asked if he was interested in the role of Hindalco CEO. It would mean a move to Mumbai, India. He returned to his home country and started the process of learning an industry that was new to him: metals and mining.

Pai was part of a Hindalco CEO succession plan that began in August 2013, when he became head of the company's aluminium business.

"When I joined Hindalco, all the problems that can happen, happened straight away," he said.

Aside from falling London Metal Exchange aluminium prices, difficulties included the decision by India's Supreme Court to scrap all but four of the 218 coal mining licenses awarded from 1993-2010 after finding they had been awarded illegally, temporarily removing the energy sources for the company's smelters.

Hindalco had meanwhile invested \$5 billion in setting up the Mahan and Aditya aluminium smelters plus the Utkal alumina refinery, but the assets still were not up and running when Pai joined. And the company had yet to fully integrate Atlanta, US-based Novelis Inc, a leading aluminium rolled products and aluminium can recycling company that Hindalco had acquired in 2007.

"I was learning at the deep end of the pool," Pai said. But learn he did: first aluminium, then copper, which he now also headed after becoming deputy CEO in February 2014.

Fortunately, the copper business was doing well; until 2016, three-month prices remained above \$6,000 per tonne, before going through some tougher times as aluminium prices started their recovery. "I quickly realized a diversified portfolio allows you to ride out the cycles," Pai noted.

Now CEO, he was ready to make his mark and proposed a strategy to Aditya Birla chairman, Kumar Mangalam Birla.

"I told the chairman that I was going to make Hindalco and Novelis combined into one of the best international aluminium companies," he said.

"I wanted to be on the same stage as the other industry leaders and be respected for being the same level as them, not for being a good Indian aluminium and copper company," he added.

Pai set about ensuring Hindalco's processes, systems, working culture, safety and sustainability were operating at the top level. He also worked on a corporate cultural transformation, creating a management framework and bringing in new, young talent from outside the firm.

"That's the journey you're seeing at Hindalco now – we're now visible on the international stage, and people know what we stand for," he said.

"We're a big Indian company, and we're also now a big international company," he added.

Pai was a key architect of the deal to buy rolled aluminium products company Aleris. "I really pushed it," he said.

"I suggested to the chairman that rather than bring capital back to India, we should invest more in Novelis. The opportunities were so huge," he added.

Hindalco now owns a downstream aluminium company producing four million tonnes of rolled products annually. The company is focused on growing the combined group's downstream business in India and deleveraging its balance sheet, supported by strong cash flows across the divisions.

Pai's own experiences have made him push his employees to move around the company's operations when possible, citing benefits such as flexibility, compromise, and cultural awareness.

Having encouraged his children to pursue professions that made them happy, Pai said he would tell a new starter in the metals and mining world to "build a career in metals that have a future."

"It's very clear now that there are certain categories of metals that are going to have a long life, so get into those metals and pick a company that really believes in ESG [environmental, social and governance] because that company will have all the right characteristics to give you a good career," he said.

Passion for minor metals

As the director of sales, global supply chain, and trade compliance at Indium Corp, as well as Chair of the Minor Metals Trade Association, Donna Vareha-Walsh has a global view of markets for minor metals.

Vareha-Walsh found her passion for the metal industry almost by chance when working as a business consultant in 2001 with Jefferson Wells International, shortly after spending nearly three years as an international tax consultant for Ernst and Young.

"Back then, I was working with clients that were dealing with international businesses, helping them understand and reduce their overall total landed costs and supply chain and I worked with one particular customer that was dealing with challenges created by the 'Dot.com' crash and the move of manufacturing to Asia," she said.

"They had global operations and we needed to develop a strategy for them, given the challenges that low-cost Asian plants and raw materials presented," she explained (October 2021 issue of Metal Market Magazine).

The customer for that project was Kennametal – the company she would start working for in September 2001.

"This is how I joined the metals industry; I started as a Business Unit Controller and stepped out of finance and entered into the other side – the sales and operations side of it – after three years with the company," she explained.

"That was the biggest decision of my life." She hesitated at first because she was already good and confident in her finance skills and the other side was uncertain, but any fears she may have held about making the move did not change her choice. "I believe everything that happens will lead you to another road or provide you with experiences that make you successful later."

Indium Corp is a US-based company that provides advanced electronics assembly materials, and trades high-purity metals as well as compound products made from the minor metals indium, gallium, and germanium, where Vareha-Walsh has responsibility for the company's supply chain, international trade, and logistics, while also leading global sales for the metals, the metal compounds, and the recycling business unit.



INDIUM CORPORATION

Dealing with ups and downs

Dealing with the market impacts of the global Covid-19 pandemic has been one of a number of major metal market disruptions Vareha-Walsh has successfully worked through during her career. What tips does she have for responding to them?

"I think from a supply-chain perspective on managing metals, the one thing that you always want to do is position yourself so that you don't have 100% where you believe your forecast and demand is, but you make decisions based on a variety of factors," she said.

"Each metal is different, but you really need to assess each one and determine what supply chain strategy you should have. You need to ask yourself a series of questions: How much should we have on a long-term contract? Where does the material come from? How does the supply-chain situation look going forward? Are we accessing all the different elements that could trigger either the lack of material or a significant increase, or vice versa?"

"Decide on a sourcing strategy which could be 75% on commitment to 25% on the spot market, or some version of that," she said, explaining that different percentages depend on how you use or sell or the customer pricing strategies.

Vareha-Walsh has learned how to set such ratios over the years. She has extensive experience in cross-commodities markets, including APT, tantalum, and cobalt during a decade with Kennametal, followed by three years with nickel, chrome, moly, niobium, etc. with specialty alloys producer Carpenter Technology Corp (as their director of global procurement).

Since joining Indium Corp in 2015, she has focused on tin, silver, and gold, and the minor metals indium, gallium and germanium. She has held different positions in the company and still sees great opportunities for the business to grow further. "I wake up every day to keep our company competitive," she said.

Her background in international tax and finance has been a big asset in working in the metals industry, as have her studies in accounting, finance, and business. She holds a bachelor's degree in finance from Duquesne University, an MBA from the University of Pittsburgh, and was also a certified public accountant.

She relishes the variety of responsibilities that her career in metals has provided. "The biggest highlights of my career are having had the opportunity to work in various functional capacities... being able to work in finance, in sales, and operations," she said.

**MMTA Chair**

Alongside her demanding role with Indium Corp, in 2020, Vareha-Walsh was elected Chair of the Minor Metals Trade Association (MMTA), a not-for-profit organization that comprises companies actively involved in all aspects of the international minor metals sector.

Vareha-Walsh is the first female and first American Chair of the MMTA, but when that was mentioned in discussion, she stressed instead the importance of hard work to make career progress rather than focusing on her gender.

"Yes, I am the first woman in this position, but I am not sure why there have not been others. Throughout my career, I have never felt that being a woman has put me at a disadvantage," she said. "I think that anyone that works hard and makes sure that they understand their job can excel at it. If you work hard, the opportunities will follow."

She has big plans for the MMTA. "We want to make sure that we keep and grow the spirit of the MMTA," she said.

Bringing more industrial players into the association and increasing the membership is one of her priorities. "I think that we have a lot of opportunity to further penetrate the overall minor metal industry from mine to consumer," she explained.

Equally important for the MMTA is to increase business networks and access to policy making, giving guidance on the implications of duties or tariffs and any practical information that is important to anyone buying or selling minor metals, from warehousing to transport or trade regulations.

MMTA conferences, seminars, and other major events play a key role in the minor metals industry. Among them, Vareha-Walsh, an enthusiastic presenter, is a well-known face to be found at many conferences or business meetings.

New applications

New applications for minor metals are driving changes in their markets. In particular, Vareha-Walsh sees potential from the Internet of Things, 5G, and, especially in the US, automation. In these areas, germanium, used in infrared lenses, and gallium, a key component for the development of 5G networks through gallium arsenide and gallium nitride semiconductors, have great prospects in the years ahead, she said.

Other factors, such as recycling, are important too, as the circular economy has created a shift in the use of metals from a production- to-disposal mentality towards re-use and recycling. Many minor metals are well-suited to this shift in economic model because they have recycling loops of high economic value.

"There's a lot of focus going forward on the end-of-life of electronics that are absorbing all these metals and then bringing them back into the supply chain through recycling," said Vareha-Walsh.

Leading a team

Sharing her knowledge about the intricacies of the markets with her team so that they can apply it in their own way is one of Vareha-Walsh's biggest passions. "I really like developing people from all over the world," she said with a smile on her face. "They bring a lot."

"I have a super team; very dedicated professionals that work hard. It is my team that allows me to be successful." The team she leads is global, with its members based in China, South Korea, Malaysia, Europe, and the US.

"I'm used to working as a global team – 7am meetings work well to have everyone on board," she said. Her day starts with Asia, then Europe and North America, to focus on Asia again after 7pm. She is always 'on call' if anything urgent needs to be addressed, she said, but she also knows how to delegate as a matter of trust and as a form of empowerment.

"I like to make sure that my teams are empowered; I provide the strategy

direction and objectives, and they decide the course," she said. She and the team pursue every avenue in which they see an opportunity, she said. While she works for a big company, its culture is entrepreneurial.

For her, the role of a mentor in every stage of career development has been greatly valued. Her mentor at the global tungsten company she worked for, Gary Weissman, supported her to achieve many of her goals and take the leap out of finance into sales and operations.

"It is important that a mentor is judgement-free; that you can ask questions about any topics you are trying to deal with; and that they're someone that you can talk to openly and freely," she explained.

She wants to do the same for her colleagues. "Even as a sales director, I can share with them experiences from procurement that can be useful when they're coming to sell a product."

Her advice to people new in the industry is to learn as much as they can, to understand how the pricing is set, and understand the players in the markets and the import/export environment. "Looking for opportunities, looking on how to make your company competitive. Never stop learning," she concluded.

World-class copper mining

Kathleen Quirk, the president and CFO of US copper producer Freeport-McMoRan, stresses teamwork and the strength of her colleagues (November-December 2021 issue of Metal Market Magazine).

She attended Catholic schools throughout elementary and high school, where she was very active in team sports, including swimming, softball, volleyball and basketball. "I really feel it helped me in growing and in my career in terms of working with people in a team. I wasn't the best athlete on the team, but I really enjoyed the teamwork and interaction," she said.

"I learned about compassion for others from my mother. This has carried through in my life and during my career," she added.

She was also involved in student council activities throughout school, which taught her leadership skills. It is clear that Quirk, a gregarious and outgoing student, enjoyed having fun.

"I was a good student, not the best. I enjoyed the full program of activities at school, not just academics, but everything it had to offer," she added.

When the time for university came, her father – then the CEO of an engineering firm in New Orleans – gave her some advice: pursue accounting.

"He was an engineer, which I never considered as a career. My dad encouraged me to look at accounting; he felt it would provide a good base level of education that would allow me to do other things beyond accounting," she recalled.

She attended Louisiana State University (LSU), about an hour away from New Orleans in Baton Rouge, the flagship college in the state. It was a much larger educational venue than she was used to and brought her into contact with people from all over Louisiana as well as the country.

"I loved LSU. I had several friends from New Orleans, but one of the neat things was I made a lot of new friends that are lifelong to this day," Quirk noted.

Many of those friends were members of her Delta, Delta, Delta sorority, which was, she said, not just a social experience but a development opportunity in leadership.

"I got involved in the organization and leadership of the sorority and really learned about working with people, challenges and budgets," she said.

With limited fellow accounting students in her sorority, Quirk also established strong friendships with others in the accounting program with whom she studied several times a week.



"They were incredible in terms of their knowledge of accounting; it was really good discipline for me and really helped," she added.

When her graduation came around, Quirk upped sticks and moved to Dallas, Texas.

After interviewing with Mobil Oil, she started working in the tax department at the company's Dallas accounting center. It was interesting work; Quirk got exposure to the natural resources industry, particularly Mobil's international projects. But after a few years she began to look for a role in a corporate headquarters, with the intention of better understanding a company's overall strategy. She joined Freeport's tax department at the company's headquarters in New Orleans.

Adkerson became its CFO. The mining business was developing the Gresik smelter in Indonesia, an "enormous negotiation," as well as forming strategic partnerships to raise capital to fund Grasberg. Rio Tinto made an investment and became a partner in Grasberg in 1995.

After Goodyear's departure from Freeport, Quirk moved into the Treasury group and started working more closely with Adkerson in a partnership that flourished. By the time she became Treasurer in 2000, Freeport's focus was on mining at Grasberg, with a small oil and gas company.

Phelps Dodge deal

By 2003, as China emerged as a major developing economy, copper prices started to move higher. At year-end, Adkerson became CEO and Quirk stepped into the CFO role. The two of them started thinking strategically about the future of the company.

"We thought during that time that one of the larger miners would buy us, given the Grasberg asset and the simplified company structure, which had been cleaned up," she recalled. "We considered a number of things, but nothing panned out, so we started thinking strategically about Freeport as a continuing standalone company," she said.

In an unexpected twist of fate, the opportunity to buy the larger miner Phelps Dodge came along, which was the largest deal ever done in mining at that point and one that Quirk said transformed Freeport into a more globally diversified company.

Following a successful integration and with copper prices buoyant, business was good until the global financial crisis of 2008, and a collapse in copper prices. "We had to make really hard decisions and develop business plans allowing us to cut costs and capital that all the teams would embrace. We've had to do it on a couple more occasions since then, and while they have been a little different each time, the theme is the same in that people came together, rolled up their sleeves and figured out what to do," Quirk recalled.

By 2011 Freeport was debt free, copper prices were at record highs, and the company's share price was riding high. But things changed when Freeport started to run into contract issues in Indonesia and an ill-fated investment in oil and gas – driven by the board at the time and not by management – the following year, which created significant debt.

Quirk and Adkerson subsequently worked through a company restructuring and managed lengthy negotiations with the Indonesian government, which culminated in agreement in December 2018.

"What I've learned in my career at Freeport is that finding common ground with whomever you're dealing with is very important. We needed to defend our rights and contract but listening and thinking about the long-term was also important. Everybody needed to come to the table and figure it out," she said.

"By 2018, we'd already invested billions of dollars in Grasberg. Richard always says, making the multi-year investment to develop the underground before settling the contract issue was the biggest risk he has undertaken as CEO. If we hadn't gotten the right structure with the government, the consequences would have been negative for all stakeholders," she said.

"But it's all worked out really well; it's a great asset for Freeport, the Indonesian government, the workers, the communities and the industry too," Quirk added.

Mentors and mining

Quirk has had several mentors throughout her career, including senior executives like Goodyear, former Freeport Chairman Jim Bob Moffett, as well as Adkerson. At the same time, she has learned much from colleagues in the teams she has worked alongside over the years, including now.

"I learn not just from people I worked for, but also from the people I work with. Everybody is really talented – I really try to listen to what people have to say, because it's really hard to make decisions unless you put yourself in other



Freeport

It was 1989, the year after Freeport-McMoRan had discovered the Grasberg copper and gold deposit in Indonesia, a game-changing asset for the company, which was soon to be one of the industry's greatest mines.

The company had a very entrepreneurial style that she instantly enjoyed, Quirk said. The role was demanding, but fun, and at an active time for the company, which owned a number of publicly traded companies, including sulfur, fertilizers, gold, and oil and gas, as well as a publicly listed holding company.

Coincidentally, in the same year current Chairman and CEO Richard Adkerson joined Freeport, along with Chip Goodyear, the future head of BHP Billiton.

"Richard and Chip initially didn't have specific well-defined roles, but they were creating a lot of energy and velocity in restructuring the company. I thought at the time I needed to try to get into their group," Quirk recalled. There was an opening in investor relations, dealing with its interface with the tax department; Quirk moved into the role and ran the group. It was here that her interest in the institutional aspect of the business blossomed, she said.

From there, she had an opportunity to move into finance and business development for Freeport's fertilizer business, run by Goodyear; Adkerson was in charge of oil and gas, plus the development of Grasberg. Their team worked together, with plenty of interaction. Richard and Chip were true partners and close personal friends, she said. It was a dynamic environment.

"I worked directly for Chip for several years. I've been so fortunate to have worked with people who are so good at what they do. I was a sponge, learning as much as I could from these great people," Quirk said.

In 1992, Goodyear became Chief Development Officer of Freeport while

people's shoes," Quirk said.

Quirk noted that after being driven by the technical side for so long, non-technical skills have become critical in the mining sector.

"When I was growing up, I don't think I even knew what mining was. I don't think people have the appreciation for the types of disciplines that add value in our industry – it's such a broad-ranging sector," she said.

"We need to do a better job to educate people, so they don't think they need to get into a large haulage truck to do their job at Freeport. That's an important part of what we do, of course, but we have a lot of different roles that cover a whole gambit of opportunities, so education around that is going to give us a broader pool of people," she added.

For Quirk, this includes creating a more inclusive industry, she said, adding: "Having an inclusive environment where people have a voice and can contribute, to me that goes a long way."

In March 2022, Maree Robertson will become senior vice president and CFO of Freeport-McMoRan, reporting to Quirk, who was appointed president in February 2021 in addition to her present role as CFO. Robertson served as CFO, Energy and Minerals of Rio Tinto Group since 2019.

Trade log: Cobalt sulfate 20.5% Co basis, exw China, yuan/tonne

By pricing@fastmarkets.com - Friday 14 January

The Cobalt sulfate 20.5% Co basis, exw China, yuan/tonne trade log including business, bids and offers reported to Fastmarkets.

Fastmarkets publishes trades logs for its key price assessments and indices to bring more transparency into the markets it covers and the pricing process it applies.

Fastmarkets assessed Cobalt sulfate 20.5% Co basis, exw China, yuan/tonne at 104,000.00-105,000.00 on Friday January 14, 2022.

- Prices indicated at ¥105,000.00
- Offer at ¥106,000.00-108,000.00
- Purchase at ¥105,000.00 for small tonnage
- Offer at ¥105,000.00
- Prices indicated at ¥104,000.00
- Prices indicated at ¥103,500.00-105,000.00
- Offer at ¥106,000.00-107,000.00
- Prices indicated at ¥104,000.00
- Prices indicated at ¥103,500.00-104,500.00
- Offer at ¥108,000.00
- Prices indicated at ¥104,000.00-105,000.00
- Offer at ¥105,000.00-106,000.00
- Prices indicated at ¥106,000.00
- Prices indicated at ¥105,000.00

Any data submitted under a Data Submitter Agreement (DSA) will not be published.

To see all Fastmarkets' pricing methodology and specification documents, go to <https://www.fastmarkets.com/about-us/methodology>.

Fastmarkets uses its expert judgment to exclude outlying or unrepresentative numbers, and discount or discard prices that it believes may otherwise be questionable and/or unreliable.

China's planned manganese flake output cuts in Q1 not causing panic yet

By Cristina Belda, Jessica Long - Friday 14 January

The manganese flake market has started the year with lower production from the main producers in China and market participants are now assessing whether the cuts will lead to a severe tightness or shipments on the water will be sufficient.

Production cuts were announced after a meeting held in late December by the Manganese Innovation Alliance, an industry group formed by more of 40 electrolytic manganese producers in China. This group was formed in October 15 to "form an industry coordination operation mechanism, improve product quality and efficiency, and promote the healthy development of the industry," it said.

Fastmarkets has seen an official document from the alliance, which says that the main producers will suspend production during the first quarter. More than half a dozen market participants, some of them direct customers of Ningxia Tianyuan Manganese Industry Group, the country's largest producer, have also been notified about the production cuts.

The news came after Ningxia Tianyuan said in November that it planned to [cut electrolytic manganese flake throughout February and March](#).

The production cuts will remove approximately 140,000 tonnes of electrolytic manganese flake from the market, a source with knowledge of the matter said.

China's manganese flake production, which accounts for more than 95% of global output, is currently around 100,000 tonnes per month, the same source estimated.

Fastmarkets' price assessment for [99.7% electrolytic manganese flake, fob China](#) was \$6,500-6,700 per tonne on Friday January 7, up by \$100-200 per tonne from \$6,300-6,600 per tonne a week earlier.

Production of manganese flake in Xiushan, Chongqing, has been shut down by the end of 2021 in alignment with China's environmental protection policies and requirements to weed out obsolete facilities, a second producer source said.

"I think the price rise has its support. Manganese flake production across the country will be largely eliminated, and I hear that there will be no more than 20 producers left in 2022. The spot supply tightness will continue for quite some time," a market participant in China said.

Environmental protection measures will intensify ahead of the February 4-20 Beijing Winter Olympics. These, along with upgrades to production capabilities and maintenance, will continue to tighten spot supply, sources in China said.

No price increases in Europe yet

Meanwhile, in Europe, the market remains divided: some participants downplay the effect of the production cuts and expect shipments to ease any tightness, while others are increasingly bullish due to the heavy dependence on China.

"There is a lot of material on the water - people were buying in November and December for March, [being] aware of the difficulties. So the question is basically - how long can the market live for that supply, [and] will the supply on the water be enough?" a European trader said.

The shipments on the water are already sold to customers, however, and traders have little spare inventory, Fastmarkets understands. But traders have not seen drastic increases in orders or prices so far.



"It is quite clear that irrespective of the loudly announced production cuts, there is no panic buying in the market yet and customers can procure the quantity they need and at competitive pricing for now," a second trader in Europe said.

"Whether this is buffer built up prior to the cuts being [put into] action, who knows? But it is clear there is no shortage on shipment material yet."

For instance, by the end of last week, a German steelmaker completed its buying of 1000 tonnes just below \$7,000 per tonne, Fastmarkets heard. Even though it was not for prompt delivery, this sale signals that prices are not rising drastically.

"I don't think [major steel mills have] bought all their needs, but shipments to Rotterdam are relatively easy to get and costs are stable," a third trader said.

Fastmarkets' price assessment for manganese, 99.7% electrolytic manganese flake, in-whs Rotterdam was \$7,100-7,400 per tonne on Wednesday January 12, down by \$200-300 per tonne from \$7,400-7,600 per tonne a week earlier. At the beginning of 2021, the price stood at \$2,120-2,280 per tonne.

Some traders say it is "a matter of a time" for prices to increase and they have stopped offering material on a spot basis.

"We are not offering anything because we expect the market to be very tight, and we are holding on to the material we have. We are very bullish on pricing," a fourth trader told Fastmarkets.

Supply and demand

The balance between supply and demand will be key, sources said, and the market is eyeing buying appetite from steelmakers. Nearly 74% of manganese flake demand is derived from the steel sector, where it is primarily consumed in the production of 200-series stainless steel.

"One has to consider the fact we have two demand centers being Europe and China facing headwinds from production cuts or exorbitant energy prices at the moment versus the widely announced production cuts on flake so it's a question of what wins out?" the first trader said.

Some expect less stainless steel production in the first quarter due to plant maintenance as well as a break due to the Chinese New Year offsetting lower production of manganese flakes.

In the medium term, stainless steel production in China is set to rise, and stands to benefit from the country's push for decarbonization. The post-pandemic economic recovery, especially in Europe and the United States, may also lead to a significant increase in demand for stainless steel, which will in turn drive Chinese exports of such products, market participants said.

Ores and alloys

Global ferro-silicon prices stable amid year-start lull in demand

By Declan Conway, Chris Kavanagh, Jessica Long - Friday 14 January

Key data from Fastmarkets' pricing sessions in China, Europe and the United States on Friday January 14.

China's apparent stainless steel consumption in the first nine months of 2021 totaled 20.35 million tonnes, up by 1.85 million tonnes (10%) from a year earlier, according to data released by the China Stainless Steel Council (CSSC).

Domestic demand in China will also have support from infrastructure investment, market sources said. Local governments have announced the start of several major projects in the first quarter of 2022 that involve a total investment of some 3 trillion yuan (\$471 billion).

Covid-19 risks

Beyond fundamentals, the wave of infections of the Omicron variant of Covid-19 is also causing logistical disruptions to persist.

"Although the fatality rate of the Omicron variant of Covid-19 is far lower than its predecessors, the high rate of infections is beginning to undermine the availability of key workers. [...] This could extend into the global supply chain again and undermine the movement of goods and people," Fastmarkets base and precious metals research analyst Andy Farida said.

China has reported more outbreaks and strict lockdown measures are back in place in parts of the country under its "zero Covid" strategy. Tianjin, a major port city near Beijing, started city-wide testing for Covid-19 on January 9 after more local cases of the Omicron variant were detected there.

Shaanxi province's capital Xi'an remains in a lockdown after three weeks, while tech hub Shenzhen has implemented strict control measures after a third case was reported recently.

Henan province's capital city, Zhengzhou, is also implementing partial lockdowns after reporting 42 new cases on the morning of January 8.

"Everyone is waiting for more information from the local authorities because there are no clear guidelines, even [logistics companies such as] DHL or Fedex are not working normally," a manganese flake distributor source in China said.

Amid the uncertainty, market sources have pointed to alternative trade routes as part of a worst-case scenario.

"Even if the Port of Tianjin closes due to Covid-19, a lot of flake [can still come] via the south, [such as through] Huangpu, Shanghai and other ports.

"Chinese traders and producers need cash and will sell. The same will be for Western traders because these price levels make flake business quite expensive," the third European trader concluded.

GLOBAL FERRO-SILICON PRICES

	New price	Previous price	% Change
Ferro-silicon 75% Si min export, fob China, \$/tonne	2,000-2,050	2,000-2,050	0
Ferro-silicon 75% Si min, in-whs China, yuan/tonne	9,300-9,500	9,300-9,500	0
Ferro-silicon 75% Si min, cif Japan, \$/tonne	2,050-2,100	2,030-2,080	▲0.97%
Ferro-silicon lumpy basis 75% Si (scale pro rata), delivered Europe, €/tonne	2,800-3,300	2,800-3,300	0
Ferro-silicon 75% Si, in-whs Pittsburgh, \$/lb	3.30-3.40	3.30-3.40	0%

Source: Fastmarkets

China

- The China ferro silicon market was stable over the week, but market sentiments improved slightly with more active inquiries.

- With the Chinese new year approaching, steel mills were stocking up.



Transportation difficulties, plus the effects of Covid-19 infections, will give some support to the price.

- Currently, the domestic market was a little oversupplied because many steel mills have replaced some stock before the new year, and downstream steel demand was not very strong.
- Semi-coke enterprises in Yulin, Shaanxi province, were undergoing security and environmental checks, and semi-coke prices have gone up, which boosted market confidence.

Europe

- The market extended its steady start to the year in the week to January 14, despite few deals being reported and no sign yet of renewed consumer buying inquiries.

• One deal was reported for about 100 tonnes of standard grade material, slightly above the top end of the current range, although it was for delivery later this quarter and with special qualities.

- Suppliers were holding their offer prices steady, however, in expectation of a quick return by consumers to the spot and longer-term markets, confirmed to Fastmarkets by some consumers this week.

• Ferro-silicon production has been reduced in Europe in the past 12 months or more, and replacement costs appear more expensive currently, with persistently high freight rates and worries about container availability due to Covid-affected port disruptions in China, such as at Tianjin; international container costs were already reported to be climbing again after easing from record peaks last year.

United States

- The US ferro-silicon market remained steady once again over the week with consumer buying interest thin at the start of the year.

• Current prices continued to be underpinned by the limited stocks available, despite the declines in prices seen globally during the latter part of 2021.

- Market participants suspected that prices would be held over for the near term while activity remained low.

Fastmarkets AMM: Ferro-alloys January 14

By Chris Kavanagh - Friday 14 January

The latest ferro-alloy prices from Fastmarkets price reporters.

		FERRO-ALLOYS			
PRICE DESCRIPTION	LOCATION	CURRENT PRICE	ASSESSMENT DATE	PRIOR PRICE	ASSESSMENT DATE
FERRO-SILICON					
Coke-free, South Africa, 100% concentrate, 42% Si, 10% C, \$ per tonne					
South Africa	180	29-Sep-18	180	21-Sep-18	▲ 2 ▲ 1.0%
Turkey	220 - 230	29-Sep-18	220 - 230	21-Sep-18	0 0%
Ferro-silicon, high carbon					
Ferro-silicon, 8-9% Si, max. 10% Cr, max. 2%, United States (in-warehouse Pittsburgh), \$ per tonne	USA	1,25 - 140	27-Sep-18	1,25 - 140	20-Sep-18 ▢ 10.0% ▢ 1.0%
EU	1,15 - 120	29-Sep-18	1,25 - 130	21-Sep-18	■ 10.0% □ 1.0%
Ferro-silicon low phosphorus, min. 85% Cr, max. 7% C, max. 1% Si, max. 0.015% P, max. 0.01% Ti, \$ per tonne	EU	1,25 - 135	21-Sep-18	1,25 - 145	27-Sep-18 ▢ 7.1% ▢ 1.0%
Ferro-silicon Japan Import, 8-9% Si, max. 10% Cr, \$ per tonne	Japan	0.80 - 0.93	27-Sep-18	0.80 - 0.93	20-Sep-18 0 0%
Ferro-silicon South Korea Import, 8-9% Si, max. 10% Cr, c.i.f. South Korea, duty unpaid, \$ per tonne	South Korea	0.85 - 0.98	27-Sep-18	0.85 - 0.98	20-Sep-18 0 0%
Ferro-silicon China Import, charge chrome 32% Cr, India, c.i.f. Shanghai, duty unpaid, \$ per tonne	China	0.84	29-Sep-18	0.83	21-Sep-18 0 □ 1.2%
Ferro-silicon China spot, 8-9% Cr, min. 85% Cr, delivered duty paid, FOB per tonne	China	7,100 - 7,200	29-Sep-18	7,000 - 7,200	21-Sep-18 ▢ 1.0% ▢ 0.7%
Ferro-silicon China contract, 8-9% Cr, min. 85% Cr, delivered duty paid, FOB per tonne	China	8,000 - 8,100	29-Sep-18	8,000 - 8,000	21-Sep-18 ▢ 3.0% ▢ 4.4%
Ferro-silicon European Benchmark Indicator, Lurey 52% Cr, charge cents 32% (per tonne high carbon), \$ per tonne	EU	1.10	29-Sep-18	1.10	21-Sep-18 0 0%
Ferro-silicon Turkey Cr, charge cents 32% Cr, quantity, major European destination, \$ per tonne	EU	1.20	22-Oct-18	1.40	23-Apr-18 ▢ 10.0% ▢ 2.0%
Low carbon					
Ferro-silicon 12.10%, max. 85% Cr, United States (in-warehouse), duty paid, FOB, Pittsburgh, \$ per tonne	USA	2.00 - 2.1	27-Sep-18	2.00 - 2.10	20-Sep-18 0 0%
Ferro-silicon 12.00%, min. 85% Cr, United States (in-warehouse), duty paid, FOB, Pittsburgh, \$ per tonne	USA	2.05 - 2.4	27-Sep-18	2.30 - 2.4	20-Sep-18 0 0%
Ferro-silicon 12.00%, min. 85% Cr, United States (in-warehouse), duty paid, FOB, Pittsburgh, \$ per tonne	USA	2.00 - 2.08	27-Sep-18	2.00 - 2.07	13-Sep-18 ▢ 0.0% ▢ 0.4%
Ferro-silicon 12.10% Cr, average 85-10% Cr, major European destination, \$ per tonne	EU	2.25 - 2.30	21-Sep-18	2.25 - 2.4	27-Sep-18 ▢ 0.0% ▢ 1.0%
Ferro-silicon 12.00% Cr, average 85-10% Cr, European destination, in warehouse, \$ per tonne	EU	2.20 - 2.37	21-Sep-18	2.20 - 2.4	27-Sep-18 ▢ 0.0% ▢ 1.0%
FERRO-MANGANESE					
Manganese ore, 44% Mn, c.i.f. Tampa, \$ per tonne					
China	7.20	29-Sep-18	7.00	21-Sep-18	▲ 2.0% ▢ 2.9%
South Africa	9.10	29-Sep-18	9.20	21-Sep-18	▲ 0.0% ▢ 1.0%
Ferro-manganese					
High carbon					
Manganese 10% Mn, standard 7.3% Cr, United States (in-warehouse Pittsburgh), \$ per tonne	USA	1,300 - 1,400	27-Sep-18	1,300 - 1,400	20-Sep-18 0 0%
Manganese 10% Mn (grade per tonne), standard 7.2% Cr, major European destination, \$ per tonne	EU	800 - 1,000	29-Sep-18	800 - 1,000	21-Sep-18 0 0%
Manganese 10% Cr (Chinese free market), min. 85% Mn, max. 7.2% Cr, in-warehouse, FOB per tonne	China	7,300 - 7,500	29-Sep-18	7,300 - 7,500	21-Sep-18 0 0%
Medium carbon					
Manganese medium carbon, min. 85% Mn, max. 1.0% Cr, in U.S. warehouse, \$ per tonne	USA	1.14 - 1.18	27-Sep-18	1.14 - 1.18	20-Sep-18 0 0%
USA, min. 0.80% Cr, in U.S. warehouse, \$ per tonne	USA	1.21 - 1.23	27-Sep-18	1.21 - 1.23	20-Sep-18 0 0%
Inner Pittsburgh, \$ per tonne	USA	0.81 - 0.85	27-Sep-18	0.81 - 0.88	20-Sep-18 ▢ 10.0% ▢ 1.0%
10-15% Cr (grade per tonne), major European destination, \$ per tonne	EU	800 - 1,000	29-Sep-18	800 - 1,000	21-Sep-18 0 0%
EU, min. 0.80% Cr, in-warehouse, FOB per tonne	EU	1,000 - 1,100	29-Sep-18	1,070 - 1,100	21-Sep-18 ▢ 7.0% ▢ 3.0%
China, min. 0.75% Cr, in-warehouse, FOB per tonne	China	8,400 - 8,500	29-Sep-18	8,400 - 8,700	21-Sep-18 ▢ 10.0% ▢ 1.0%



IT IS A VIOLATION OF FASTMARKETS AMM COPYRIGHT TO PHOTOCOPY OR REBROADCAST THIS PRODUCT

Offers rise for portside manganese ore in China on logistical problems

By Declan Conway, Chris Kavanagh, Jon Stibbs, Siyi Liu - Friday 14 January

Key data from Fastmarkets' pricing sessions in China, India, Europe and the United States on Friday January 14.

GLOBAL MANGANESE ORE AND ALLOY PRICES			
	New price	Previous price	% Change
Manganese ore 44% Mn, cif Tianjin, \$/dmtu	5.44	5.46	▼0.4
Manganese ore 37% Mn, fob Port Elizabeth, \$/dmtu	3.38	3.23	▲4.6
Manganese ore index 37% Mn, cif Tianjin, \$/dmtu	4.51	4.51	0
Manganese ore port index, base 44% Mn, range 42-48%, fob Tianjin China, yuan/dmtu	43.20	42.10	▲2.6
Manganese ore port index, base 37% Mn, range 35-39%, fob Tianjin China, yuan/dmtu	34.30	33.90	▲1.2
Ferro-manganese high carbon 78% Mn, standard 7.5% C, in-whs Pittsburgh, \$/long ton	2,600 - 2,650	2,600 - 2,650	0
Ferro-manganese medium carbon 80% Mn, max 1.50% C, in-whs Pittsburgh, \$/lb	2.55 - 2.60	2.55 - 2.60	0
Ferro-manganese basis 78% Mn max, standard 7.5% C, delivered Europe, €/tonne	1,500 - 1,550	1,500 - 1,550	0
Ferro-manganese 65% Mn min, max 7% C, in-whs China, yuan/tonne	7,400 - 7,600	7,200 - 7,500	▲2.0
Silico-manganese lumpy 65-75% Mn, basis 15-19% Si (scale pro rata), major European destinations €/tonne	1,550 - 1,600	1,550 - 1,600	0
Silico-manganese 65% Mn min, min 16% Si, in-whs Pittsburgh, \$/lb	1.20 - 1.25	1.20 - 1.25	0
Silico-manganese 65% Mn min, max 17% Si, in-whs China, yuan/tonne	7,900 - 8,200	7,800 - 8,000	▲1.9
Silico-manganese 65% Mn min, min 16% Si, fob India, \$/tonne	1,450 - 1,520	1,450 - 1,500	▲0.7
<hr/>			
Manganese ore inventories at the main Chinese ports of Tianjin and Qinzhou, million tonnes	5.11-5.27	5.05-5.29	▲0.4

Source: Fastmarkets

China

- Tianjin's mass Covid-19 testing continued to hammer port operation and transportation links, sparking concerns over the availability of ore should the situation be prolonged.
- Trading activity slowed amid logistics disruptions, and portside prices for low- and high-grade manganese ore prices ticked upward after sellers raised offers citing higher costs.
- Seaborne low- and high-grade manganese ore markets stabilized with fresh liquidity, good buying appetite was garnered by improved downstream alloys and steel performance.
- Spot ferro-manganese and silico-manganese markets continued to trend upward amid rising futures prices.
- The regional government of Ulanqab, Inner Mongolia, issued plans for alloys producers to lower their electricity usage from January 20, which could tighten the supply of material, market participants said.

Europe

- Manganese alloys markets stabilized, with suppliers reluctant to cut prices further in the hope of renewed consumer demand.
- Freight rates remain high and production has been reduced in Europe in the past 12 months amid reports of further domestic cuts this quarter.
- Container rates are also reported to be moving higher amid a renewed shortage due to Covid-related disruptions in China.
- Replacement costs look increasingly expensive in the coming weeks, shoring up support for ferro-alloys prices in the quarter, trade sources said.

India

- The silico-manganese market price has widened upward slightly after suppliers booked around 15,000 tonnes to buyers in the Middle East, and
- increased their offer prices amid steady domestic demand and expectation of renewed demand in Southeast Asia.
- Demand is expected to be higher than usual from Southeast Asia because China will be shutting down in a few weeks for the Lunar New Year holidays.

United States

- US alloys markets remained steady once again after consumers remained on the sidelines of the spot market.
- Current price levels continue to be underpinned by limited prompt supply options, despite the lower prices seen in global markets.
- Market participants expect these trends to continue over the near term while activity remains scant.

The global manganese snapshot will be discontinued after this week, allowing greater capacity for further editorial coverage. Fastmarkets' manganese prices and market commentary will remain available on the Dashboard.

Trade log: Tungsten APT 88.5% WO3 min cif Rotterdam and Baltimore duty-free, \$/mtu WO3

By pricing@fastmarkets.com - Friday 14 January

The Tungsten APT 88.5% WO3 min cif Rotterdam and Baltimore duty-free, \$/mtu WO3 trade log including business, bids and offers reported to Fastmarkets.

Fastmarkets publishes trades logs for its key price assessments and indices to bring more transparency into the markets it covers and the pricing process it applies.

Fastmarkets assessed Tungsten APT 88.5% WO3 min cif Rotterdam and Baltimore duty-free, \$/mtu WO3 at 326.00-330.00 on Friday January 14, 2022.



- Prices indicated at \$325.00-330.00
- Sale at \$325.00 for 15 tonnes (discarded, outside specifications)
- Prices indicated at \$326.00-330.00
- Purchase at \$330.00 for 24 tonnes
- Offer at \$330.00
- Prices indicated at \$330.00-335.00
- Prices indicated at \$330.00-332.00
- Prices indicated at \$326.00-332.00
- Sale at \$326.00 for 20 tonnes
- Sale at \$328.00 for 20 tonnes
- Offer at \$330.00
- Sale at \$330.00 for 40 tonnes
- Offer at \$330.00
- Prices indicated at \$330.00-335.00

Any data submitted under a Data Submitter Agreement (DSA) will not be published.

To see all Fastmarkets' pricing methodology and specification documents, go to <https://www.fastmarkets.com/about-us/methodology>.

Fastmarkets uses its expert judgment to exclude outlying or unrepresentative numbers, and discount or discard prices that it believes may otherwise be questionable and/or unreliable.

Trade log: Vanadium pentoxide 98% V2O5 min, in-whs Rotterdam, \$/lb V2O5

By pricing@fastmarkets.com - Friday 14 January

The Vanadium pentoxide 98% V2O5 min, in-whs Rotterdam, \$/lb V2O5 trade log including business, bids and offers reported to Fastmarkets.

Fastmarkets publishes trades logs for its key price assessments and indices to bring more transparency into the markets it covers and the pricing process it applies.

Fastmarkets assessed Vanadium pentoxide 98% V2O5 min, in-whs Rotterdam, \$/lb V2O5 at 8.50-9.00 on Friday January 14, 2022.

- Prices indicated at \$9.00
- Prices indicated at \$9.00
- Prices indicated at \$9.00
- Prices indicated at \$8.50-9.00

Any data submitted under a Data Submitter Agreement (DSA) will not be published.

To see all Fastmarkets' pricing methodology and specification documents, go to <https://www.fastmarkets.com/about-us/methodology>.

Fastmarkets uses its expert judgment to exclude outlying or unrepresentative numbers, and discount or discard prices that it believes may otherwise be questionable and/or unreliable.

Trade log: Ferro-tungsten basis 75% W, in-whs dup Rotterdam, \$/kg W

By pricing@fastmarkets.com - Friday 14 January

The Ferro-tungsten basis 75% W, in-whs dup Rotterdam, \$/kg W trade log including business, bids and offers reported to Fastmarkets.

Fastmarkets publishes trades logs for its key price assessments and indices to bring more transparency into the markets it covers and the pricing process it applies.

Fastmarkets assessed Ferro-tungsten basis 75% W, in-whs dup Rotterdam, \$/kg W at 39.90-40.80 on Friday January 14, 2022.

- Offer at \$40.00
- Sale at \$38.00 (discarded, outside Fastmarkets' specifications)
- Prices indicated at \$38.00-40.00
- Purchase at \$36.80 for 20 tonnes (discarded, outside of Fasmrkets's specifications)
- Sale at \$40.75 for 10 tonnes
- Purchase at \$40.25 for 10 tonnes
- Offer at \$40.00
- Offer at \$41.00 for 5 tonnes
- Prices indicated at \$40.00-41.00
- Bid at \$39.90
- Sale at \$40.80 for 10 tonnes
- Sale at \$41.50 for 5 tonnes (discarded, outside of Fastmarkets specifications)

Any data submitted under a Data Submitter Agreement (DSA) will not be published.

To see all Fastmarkets' pricing methodology and specification documents, go to <https://www.fastmarkets.com/about-us/methodology>.

Fastmarkets uses its expert judgment to exclude outlying or unrepresentative numbers, and discount or discard prices that it believes may otherwise be questionable and/or unreliable.

Trade log: Ferro-vanadium basis 78% V min, 1st grade, ddp Western Europe, \$/kg V

By pricing@fastmarkets.com - Friday 14 January

The Ferro-vanadium basis 78% V min, 1st grade, ddp Western Europe, \$/kg V trade log including business, bids and offers reported to Fastmarkets.

Fastmarkets publishes trades logs for its key price assessments and indices to bring more transparency into the markets it covers and the pricing process it applies.

Fastmarkets assessed Ferro-vanadium basis 78% V min, 1st grade, ddp Western Europe, \$/kg V at 34.00-37.00 on Friday January 14, 2022.



- Sale at \$39.00 for 5 tonnes
- Sale at \$36.10 for 3 tonnes (discarded)
- Prices indicated at \$34.00-36.50
- Sale at \$35.50 for 40 tonnes
- Sale at \$36.10 for 5 tonnes
- Prices indicated at \$34.50-35.50
- Sale at \$36.15
- Sale at \$36.50
- Sale at \$36.90 for 5 tonnes
- Purchase at \$36.90 for 15 tonnes
- Sale at \$37.00 for 5 tonnes
- Prices indicated at \$35.00-36.00
- Sale at \$34.40
- Purchase at \$34.00
- Offer at \$34.50
- Deal heard at \$36.50
- Offer at \$37.50
- Sale at \$34.50 for 3 tonnes (discarded)
- Sale at \$35.50 for 1 tonne (discarded)
- Deal heard at \$35.50 for 5 tonnes
- Deal heard at \$34.00
- Purchase at \$34.00 for 5 tonnes
- Deal heard at \$35.50
- Prices indicated at \$34.00-35.50
- Purchase at \$34.00 for 20 tonnes
- Sale at \$34.50 for 20 tonnes
- Offer at \$35.50
- Offer at \$37.50
- Prices indicated at \$34.00-38.00
- Deal heard at \$34.50-35.50
- Bid at \$36.25
- Sale at \$33.50 for 10 tonnes

Any data submitted under a Data Submitter Agreement (DSA) will not be published.

To see all Fastmarkets' pricing methodology and specification documents, go to <https://www.fastmarkets.com/about-us/methodology>.

Fastmarkets uses its expert judgment to exclude outlying or unrepresentative numbers, and discount or discard prices that it believes may otherwise be questionable and/or unreliable.

Trade log: Ferro-molybdenum 65% Mo min, in-whs Rotterdam, \$/kg Mo

By pricing@fastmarkets.com - Friday 14 January

The Ferro-molybdenum 65% Mo min, in-whs Rotterdam, \$/kg Mo trade log including business, bids and offers reported to Fastmarkets.

Fastmarkets publishes trades logs for its key price assessments and indices to bring more transparency into the markets it covers and the pricing process it applies.

Fastmarkets assessed Ferro-molybdenum 65% Mo min, in-whs Rotterdam, \$/kg Mo at 44.80-45.50 on Friday January 14, 2022.

- Prices indicated at \$45.00-45.20
- Deal heard at \$45.50 for 72 tonnes
- Offer at \$45.00
- Prices indicated at \$44.80
- Bid at \$45.00
- Offer at \$45.20 for 40 tonnes
- Offer at \$45.50
- Prices indicated at \$44.80
- Prices indicated at \$45.00-45.50
- Purchase at \$44.80 for 20 tonnes

Any data submitted under a Data Submitter Agreement (DSA) will not be published.

To see all Fastmarkets' pricing methodology and specification documents, go to <https://www.fastmarkets.com/about-us/methodology>.

Fastmarkets uses its expert judgment to exclude outlying or unrepresentative numbers, and discount or discard prices that it believes may otherwise be questionable and/or unreliable.

Attributable FeCr output up year on year at Glencore-Merafe chrome venture in South Africa

By Claire Patel-Campbell - Friday 14 January

Annual attributable ferro-chrome output from the Glencore-Merafe chrome joint venture in South Africa increased by 42.7% year on year in 2021 after a positive end to the year, according to the latest production report from Merafe Resources.

Full-year production was 379,000 tonnes in 2021, compared 265,000 tonnes in 2020.

Fourth quarter output was up by 5.1% compared with the same period in 2020.

In the three months to December 31, 2021, the joint venture achieved 102,000 tonnes of attributable ferro-chrome production, compared with 97,000 tonnes in the last quarter of 2020.

The increase was largely due to recent output being less affected by Covid-19 restrictions and benefiting from improved plant efficiencies at the company's smelters, Merafe said in a notice to the Johannesburg Stock Exchange.

Glencore has a 97.5% stake in the joint venture and Merafe 20.5%.

Merafe and Glencore Operations South Africa (Glencore SA) have also reached an agreement to add a new platinum group metal (PGM) production plant to the joint venture. This is under construction at the Kroondal Mine.

The new PGM plant's main operations will be the treatment of PGM-bearing material from the mining operations at the joint venture's western chrome mines, as well as material available in applicable tailings facilities, dams and from certain mining operations near the Kroondal Mine to which Glencore SA and/or Merafe directly or indirectly have rights related to PGMs.

Merafe is also responsible for announcing the European charge and high-carbon ferro-chrome benchmark settlement on a quarterly basis. For the first quarter of 2022, the benchmark for **ferro-chrome lumpy Cr charge quarterly, basis 52% Cr (and high carbon), delivered Europe**, rolled over from the fourth quarter of 2021, remaining at \$1.80 per lb Cr.

Steel

HRC slips below \$75/cwt; mills lower offers

By Rijuta Dey Bera - Friday 14 January

Hot-rolled coil prices in the United States once again fell below the \$75-per-hundredweight (\$1,500-per-short-ton) level, with mill offers continuing to decline in an effort to drum up spot interest among buyers who are otherwise content to wait and watch.

Fastmarkets' daily [steel hot-rolled coil index, fob mill US](#) was calculated at \$74.84 per cwt (\$1,496.80 per ton) on Friday January 14, a decrease of 1.58% from \$76.04 per cwt on Thursday January 13 and down 0.73% from \$75.39 per cwt a week earlier.

Fresh inputs were received in the distributor sub-index in a range of \$70-74 per cwt, representing deals and general indications of current spot market pricing. Inputs were carried over in the producer and consumer sub-indices due to a lack of liquidity there.

Any data received under Data Submitter Agreements or subject to a confidentiality request will not be published.

Heard in the market

The hot-rolled coil price downtrend has resumed following [Thursday's rebound](#), with buyers keeping one eye on import offers and the other on steel futures prices, which all indicate further softening in the coming weeks. Domestic mills are quoting spot offers in the mid- to low \$70s, with lead times of four weeks or fewer.

Quote of the day

"In general, US buyers are sitting on their hands, expecting prices to decline further and waiting to have a better feel about the direction of the market," a distributor source said.

Thorsten Schier in New York contributed to this report.

Brazil steel rebar price recovers after mills raise January offers

By Renato Rostás - Friday 14 January

The price for steel rebar in Brazil recovered during January after larger mills announced a 7% increase, although not all trades in the month settled at the new price, according to market participants.

Fastmarkets' price assessment for [steel reinforcing bar \(rebar\), domestic, monthly, delivered Brazil](#), went up to 4,440-4,780 Reais (\$803-864) per tonne on Friday January 14, from 4,280-4,600 Reais per tonne on December 10 last year.

The price, however, was still down from 4,700-4,900 Reais per tonne on November 12, and significantly lower compared with the all-time high of 5,630-5,700 Reais per tonne on April 9 last year.

While steelmakers tried to push for a 7% price increase in January, the first month of the year is historically weaker for rebar demand, mainly because of how the rainy season affects construction sites. So, some customers were able to buy at December prices, and some received a smaller price increase.

In 2021, [heavier-than-average rainfall](#) was putting additional pressure on a market that already has a traditional lull at the beginning of the year.

"A few clients had more immediate needs and I was able to sell at the full price for January," one steel mill source said. "But soon, distributors and construction companies alike will need to absorb that rise because there is currently a lag between domestic and import prices."

Discounted rebar from local steelmakers further discouraged imports, and market participants said that the market was closed. The country's unfavorable currency exchange rate for imports was adding to that, they said.

Fastmarkets' latest price assessment for [steel reinforcing bar \(rebar\), export, fob main port Turkey](#), was \$690-700 per tonne on January 13, stable from the week before but narrowing upward by \$10 per tonne from \$680-700 per tonne on December 30.

"I think the whole distribution sector is pretty well-stocked right now," one distributor source said. "We might have better visibility on where prices are going at the end of February."

South American flat steel market downturn deepens

By Renato Rostás - Friday 14 January

Market headwinds dominated the South American flat-rolled steel sector once again in the week to Friday January 14, with lower offers on an fob basis from all origins and reduced maritime freight costs continuing to put downward pressure on prices.

Fastmarkets assessed the price for [steel plate, import, cfr main ports South America](#), at \$880-900 per tonne on Friday, down by \$10-15 per tonne from \$890-915 per tonne the week before.

That range represented solely Chinese offers to the Pacific coast, but no deals were heard. There were also no reports at the time of publication of offers from Japan, another important supplier to the region.

Fastmarkets' price assessment for [steel hot-rolled coil, import, cfr main ports South America](#), was \$830-880 per tonne on Friday, down by \$10 per tonne from \$840-890 per tonne a week earlier.

China-origin material was offered to the Pacific coast of South America at \$860-870 per tonne, and at \$880-900 per tonne to Brazil. Market participants added that some traders were able to sell at \$840-860 per tonne to both coasts.

Mexican prices were relatively stable, with offers to South America reported at \$850 per tonne. And South Korean HRC would change hands at \$830 per tonne.

Fastmarkets' price assessment for [steel cold-rolled coil, import, cfr main ports South America](#), narrowed downward to \$940-960 per tonne on Friday, from \$940-980 per tonne on January 7.

Offers to the Pacific coast were mostly heard closer to the low end of the range, while Brazilian clients received offers at the high end or beyond.

Meanwhile, Fastmarkets assessed the price for [steel hot-dipped galvanized coil, import, cfr main ports South America](#), unchanged week on week at \$1,000-1,040 per tonne on Friday, amid severe market illiquidity.

And the price assessment for [steel coil Galvalume, import, cfr main ports South America](#), was \$1,150-1,180 per tonne on Friday, narrowing downward by \$20 per tonne from \$1,150-1,200 per tonne a week before.

Galvalume® is a registered trademark of BIEC International.



Brazilian steel slab export prices up as markets revive

By Felipe Peroni - Friday 14 January

Export prices for steel slab from Brazil increased in the week ended Friday January 14, with renewed demand in some buying markets but only limited supply.

Fastmarkets' assessment of the price for **steel slab, export, fob main port Brazil**, reached \$610-630 per tonne on Friday, up by \$30 from the previous week's \$580-600 per tonne.

There was increased demand for slab in western Europe and Turkey during the week, with bids for Brazilian slab heard around \$610 per tonne fob.

Higher costs of energy in Europe and Turkey, along with a **recovery in global scrap prices**, were the main drivers of the increase in slab demand.

There was also buying interest from the United States, the main consumer of Brazilian slab, despite recent drops in US flat steel prices.

Fastmarkets' daily **steel hot-rolled coil index, fob mill US**, was calculated at \$76.04 per hundredweight (\$1,520.80 per short ton) on January 13, up by 2.70% from \$74.04 per cwt on January 12 but down by 0.50% from \$76.42 per cwt a week earlier.

Additionally, the supply of slab was low in the Commonwealth of Independent States (CIS), leaving buyers with few options to negotiate prices.

Offers of Brazilian material were heard as high as \$630 per tonne fob, but few producers were in the market for March shipment batches.

Sources also reported a reduction in freight prices to several destinations, which increased the viability of deals.

Ulbrich acquires ATI's California service center

By Rijuta Dey Bera - Friday 14 January

Ulbrich Stainless Steels & Special Metals has acquired ATI Specialty Rolled Products' Pico Rivera, California, distribution center, the metals reroller and distributor said in early January.

The service center will operate as Ulbrich of California from January 31, 2022, and ATI will remain the facility's primary supplier of nickel, titanium and specialty alloy products, New Haven, Connecticut-based Ulbrich said in the [Tuesday January 4 release](#).

Ulbrich manufactures precision stainless steel wire, carbon steel wire and special metals strip and wire for the aerospace, automotive, energy, medical, chemical processing and electronics industry.

Stainless steel prices in the United States are at the **highest level since 2008**, with supply tightness lingering into 2022.

Fastmarkets' monthly assessment for **stainless steel 304 cold-rolled sheet, fob mill US** was at \$205 per hundredweight (\$4,100 per short ton) on January 10, up by 2.50% from \$200 per cwt on December 10 and by 6.77% from \$192 per cwt on November 10.

Steel billet import prices in Asia push up on rising raw materials costs

By Lee Allen - Friday 14 January

A strong raw materials markets and rising demand led to an increase in semi-finished import prices in Asia at the end of the week, sources told Fastmarkets on Friday January 14.

A bid for about 80,000 tonnes of Indonesia-origin 3sp 150mm blast furnace (BF) steel billet came in at \$625-628 per tonne cfr on Wednesday, but was rejected by the producer mill, which then immediately withdrew its existing offer prices from the market in the belief it could achieve higher prices, sources said.

And it was proved right, when a major Chinese importer source told Fastmarkets on Friday that a cargo of the same specification had been sold at \$630-635 per tonne cfr China toward the end of the week amid stronger demand in China.

"Steel margins had remained at a good level, but scrap prices went up too fast recently and meant most [mills with] electric arc furnaces (EAFs) were losing money. Most of them stopped production and only plan to restart after the Chinese New Year," he said.

"So the market needs more [material to roll], which has recently caused a bullish demand for billet," he added.

And a CIS steelmaker sources told Fastmarkets on Friday that while there was some support for prices, "Chinese [futures] are slightly down today and were yesterday too."

Sellers have this week had to increase their offers because the cost of iron ore has risen sharply, a Beijing-based trading source said.

Fastmarkets' price assessment for **3sp-grade steel billet, import, cfr China**, was \$630-635 per tonne on Friday, up by \$15-20 per tonne from \$610-620 per tonne cfr one week before.

An India-origin shipment of 3sp BF billet was heard sold to a Chinese trading company in a tender for 100% advance payment at \$596.50 per tonne fob, with an estimated \$50 per tonne in freight costs to China, market sources said.

The deal was done toward the end of this week, sources said, adding that they expect the cargo to be sold to an end user in China.

With freight, margin and other costs added, it would put the cargo at least at \$650-660 per tonne cfr China on Friday, which would be \$20-25 per tonne higher than the previous deal done to China, sources said.

A second CIS steelmaker source said the decision to book the cargo looked like an optimistic long position and a clear "punt" on the China market going up, while a Singapore-based trader said he believed international trading companies were not yet confident enough about the future direction of the Chinese market to do such a deal, with some instead preferring to sell material into Egypt.

Other Asian markets

Taiwan continued its spate of recent steel billet bookings, with a handful of cargoes heard purchased from a blast furnace mill in Russia's Far East at \$640-645 per tonne cfr this week.

A deal also came to light for Indonesian 5sp 150mm cargo BF billet heard sold to a major buyer in the Philippines port of Davao at around \$629 per tonne cfr late last week, sources said.

In response to the rise in the cfr China market, Fastmarkets heard that fresh



offers for 5sp 150mm billet produced by the same Indonesian mill had increased to \$645-650 per tonne cfr Manila by Friday, while Vietnam-origin 5sp BF billet was heard offered at \$665-670 per tonne cfr Manila.

Malaysia-origin 5sp billet was last heard offered at \$660 per tonne cfr Indonesia earlier this week, while a second Malaysian mill was heard to be considering offering billet at around \$610 per tonne fob China, with around \$45 per tonne in freight costs.

Buying activity was mostly quiet in the key Manila market this week, however, with bids for 3sp billet heard at around \$615-620 per tonne cfr and 5sp bids at around \$625 per tonne cfr.

A Philippines trading source told Fastmarkets that, although some sellers might consider accepting \$635-640 per tonne cfr Manila on Friday for 5sp billets, he thought buyers were likely to need lower price to conclude deals.

"Local rebar production is already being constricted by the high number of workers getting infected [with Covid-19]," the trader said.

But the first CIS steelmaker source said that, given the deal prices seen in Taiwan, the Manila market for 5sp billet was likely to be forced to pay around \$640 per tonne cfr to get any material.

Fastmarkets' price assessment for standard 5sp 120-150mm steel billet, import, cfr Manila, was \$630-640 per tonne cfr on Friday, up by \$5 per tonne day on day from \$625-635 and up \$5-10 per tonne week on week from \$625-630 per tonne cfr.

Steel scrap prices jump in Asia, Turkey cools after recent rise

By Vlada Novokreshchenova, Cem Turken, Paul Lim, Lee Allen, Amy Hinton, Tianran Zhao - Friday 14 January

Steel scrap prices generally rose in the major importer markets in the week ended Friday January 14, with Asian markets bidding higher amid firmer demand while mills in Turkey have cooled their buying interest again following a jump in prices late last week.

- Turkish steelmakers retreat from deep-sea market after recent bookings
- US exporters close deals to Bangladesh, Turkey
- Vietnamese scrap prices jump amid bullish Asian sentiment
- Chinese local scrap in tight supply ahead of new year holiday
- Taiwan import prices gain throughout week
- Indian prices rise as customers accept higher offers.

Turkey

Turkish steel producers continued their deep-sea scrap bookings for February shipments on a slow pace throughout the week to January 14.

Two deep-sea cargoes, from the United States and Baltic Sea regions respectively, were heard traded on January 12, bringing Fastmarkets' daily scrap indices down by \$6.84 per tonne day on day.

And a Venezuelan cargo was heard traded at the end of the week.

"It seems the scrap prices have reached a ceiling for now," a Turkish mill source said on Wednesday. "The number of deep-sea scrap cargo offers in the market is increasing, while Turkish steelmakers are still struggling with long steel and billet sales."

Pricing history

steel scrap HMS 1&2 (80:20 mix), Northern Europe origin, cfr Turkey.

steel scrap HMS 1&2 (80:20), US origin, cfr Turkey.

United States

US scrap exporters have increased their volumes sold to both Turkey and Bangladesh in recent weeks. With demand firm in Asia, offer prices from the US West Coast had risen by January 13 to \$545-550 per tonne cfr Bangladesh and to \$530 per tonne cfr South Korea for deep-sea HMS 1&2 (80:20).

Pricing history

steel scrap, HMS 1&2 (80:20), export index, fob New York.

steel scrap, HMS 1&2 (80:20), export index, fob Los Angeles.

Vietnam

Prices for imported scrap in Vietnam continued to surge with increased demand from buyers and bullish ferrous markets across Asia. South Korean buyers were already negotiating around \$520-530 per tonne cfr for bulk cargoes of HMS 1&2 (80:20) by the end of the week.

Pricing history

steel scrap, HMS 1&2 (80:20), cfr Vietnam.

China

Spot prices for imported scrap in China were largely stable on Friday although some buyers raised their bids slightly amid tight domestic supplies of the material ahead of the Chinese new year, which begins on February 1.

Pricing history

steel scrap, index, heavy recycled steel materials, cfr north China

Taiwan

Spot prices for imports of containerized ferrous scrap to Taiwan rose in the week to January 14 amid warming sentiment caused by higher demand from South Korea and Vietnam.

Pricing history

steel scrap, HMS 1&2 (80:20 mix), US material import, cfr main port Taiwan.

India

Prices for imported shredded scrap in India increased over the week with customers accepting higher prices in fresh bookings.

Several cargoes were reported booked within the range of \$530-535 per tonne cfr over the week. This was \$15-20 per tonne higher than in the previous round of sales earlier this month.

Following those deals, fresh offers of shredded material were heard within the range of \$540-545 per tonne cfr.

Pricing history

steel scrap, shredded, index, import, cfr Nhava Sheva, India.



GLOBAL WEEKLY SCRAP WRAP

	Price on 14/01	Price on 07/01	Value change week on week
Steel scrap HMS 1&2 (80:20 mix) North Europe origin, cfr Turkey, \$/tonne	457.87	461.59	▼3.72
Steel scrap HMS 1&2 (80:20 mix) US origin, cfr Turkey, \$/tonne	466.16	469.88	▼3.72
Steel scrap HMS 1&2 (80:20 mix) export, fob main port UK, \$/tonne*	431	422	▲9.00
Steel scrap HMS 1&2 (80:20), export index, fob New York, \$/tonne	427	417.5	▲9.50
Steel scrap HMS 1&2 (80:20), export index, fob Los Angeles, \$/tonne	430	475	▼45.00
Steel scrap HMS 1&2 (80:20 mix) US material import, cfr main port Taiwan, \$/tonne*	439	436	▲3.00
Steel scrap, heavy recycled steel materials, cfr China, \$/tonne*	517.86	498	▲19.86
Steel scrap, shredded, index, import, cfr Nhava Sheva, India, \$/tonne	534.17	526.2	▲7.97
Steel scrap, shredded, import, cfr delivered Turkish port, \$/tonne*	479	481.5	▼2.50
Steel scrap HMS 1&2 (80:20), cfr Vietnam, \$/tonne*	530	500	▲30.00

*midpoint of the price assessment range

Source: Fastmarkets

US import pig iron market stable on muted trading

By Marina Shulga - Friday 14 January

The import pig iron market in the United States was stable during the week to Friday January 14 on muted trading activity.

Fastmarkets' assessment of the price for [pig iron, import, cfr Gulf of Mexico, US](#), was \$530-540 per tonne on Friday, [unchanged week on week](#).

The only booking heard was under a long-term agreement from the north of Brazil at \$540 per tonne cfr. The contract parties were heard to price material in line with the current spot market, although several other sources on both the buyers' and traders' sides estimated the workable level at \$530 per tonne cfr.

"The market for hot-rolled coil is weak in the US and the scrap price has dropped in January. That is why the US pig iron buyers may try to push prices down more aggressively," one source said.

HRC production requires pig iron as feedstock for electric-arc furnaces, while the price of competing scrap material is a strong indicator for the pig iron market.

Another source said that "high demand in China [which can compete with the US for pig iron volumes in the global market] could be a threat for US consumers, but Chinese buyers are ready to pay a higher price only for prompt shipment. Meanwhile, for regular cargoes, China gives a lower price now [than the US, considering the difference in freight rates]."

Brazil export pig iron up on new sales; shipments impacted by heavy rains

By Marina Shulga - Friday 14 January

The export pig iron market in Brazil improved during the week to Friday January 14 on new sales, while shipments of earlier sold cargoes with January and February shipments were impacted by heavy rains, sources told Fastmarkets.

Fastmarkets' weekly price assessment for [pig iron, export, fob port of Vitoria/Rio, Brazil](#) was \$500 per tonne on Friday, up from \$485 per tonne [a week before](#).

One cargo was sold at \$500 per tonne fob during the week, although the destination was not clear at the time of publication.

Exporters from the south of Brazil had pig iron availability for late March-April shipment, sources said.

Meanwhile, shipments of cargoes for January and February will be postponed at least by two weeks due to heavy rains in the south of Brazil.

"Rainy season is not something extraordinary for Brazil and everyone is ready for it, although now rains are far more heavy than normally, and that causes a lot of difficulties for transportation via rail and roads," one trader said.

"Suppliers declare force majeure, shipments in January and likely in February as well will be delayed, because we can't receive charcoal and deliver produced pig iron to ports," one pig iron seller said.

One source said that it is unlikely that buyers will be impacted by delayed shipments because they are secured by stocks.

Fastmarkets' assessment for [pig iron, export, fob Ponta da Madeira, Brazil](#) was \$520 per tonne on Friday, narrowing upward from \$510-520 per tonne [a week earlier](#).

A sale under long-term agreement was done from the north of Brazil to the United States at \$540 per tonne cfr, equivalent to \$520 per tonne fob. According to the contract, parties priced material in line with the current spot market level.

Turkish coated coil producers give further discount on lack of demand

By Serife Durmus - Friday 14 January

Producers of coated steel coil in Turkey gave further discounts during the week ended Friday January 14 because of weak demand, sources have told Fastmarkets.

Most producers were accepting orders to be produced in February and March, but export activity was very limited, and demand in the local market was also low.

Domestic prices

Fastmarkets' weekly price assessment for [steel hot dipped galvanized coil, domestic, exw Turkey](#), was \$1,050-1,100 per tonne on January 14, widening downward from \$1,075-1,090 per tonne on January 7.

Turkish producers were still offering 0.5mm HDG with Z100 coating at around \$1,100 per tonne ex-works.

Deals were heard at \$1,050-1,100 per tonne ex-works.

Fastmarkets' weekly price assessment for [steel pre-painted galvanized, domestic, exw Turkey](#), was \$1,150-1,200 per tonne on Friday, also widening downward from \$1,175-1,200 per tonne on January 7.

Offer prices for pre-painted galvanized iron, also known as color-coated coil, of 0.50mm thickness with 9002 color code, were \$1,175-1,200 per tonne ex-works, unchanged since last week. But deals were made at \$1,150-1,200 per tonne ex-works.

HDG exports

HDG was on offer from Turkey at \$1,100 per tonne fob, increasing [from \\$1,075-1,090 per tonne fob last week](#).

One buyer was bidding \$1,050-1,060 per tonne fob.

Only small tonnages were heard sold to Africa during the week.

As a result, Fastmarkets' weekly price assessment for [steel HDG, export, fob Turkey](#), was \$1,060-1,100 per tonne on January 14, widening from \$1,075-1,090 per tonne on January 7.

Demand in Europe, the biggest export outlet for Turkish HDG, was very weak because of a [continuing anti-dumping investigation](#).

There were rumors in the market that the anti-dumping margin, which was expected to be announced before mid-February, would be more than 10%.

Uncertainty in the market causes volatility in Turkish flat steel prices

By Serife Durmus - Friday 14 January

Some flat steel prices rose while others fell in the Turkish flat steel market because of a mixed price direction in global markets, sources told Fastmarkets on Friday, January 14.

Prices from [Asia](#), mainly China and India have been decreasing recently.

On the other hand, prices in [Europe](#) are increasing.

Most market participants in Turkey believe that markets will stabilize by mid-February, after the Chinese New Year holidays.

Turkish hot-rolled coil producers were accepting orders to be produced in late March and early April during the week.

Domestic prices

Fastmarkets' weekly price assessment for [steel hot-rolled coil, domestic, exw Turkey](#) was \$815-830 per tonne on January 14, falling from \$830-850 per tonne on January 7.

Turkish HRC producers were offering HRC at \$830-840 per tonne ex-works for March and April production during the week, narrowing downward from \$830-850 per tonne ex-works [last week](#).

Deals were made at \$815-820 per tonne ex-works.

Cold-rolled coil prices, on the other hand, increased during the week in Turkey.

Producers were offering 1mm thick CRC at \$990-1,000 per tonne ex-works during the week, and deals were heard at \$970-980 per tonne ex-works.

Fastmarkets' weekly price assessment for [steel cold-rolled coil, domestic, exw Turkey](#) was \$970-990 per tonne on January 14, rising from \$960-980 per tonne on January 7.

HRC exports

Offers for HRC from Turkey were at \$830-840 per tonne fob, narrowing downward from \$830-850 per tonne fob last week.

Buyers were bidding \$810-815 per tonne fob.

No major deals were heard.

The quota for Turkish HRC in Europe has already been filled for the first quarter, making demand for the product weak in Europe, sources told Fastmarkets.

Other export markets were also slow because of price uncertainty and more competitive prices from India, sources said.

The United States Department of Commerce set anti-dumping duty rates on hot-rolled flat steel products from [seven countries including Turkey](#) on January 6.

HRC from Turkey is now subject to a 24.32% anti-dumping duty, higher than the 4.15-6.77% range of rates established in the original duty order on October 3, 2016.

Fastmarkets' weekly price assessment for [steel HRC, export, fob main port Turkey](#) was \$815-830 per tonne on January 14, falling from \$830-850 per tonne on January 7.

Import prices

India sold HRC at \$785-790 per tonne cfr Turkey during the week for February shipping.

One source heard two HRC deals from India to Turkey at \$770 per tonne cfr, but the deals could not be confirmed before the story was published.

South Korea was also rumored to have sold HRC to Turkey at \$810 per tonne cfr, but this was not confirmed by most market participants.

No new prices were heard from Russia and Ukraine to Turkey [during the week](#).

Fastmarkets' weekly price assessment for [steel HRC, import, cfr main port Turkey](#) was \$785-790 per tonne on Friday, narrowing upward from \$780-790 per tonne on January 7.

No new CRC import prices were heard during the week, leaving Fastmarkets' weekly price assessment for [steel CRC import, cfr main port Turkey](#) at \$930-935 per tonne on Friday, unchanged week on week.

Liberty Steel will restart Flémalle and Tilleur rerolling mills in Belgium

By Maria Tanatar - Friday 14 January

Liberty Steel will restart its two rerolling mills in Belgium - Flémalle and Tilleur - by mid-February this year, the company said on Friday January 14.

In December last year, the company [announced its intention to restart the facilities](#), both located in Liège, Belgium, without giving a deadline.

Liberty Liège previously obtained the required funding from its parent company to carry out the first step of the transformation plan for the business. The transformation plan is expected to be well advanced by the spring.

The plan includes: the Liberty Liège tinning line at Tilleur developing a new business model, including closer partnerships with major customers to manufacture specialist packaging; and the G5 galvanizing line at Flémalle



being used to generate short-term profits.

Management of Liberty Liège will continue to engage with regional investment company Sogepa on the further development of the business. In June last year, the government of Belgium's southern Wallonia region [gave a loan](#), which was provided through Sogepa, to Liberty Steel.

Liberty Liège comprises the Flémalle and Tilleur production sites in Belgium, which each produce cold-rolled coil, hot-dipped galvanized coil and tinplate.

In January, [domestic prices for CRC and HDG increased](#) in Northern and Southern Europe, supported by stronger demand from the automotive industry.

ArcelorMittal increased its official offer for HDG to €1,160 (\$1,328.86) per tonne ex-works in Northern Europe - an increase of roughly €50 per tonne compared with its previous offer.

Fastmarkets' weekly price assessment for [steel HDG, domestic, exw Northern Europe](#) was €1,080-1,100 per tonne on Wednesday, up by €50-80 per tonne from €1,000-1,050 per tonne a week before.

Europe, UK alloy steel scrap market cautious following nickel price jump

By Ross Yeo - Friday 14 January

The price of alloy steel scrap in Europe and the United Kingdom increased during the week to Friday January 14 following a sharp rise in nickel costs, Fastmarkets heard.

But traders were reluctant to fully match the nickel price increase in their scrap purchase prices for fear that the nickel market will retreat again next week.

Fastmarkets' weekly assessment for [stainless steel scrap 18/8 solids domestic, delivered merchants UK](#) was €1,550-1,640 (\$2,127-2,250) per tonne on Friday, up by €30-60 per tonne week on week.

"It's been crazy; nickel went right up, then it came down and now it's going up again. We've been reluctant to completely follow it in case it comes down again on Monday," one UK trader said.

The [London Metal Exchange three-month nickel contract](#) closed at \$21,950-21,975 per tonne on Thursday January 13, up from \$20,340-20,360 per tonne a week earlier.

The trader noted that while a consistent upward trend in the nickel price tends to result in sellers holding on to material, a more volatile trajectory, as was the case this week, often results in more material being made available for sale, with sellers looking to cash in quickly.

Conversely, buyers are usually reluctant to buy scrap when nickel moves higher, unless it is clear the rise will be sustained.

As such, next week will be key. If nickel's gains are sustained, the alloy steel scrap price could increase substantially.

Underlying fundamentals were essentially unchanged this week. Demand was healthy from stainless still mills while availability remained tight but sufficient.

Fastmarkets' weekly assessment for [stainless steel scrap 18/8 solids import, cif main European port](#) was €1,940-1,990 (\$2,222-2,280) per tonne, up by €80-100 per tonne week on week.

Steel trade case monitor in December 2021

By Maria Tanatar - Friday 14 January

As competition in the global steel markets remains fierce, Fastmarkets provides an update on the new, progressing and closed trade cases from around the world in December 2021.

The case list below includes only updates. For other continuing cases this year, see the updates for [January](#), [February](#), [March](#), [April](#), [May](#), [June](#), [July](#), [August](#), [September](#), [October](#) and [November](#) last year.

TRADE CASE MONITOR, DECEMBER 2021

Investigating region	Product	Origin of product	Latest action
US (1)	Rebar	Turkey	On December 2, the US Department of Commerce issued preliminary countervailing determinations following an administrative review, assigning duties of 0.07-1.75%
US (2)	Rebar	Mexico	On December 3, the US Department of Commerce issued preliminary anti-dumping determinations: a dumping margin for Grupo Simec was determined at 66.70%; for Grupo Acerero SA de CV and Siderfert SA de CV at 33.35% and for Deacero SAPI a weighted average dumping margin of zero
Ukraine (3)	Ferrous scrap	Ukraine	On December 8, the Ukrainian government increased export duties to €180 per tonne, up from €58 per tonne
China (4)	Steel raw materials	All origins	On December 15, China's Ministry of Finance released a notice that it will continue to impose a 0% import duty in 2022 for iron ore, semi-coke, coke, pig iron, direct-reduced iron, hot-briquetted iron, recycled steel raw materials and semi-finished steel; the export duty for recycled steel raw materials will remain at 40%
EU (5)	26 steel product categories	All origins	On December 17, the European Commission started a review of the existing safeguard measures
EU (6)	Steel wind towers	China	On December 17, the European Commission imposed definitive anti-dumping duties of 7.2-19.2%
US (7)	Hot-rolled flat steel	Russia	On December 22, the US Department of Commerce announced its decision to maintain anti-dumping duties in place
Eurasian Economic Union (8)	Steel tube	Ukraine	On December 21, the Eurasian Economic Commission (EAEC) decided to extend existing anti-dumping duties of 18.9-37.8% for five years
Eurasian Economic Union (9)	Graphite electrodes	n/a	On December 28, the Board of the Eurasian Economic Commission decided to reduce the import customs duty rate from 8% to 0% for a period of two years

Source: Fastmarkets

1. US: [steel concrete reinforcing bar](#) from Turkey
2. US: [rebar](#) from Mexico
3. Ukraine: [ferrous scrap](#) export
4. China: [steel raw materials](#) import
5. EU: [26 steel product categories](#) import
6. EU: [steel wind towers](#) from China
7. US: [hot-rolled flat steel](#) from Russia
8. Eurasian Economic Commission (EAEC) [steel tube](#) from Ukraine
9. Eurasian Economic Commission (EAEC) [graphite electrodes](#)



EU domestic HRC market largely stable, sentiment slowly improving

By Maria Tanatar - Friday 14 January

Domestic prices for hot-rolled coil in Northern Europe and Italy were little changed on Friday January 14, but sentiment has cautiously improved on higher production costs and a degree of demand recovery, sources told Fastmarkets.

European steelmakers and end consumers, including the automotive industry, have finalized some long-term contracts for flat steel. Contract prices have been settled with an increase of about €500 (\$573) per tonne year on year.

Following this, ArcelorMittal and some other steelmakers have increased their offers for downstream coil products in an attempt to level the spot and contract prices, but no official price rises for HRC have been reported.

Earlier this week, two market sources claimed that official offers for HRC have also risen, but this was not widely confirmed.

A continuing surge in energy costs has also supported a bullish market mood.

Fastmarkets calculated its daily steel hot-rolled coil index, domestic, exw Northern Europe, at €920.00 per tonne on Friday, down by just €1.67 per tonne from €921.67 per tonne a day earlier.

The index was, however, up by €20 per tonne week on week and up by €8 per tonne month on month.

The calculation was based on achievable prices indicated by market participants at €900-930 per tonne ex-works.

Fastmarkets calculated its corresponding daily steel HRC index, domestic, exw Italy, at €823.75 per tonne on Friday, unchanged from a day earlier.

The Italian index was up by €8.75 per tonne week on week, but down by €23.25 per tonne month on month.

The calculation was based on achievable prices heard at €800-815 per tonne ex-works, a bid reported at €800 per tonne ex-works and offers reported at €830-860 per tonne ex-works.

CIS billet prices firm due to interest from Egypt

By Vlada Novokreshchenova - Friday 14 January

CIS billet exporters managed to achieve higher prices earlier this week in a sale to Egypt, due to the lively demand coming from that market.

In addition to a 50,000-tonne cargo sold by one of Russia's major producers at \$615 per tonne cfr, market participants reported another large cargo from Ukraine being sold to the country in the range of \$610-620 per tonne fob Black Sea.

"I heard Egypt booked around 100,000 tonnes [of billet] in total from CIS this week, one trader said.

As a result, Fastmarkets' daily steel billet index, export, fob Black Sea, CIS remained stable on Friday January 14 at \$615 per tonne fob Black Sea.

Following successful sales, CIS mills continued to test the market with higher offers.

The lowest level heard on Friday was \$615 per tonne fob Black Sea, and the upper level reached \$630 per tonne, compared with \$610-620 per tonne in the first half of the week.

Import scrap prices in India, Pakistan keep climbing as customers accept higher levels

By Vlada Novokreshchenova - Friday 14 January

Prices for imported steel scrap in India and Pakistan continued to grow in the week to Friday January 14. The fact that customers accepted higher levels in deals was the main reason for the growth of prices.

India

The most significant increase was seen in the HMS scrap segment in India.

Fastmarkets' weekly price assessment for steel scrap, HMS 1&2 (80:20 mix), import, cfr Nhava Sheva, India, was \$465-480 per tonne on Friday, up by \$15-25 per tonne from \$440-465 per tonne on January 7.

A cargo of HMS1&2 material from West Africa was reported traded to the country within the range of \$465-470 per tonne cfr.

Two more cargoes of HMS 1 scrap were heard sold to the country at \$490 per tonne cfr and 495 per tonne cfr from the Middle East and South Africa respectively.

According to the estimates provided by the market participants, the price for HMS1&2 material originating from those markets would net back to \$480 per tonne cfr.

In the segment of shredded scrap, Indian customers also accepted higher prices in deals.

Several cargoes were reported booked within the range of \$530-535 per tonne cfr over the past week. This is \$15-20 per tonne higher than in the previous round of bookings done earlier this month.

Following those deals, fresh offers of shredded material were heard in the country within the range of \$540-545 per tonne cfr.

A source on the trading side said he still received bids at \$535 per tonne cfr from Indian buyers at the end of the week, but preferred to sell material to Pakistan, where customers were ready to pay higher prices.

Fastmarkets' calculation of the steel scrap, shredded, index, import, cfr Nhava Sheva, India, was \$534.17 per tonne on Friday, compared with \$531.67 per tonne on Tuesday this week, and \$526.20 per tonne the previous Friday.

Pakistan

Pakistani customers traditionally accepted higher prices compared to buyers in India. And the closer to the end of the week, the higher prices they paid.

While early in the week deals were heard concluded within the range of \$540-550 per tonne cfr, by Friday sales prices rose to \$555 per tonne cfr.

As a result, Fastmarkets calculated its weekly steel scrap, shredded, index, import, cfr Port Qasim, Pakistan, at \$545.26 per tonne on Friday, up from \$544.51 per tonne on January 7.



Turkish steelmakers continue with deep-sea steel scrap bookings

By Cem Turken - Friday 14 January

Turkish steel producers continued their deep-sea scrap bookings for February shipment at a slow pace in the week ended Friday January 14, market players told Fastmarkets.

A steel mill in the Izmir region booked a Venezuelan cargo consisting of HMS 1&2 (95:5) at \$473 per tonne cfr, although the cargo volume was unclear at the time of publication.

There were only two more cargo deals concluded so far in the week.

A steel mill in the Iskenderun region booked a 30,000-tonne cargo from the United States, comprising HMS 1&2 (95:5) and plate and structural (P&S) at an average of \$484 per tonne cfr on January 11. This equates to \$463 per tonne cfr for HMS 1&2 (80:20) and \$488 per tonne cfr for the P&S portion of the cargo.

A steel producer in the Marmara region booked a Baltic Sea cargo at \$465 per tonne cfr on HMS 1&2 (80:20) basis late on January 10.

Venezuelan cargoes are not a traditional supplier of scrap, so the deals were not taken into consideration when calculating Fastmarkets' daily scrap indices.

Therefore, the daily scrap indices remained static at the end of the week.

Fastmarkets' calculation of its daily index for **steel scrap, HMS 1&2 (80:20 mix), North Europe origin, cfr Turkey** was \$457.87 per tonne on Friday January 14, unchanged day on day.

Fastmarkets' corresponding daily index for **steel scrap, HMS 1&2 (80:20 mix), US origin, cfr Turkey** was \$466.16 per tonne on January 14, also flat day on day, leaving the premium for US-origin material over European scrap at \$8.29 per tonne.

UK steel scrap consumer prices drop for January settlements

By Declan Conway - Friday 14 January

Monthly settlements for steel scrap deliveries into UK steelmakers have been settled mostly at prices down by £5 (\$7) per tonne month on month for deliveries in January, with weaker export markets reducing the tightness in domestic availability, trade sources told Fastmarkets on Friday January 14.

The move followed an easing of availability this month amid a drop in both export volumes and prices to traditional destinations such as Turkey and the Indian subcontinent.

But availability was expected to be generally tight for the rest of this quarter and into April-June, typically the strongest period in the year for steel production and consumption of steelmaking feed.

Some consumers achieved a reduction of £10 per tonne from their suppliers for deliveries in January, while others reached agreement for a rollover. But most trade sources said that they had agreed, or heard of, mostly smaller reductions in deals negotiated this month.

"Deep-sea trading at the start of the year was lackluster and UK domestic

steel mills were keen to settle early," one major processor told Fastmarkets.

"We probably would have taken a different tack if we had the benefit of seeing the increases that we have seen in the international markets in the past few days," he added.

"Most low residual and new production sales we settled on the same basis, at minus £10 per tonne. And with demand [in the United States] very subdued, and with increased freight rates on short-sea trade affecting export fob prices, British steel mills were aware of the market dynamics and were keen to push the UK price down," the processor said.

Fastmarkets' monthly price assessment for **steel scrap, 1&2 old steel, domestic, delivered consumer UK**, was £225-240 (\$308-329) per tonne on Thursday January 13, down by £5 per tonne.

The corresponding price assessment for **steel scrap, OA plate and structural (P&S), domestic, delivered consumer UK**, was £245-260 per tonne on the same day, also down by £5 per tonne.

"Until recently, the US was keenly interested in buying European steel scrap, and they were paying a good premium above European scrap prices," another processor said.

"However, freight rates are still high, at around \$55-60 per tonne, from a peak of about \$75 per tonne last summer, and US buyers have been increasingly reluctant to pay such costs, so demand has fallen off," this second processor said, adding that typical freight rates were around \$20-25 per tonne.

With international scrap markets trading in dollars, the exchange rate for UK sterling versus the US dollar has a significant effect on the UK's steel exports. The exchange rate was £1 to about \$1.372 on Friday, compared with £1 to about \$1.340 on December 20 last year.

Most of the UK's annual scrap supplies, which are usually around 10 million tonnes but have fallen since the Covid-19 pandemic hit, are exported. Consequently, the rate of scrap exports in terms of tonnages and prices, as well as the sterling to dollar exchange rate, typically influences UK domestic scrap prices. Still, scrap generation and availability have been tighter than usual this year and for almost two years, due to Covid-19-related effects.

UK export markets to traditional deep-sea destinations, such as Turkey and the Indian subcontinent, and short-sea routes to Spain have been relatively steady since British domestic settlements were **agreed at a rollover on December 10**.

Turkish, Indian and Pakistan import prices from Europe have come down by about \$5 per tonne since then, but have bounced back from lows that were \$15-25 per tonne below the price levels in early January.

The market outlook was for tight UK scrap supplies to persist until at least March, with the shortage of semiconductors used in new car manufacturing - a major steel customer - expected to ease only from April. Tight UK scrap availability should shore up support for prices, or at least stem any attempts at steeper price cuts, trade sources said.

"Most suppliers were expecting a rollover [in January contracts] but said they could live with £5 per tonne off, but not much more," one industry source said. "Demand continues to exceed supply, particularly with the new production grades, and we don't see that changing in the next two or three months."

In Europe, it has been a similar story, with monthly steel scrap prices settling at either a rollover or minus €5 (\$6) per tonne in Germany, Italy and Spain, trade sources said.

The UK light iron scrap inter-merchant market was reported to be stable for the second week in January amid relatively tight availability and with processors competing keenly to secure intake and thus keep their machines running cost-effectively, sources said.



Fastmarkets assessed the price of **steel scrap 5C, loose old light, domestic, delivered inter-merchant UK**, unchanged week on week at £180-195 per tonne on Friday.

In the European steel scrap export markets, Fastmarkets calculated the daily index for **steel scrap, HMS 1&2 (80:20 mix), North Europe origin, cfr Turkey**, at \$457.87 per tonne on Thursday, compared with \$463.50 per tonne on December 10.

The corresponding calculation of the **steel scrap, shredded, index, import, cfr Nhava Sheva, India**, was \$531.67 per tonne on January 11, compared with \$534.48 per tonne on December 10.

In the Pakistan market, Fastmarkets calculated its weekly **steel scrap, shredded, index, import, cfr Port Qasim, Pakistan**, at \$544.51 per tonne on January 7, compared with \$553.90 per tonne on December 10.

UK monthly scrap prices

Fastmarkets' price assessments for UK domestic scrap material for January, on a per-tonne-delivered basis, are shown in the table below.

UK DOMESTIC SCRAP PRICES, JANUARY 2022

	Price (£/tonne)
Steel scrap OA plate and structural domestic, delivered consumer UK	245-260
Steel scrap 1&2 old steel domestic, delivered consumer UK	225-240
Steel scrap 12 A/C new production heavy steel domestic, delivered consumer UK	285-300
Steel scrap 12 D new production clean shovellable steel domestic, delivered consumer UK	290-305
Steel scrap 4A new steel bales domestic, delivered consumer UK	290-305
Steel scrap 4C new steel bales domestic, delivered consumer UK	280-295
Steel scrap 8A new loose light cuttings domestic, delivered consumer UK	280-295
Steel scrap 8B new loose light cuttings domestic, delivered consumer UK	265-280
Steel scrap 9A/10 heavy and light cast iron domestic, delivered consumer UK	235-250
Steel scrap 9B/C cylinder block scrap domestic, delivered consumer UK	255-270
Steel scrap 11A cast iron borings (low P) domestic, delivered consumer UK	195-205
Steel scrap 7B heavy steel turnings intermerchant, delivered to export dock UK	205-220

Source: Fastmarkets

Poland rebar prices rise on high costs; sentiment remains bullish

By Julia Bolotova - Friday 14 January

Steel rebar prices in Poland increased during the week to Friday January 14, as expected, on a rise in production costs and improved demand after the holiday lull, sources told Fastmarkets.

Trading activity in the Polish rebar market started to pick up this week with buyers accepting higher prices, sources said.

"Customers started to realize that prices [for rebar] will not decline. Gas and electricity prices have increased by 50-300% and inflation soon will reach 10% so there is no room for a drop," a trading source said.

Buyers indicated a workable price level for the domestic market at 3,900-3,950 zloty (\$980-993) per tonne ex-works, with some transactions for January material heard done at these levels.

At the same time, local producers are now aiming for even higher prices for February-made rebar, citing "unbelievable costs inflation."

Notably, February rebar offers from local producer CMC Zawiercie were reported at 4,000 zloty per tonne cpt (about 3,950-3,970 zloty per tonne ex-works).

ArcelorMittal Warszawa and Celsa Huta Ostrowiec were targeting an even higher level of 4,100 zloty per tonne cpt, several sources said.

Another local mill, Cognor, was offering rebar to the local market at about 4,050 zloty per tonne cpt.

Fastmarkets' assessment for **steel rebar, domestic, exw Poland** was 3,900-3,950 zloty per tonne on Friday, up by 150-300 zloty from 3,600-3,800 per zloty per tonne last week.

Higher offers were not included in the assessment however, because sources believe producers might seal new offers in deals soon.

In the secondary market rebar was heard traded at 3,920-3,950 zloty per tonne cpt.

No new offers were heard from the Commonwealth of Independent States over the week.

Latest rebar offers for Belarus-origin rebar with January shipment were heard to Poland at €750 (\$859) per tonne dap border in end-December, which nets back to €775-780 per tonne cpt.

Rebar from Moldova, which is regularly sold to Poland, could not be delivered to the nation due to logistics problems, one source told Fastmarkets.

"Moldova cannot sell anything to Poland because of the railway disruptions. And there are scarcely any trucks available," a source said.

Polish wire rod producers struggle to raise prices amid slow demand

By Julia Bolotova - Friday 14 January

Steel wire rod prices in Poland have inched up slightly over the past week on higher production costs, but slow end-user demand and competition with imports have discouraged an increase of domestic prices, sources told Fastmarkets on Friday January 14.

Trading activity in the local market has remained poor since the year-end holidays, sources said.

Fastmarkets' price assessment for **steel wire rod (drawing quality), domestic, delivered Poland**, was 3,950-4,000 zloty (\$998-1,011) per tonne on Friday, narrowing upward from 3,900-4,000 zloty per tonne seven days earlier.

The assessment was a reflection of deals, offers and market sources' estimates of workable prices.

A weak end-product market was an obstacle for wire rod price rises, Fastmarkets understands.

"The market price for reinforcing wire [of grade] b500a is just 4,200 zloty per tonne [delivered], so even 4,000 zloty per tonne delivered [for wire rod] from mills is rather high," one trader said.

Producers have closed January sales at around 3,950-4,000 zloty per tonne delivered and have yet to give February offers, which were expected to be "substantially higher," sources said.

"We expect a 200-300 zloty per tonne increase," another trader said.

But it was not clear whether the market would be able to accept such a rise, especially considering the difference between domestic and import offer prices.



On the other hand, the high costs for both electricity and gas left producers no alternative but to increase their prices for finished steel.

"Gas and electricity costs have increased sharply and keep rising - we have to reflect this in steel prices," a mill source said.

Wire rod imports from Belarus Steel Works (BMZ) were offered to Poland at around €850 (\$974) per tonne dap border, which would be equivalent to €875-880 per tonne cpt.

Moldova-origin wire rod from stock was offered to Poland at about 3,950 zloty per tonne cpt. But new steel deliveries from Moldova to Poland were complicated because of disruptions on the railway, sources said.

"Moldova cannot sell anything to Poland because of railway disruptions. And there are scarcely any trucks available," a source said.

January-production wire rod from Czech-based Liberty Ostrava was traded in Poland at about 3,700 zloty per tonne delivered, sources said. February offers from the producer were expected to be about 200-250 zloty per tonne higher at 3,900-3,950 zloty per tonne delivered, sources estimated.

No January offers were heard from Italian mills to Poland, but sources suggested that the price would be no lower than €890 per tonne delivered.

High-grade concentrate and pellet prices up amid increased demand

By Alice Li - Friday 14 January

Prices for seaborne iron ore concentrate and pellets inched higher in the week ended Friday January 14 due improved demand amid an uptrend in the fines and lumps sector, sources said.

Key drivers

The demand for the high-grade iron ore segment improved in the week to January 14. There have been several inquiries for Carajas fines, iron ore pellets, lumps and concentrates, a northern China buyer source told Fastmarkets.

Premium levels for some iron ore concentrate brands for pellet making slipped in the week because iron ore high-grade fines price increased compared with previous week, thus fixed price for concentrates still tracked the uptrend, a Shanghai-based analyst said.

The average calculation of Fastmarkets' index for **iron ore 65% Fe Brazil-origin fines** was \$157.16 per tonne cfr China in the week ended January 14, up by \$9.22 per tonne compared with the previous week's \$147.94 per tonne.

A few steel mills bought seaborne Ukraine iron ore concentrates on a demand basis in the reported week, with the transaction premium slightly lower than the offer level in previous week, a mill source from south China said.

Another buyer source from north China said demand for iron ore concentrate would continue to be prompted by lower supply from Chinese domestic suppliers because of lower production during the winter season.

Iron ore pellet prices increased amid the upgoing prices of iron ore lump and coke, which made pellet more cost-effective, sources said.

The anticipated sintering production curbing in the coming Winter Olympics and ongoing heating season in north China continued to support bullish market sentiment on pellet demand.

The number of offers from Indian iron ore pellet suppliers has been increasing in the week due to deals of high-quality cargoes, which were most likely due to increased buying interest from China, a Hong Kong trader added.

Another mill source from Hebei noted that mills were also facing narrowed steel margins when iron ore fines and coke price increased and they may turn to more cost-effective iron ore brands and blending ratio - no matter fines or direct-charging lumps or pellet - making it difficult for the pellet price to rise.

Fastmarkets iron ore indices

66% Fe concentrate, cfr Qingdao: \$163.12 per tonne, up \$7.35 per tonne

65% Fe blast furnace pellet, cfr Qingdao: \$210.44 per tonne, up \$6.84 per tonne

Iron ore pellet premium over 65% Fe fines, cfr China: \$54.80 per tonne, unchanged

Quote of the week

"The demand for the high-grade iron ore segment improved the last week. There have been several enquiries for Iron ore Carajas fines, iron ore pellets, lumps and concentrates as well. So prices across the high-grade segment of the market was supported by the increase in demand," a northern China buyer source said.

Trades/offers/bids heard in the market

Concentrate

Spot market, 70,000 tonnes of low-sulfur 65% Fe Ukrainian concentrate, traded at the average of a 65% Fe index for the month after the notice of readiness (NOR) at the port of discharge plus a premium of \$2 per tonne, January loading.

Spot market, 100,000 tonnes of 66% Fe Chilean concentrate, offered at the average of a 65% Fe index for the month of the NOR at the port of discharge and its Fe value-in-use, plus a premium of \$4 per tonne, laycan March 6-15.

Pellet

Spot market, 63% Fe KIOCL pellets, traded at the average of a 62% Fe index for the month of the NOR at the port of discharge plus a premium of \$46.50 per tonne, late-January loading.

Spot market, 63% Fe BRPL pellets, offered at \$165 per tonne cfr China, January loading.

Spot market, 63% Fe Rashmi pellets, offered at \$164 per tonne cfr China, January loading.

Spot market, 50,000 tonnes of 63% Fe KIOCL pellets, offered at \$187 per tonne cfr China, laycan January 18-25.

Spot market, 55,000 tonnes of 63% Fe BRPL pellets, offered at \$170 per tonne cfr China, laycan January 25-February 10.

Spot market, 75,000 tonnes of 63% Fe Rashmi pellets, offered at \$162 per tonne cfr China, February loading.

Spot market, 75,000 tonnes of 63% Fe Rashmi pellets, offered at \$159 per tonne cfr China, January loading.

Spot market, 64.5% Fe Essel pellets, offered at \$185 per tonne cfr China, January loading.

Spot market, 63% Fe KIOCL pellets, offered at the February average of a 62% Fe index plus a premium of \$48 per tonne, January loading.

Spot market, 63% Fe KIOCL pellets, offered at the February average of a 62% Fe index plus a premium of \$50 per tonne, January loading.

Spot market, 63% Fe KIOCL pellets, offered at the February average of a 62% Fe index plus a premium of \$52 per tonne, January loading.

Spot market, 63% Fe KIOCL pellets, offered at the February average of a 62% Fe index plus a premium of \$55 per tonne, January loading.

Alex Theo in Singapore contributed to this report.

EU flat steel distributor shipments fell by 8.1% in November 2021 - Eurometal

By Elina Virchenko - Friday 14 January

Distributors in the European Union and the United Kingdom have reported an 8.1% year-on-year drop in the shipment of flat steel products in November 2021, regional steel industry association Eurometal said on January 12.

November was the third consecutive month of decrease in shipments, after a drop of 12.0% in October and 5.5% in September.

In the first eleven months of 2021, however, flat products shipments increased by 9.3% year on year due to a rise in April-August.

Eurometal does not disclose individual product volumes.

In November 2021 Fastmarkets' calculation of its daily [steel hot-rolled coil index, domestic, exw Northern Europe](#) averaged €998.21 (\$1,137.56) per tonne, down by 1.12% month on month but up by 88.09% year on year.

European coil prices slid in November due to limited demand from automakers amid extended long-term contract negotiations. Steel demand from car manufacturers has also been limited due to the continuing [semiconductor shortage](#).

As a result spot flat steel buyers were not in rush to place orders, which supported the price decline.

Eurometal's stock index for flat steel service centers was 86 in November 2021, compared with 78 in November 2020. The index uses the 2018 average as its 100-point basis.

Stock levels at EU steel service centers averaged 64 days' worth of supply in November 2021, compared with 57 days in the corresponding month of 2020.

Multi-product distributor shipments in the EU and UK declined by 7.7% year on year in November 2021, Eurometal data showed.

"All products had a negative trend, except plates, rebars, tubular products, stainless steel and other alloy steels," Eurometal said.

In the first eleven months of 2021, only rebar and merchant bars registered lower shipments, while the rest of EU and UK steel stockholding distribution shipment volumes increases by 5.2% year on year.

The stock level among multi-product distributors in the EU and UK, expressed in Eurometal index terms, was 87 in November 2021, compared with 80 in the corresponding month of 2020.

Stock levels in November averaged 78 days' supply, compared with 67 days in the corresponding month of 2020.

Latest trade confirms uptrend in premium hard coking coal fob price

By Min Li - Friday 14 January

Premium hard coking coal fob prices continued to their upward trend on Friday January 14 following news of a deal sealed at \$410 per tonne fob Australia, with seaborne cfr prices also rising.

Seaborne low-volatility pulverized coal injection (low-vol PCI) fob prices, meanwhile, jumped in the week to Friday, boosted by tight supplies and blast furnace resumptions.

Fastmarkets coking coal indices

Premium hard coking coal, cfr Jingtang: \$391.02 per tonne, up \$10.91 per tonne

Hard coking coal, cfr Jingtang: \$353.60 per tonne, up \$6.31 per tonne

Premium hard coking coal, fob DBCT: \$413.68 per tonne, up \$11.35 per tonne

Hard coking coal, fob DBCT: \$350.16 per tonne, up \$0.09 per tonne

Fastmarkets Weekly PCI indices

PCI low-vol, cfr Jingtang: \$282.56 per tonne, up by \$48.04 per tonne

PCI low-vol, fob DBCT: \$250.09 per tonne, up by \$5.01 per tonne

In the fob Australia market, a 75,000-tonne cargo of premium low-vol hard coking coal, with March 11-20 laycan, was traded at \$410 per tonne fob Australia on the Globalcoal platform on Friday, sources told Fastmarkets.

The trade pushed seaborne premium hard coking coal fob prices to a higher level, indicating extremely tight Australian supply for the spot market.

A trading source in India said that the uptrend in the seaborne fob Australia market will continue, but the market may take a breather next week. A coke producer in India also believed the uptrend will continue.

In the cfr China market, offer prices for a February-laycan vessel of United States-origin Buchanan hard coking coal reached \$386 per tonne cfr China, sources told Fastmarkets on Friday.

A trading source in Beijing said that only a small number of mills in China preferred Buchanan, but added that he did not know if those mills had demand for it at that price level.

"The premium hard coking coal fob price is higher than the cfr price now, so North American premium hard coking coal will be redirected to ex-China markets," a second trading source in Beijing said.

The seaborne low-volatility pulverized coal injection (low-vol PCI) fob price jumped in the week to January 14 on tight seaborne supplies and relatively good demand - partly caused by a resumption in blast furnace operations in some areas of China. A February-laycan Panamax vessel of Russia-origin low-vol PCI was heard traded late this week at around \$290 per tonne cfr China, several sources in China said on Friday.

Chinese domestic low-vol PCI, meanwhile, reached 2,200 yuan per tonne this week, two trading sources in Beijing said on Friday.

Dalian Commodity Exchange

The most-traded May coking coal futures contract closed at 2,299.50 yuan (\$361.38) per tonne on Friday, down by 5 yuan per tonne.

The most-traded May coke contract closed at 3,082 yuan per tonne, down by 24 yuan per tonne.



South Korea returns to deep-sea scrap market at rising prices

By Lee Allen, Tianran Zhao - Friday 14 January

South Korean mills have returned to negotiate for imports of bulk scrap in recent days at increased prices from last week amid a surge in scrap demand across key Asian markets, sources told Fastmarkets on Friday January 14.

- South Korea comes back to bulk markets at higher prices
- Higher bids for import material from Chinese buyers, but Japan sellers want more
- China domestic market stable ahead of Chinese New Year

South Korea

The conclusion to this month's Kanto Tetsugen auction on Wednesday, together with rising prices for scrap in the key Turkey and Vietnam markets, and surging ferrous futures in China this week, have created a bullish market situation in Asia.

South Korean local scrap prices have increased in recent weeks, pushing more mills into the market for imports. But with Japan-origin prices trending higher, mills have been more attracted to the deep-sea and short-sea bulk markets.

Offer prices for deep-sea cargoes of United States-origin heavy melting scrap 1&2 (80:20) have soared to \$530 per tonne cfr South Korea in recent days, Korean mill sources said.

This is up sharply from indication from sources that deep-sea HMS 1&2 (80:20) was available at \$495 per tonne cfr South Korea by the end of last week.

Fastmarkets heard that one steelmaker was engaged in negotiations for a deep-sea cargo at an HMS 1&2 (80:20) price of \$520-530 per tonne cfr South Korea late this week.

Fastmarkets' price assessment for **steel scrap, HMS 1&2 (80:20), deep-sea origin, import, cfr South Korea** was \$525 per tonne on Friday, up \$25-35 per tonne from \$490-500 per tonne cfr the week before.

South Korean mills have also been active in the market for imports of Russia-origin A3 scrap recently, sources said.

A rumored deal for 30,000-40,000 tonnes of A3 scrap was heard to have been done late last week at \$513 per tonne cfr South Korea, sources said. A second steelmaker in the country was also heard to have bid a similar price for another A3 scrap cargo.

China import

Spot prices for imported scrap in China were largely stable on Friday. Some buyers raised their bids for imported scrap slightly amid tight domestic supplies of the material ahead of the Chinese New Year, according to sources.

The highest bid for imported HRS101-grade scrap was heard at \$540 per tonne cfr on Thursday from a major steel mill based in eastern China. Other market participants' bidding prices were between \$505 and \$535 per tonne cfr northern China on Friday, sources said, widening upward by \$5 per tonne from Tuesday.

Fastmarkets' calculation of the **steel scrap, index, heavy recycled steel materials, cfr north China** was at \$527.86 per tonne on Friday, up by \$6.31 per tonne compared to \$521.55 per tonne on Tuesday.

But trading activity for imported material was still sparse due to the persistent gap between bids and offers.

Offers for heavy scrap (HS) from Japan were heard at \$560-570 per tonne cfr China on Friday, up by \$10-15 per tonne compared with \$550-555 per tonne on Tuesday.

"Sentiment in the export market in Japan is quite bullish. Even though there were some higher bids heard from buyers in China, they are still not good enough for the sellers. Besides, the incentive of selling to China is very low in Japan currently due to the shortage of vessels," a Japanese trading source told Fastmarkets.

China domestic

Fastmarkets' weekly price assessment for **steel scrap heavy scrap, domestic, delivered mill China** was 3,570-3,720 yuan (\$562-585) per tonne on Friday, unchanged from a week earlier.

Disregarding value-added tax, China's domestic scrap prices were around \$497-518 per tonne.

"I expect the scrap market [in China] to be stable ahead of the Chinese New Year. Supply and demand for the material are both going to be weak," a mill source based in Hebei province told Fastmarkets.

A Chinese scrap industry analyst based in Beijing agreed with that view and added: "We learned that so far many mills have got enough scrap inventories for their production during the coming holiday, so demand for scrap is getting weaker. And many scrapyards have already started their holiday recently, so the market is also weak on the supply side."

Iron ore prices continue to ease amid weakened demand from mills

By Alex Theo - Friday 14 January

Seaborne iron ore prices continued to trend downward on Friday January 14 amid sustained demand weakness from mills, sources told Fastmarkets.

Key drivers

Overall market sentiment was weighed down because most mills have finished restocking iron ore at China's ports ahead of the upcoming Lunar New Year, according to a Shanghai-based trader source.

Additionally, some small and mid-sized trading houses were heard to be in no hurry to take in seaborne mid-high grade iron ore cargoes, the same trader said.

Speculative buying interest for Yandi fines and Mining Area C fines increased due to being more cost-effective compared with other brands. But this also narrowed their reselling margins at China's ports, according to a Beijing-based trader source.

The reselling margin for Yandi fines at China's ports has dipped to around 15 yuan per tonne as of Friday, compared with 20 yuan per tonne on Thursday, the Beijing-based trader said.

The most-traded May iron ore futures contract on the Dalian Commodity Exchange traded largely sideways, ending the day down by 0.6% from its closing price of 726 yuan (\$114) per tonne on Thursday.

The forward-month iron ore swaps contracts on the Singapore Exchange followed a similar trend. By 6:26pm Singapore time, the most-traded February contract eased by \$0.74 per tonne compared with Thursday's



settlement price of \$128.14 per tonne.

Fastmarkets iron ore indices

62% Fe fines, cfr Qingdao: \$128.01 per tonne, down \$1.86 per tonne

62% Fe low-alumina fines, cfr Qingdao: \$130.51 per tonne, down \$2.78 per tonne

58% Fe fines high-grade premium, cfr Qingdao: \$100.83 per tonne, down \$1.96 per tonne

65% Fe Brazil-origin fines, cfr Qingdao: \$156.60 per tonne, down \$1.20 per tonne

63% Fe Australia-origin lump ore premium, cfr Qingdao: \$0.2900 per dry metric tonne unit (dmtu), down \$0.0100 per dmtu

62% Fe fines, fot Qingdao: 847 yuan per wet metric tonne (implied 62% Fe China Port Price: \$123 per dry tonne), down by 15 yuan per wmt

Quote of the day

"Most steelmakers have already completed their restocking of iron ore. Should steelmakers still need to replenish any stocks, inventory at the Chinese ports should be sufficient. Some steel mills were also heard to be uncertain about the government's stance for production after the Lunar New Year holiday, so they have likely limited their restocking volumes," a Shanghai-based trader source said.

Trades/offers/bids heard in the market

BHP, Globalore, 90,000 tonnes of 62% Fe Mining Area C fines, traded at \$118.60 per tonne cfr China, laycan February 3-12.

BHP, Globalore, 80,000 tonnes of 62% Fe Jimblebar fines, offered at the February average of two 62% Fe indices plus a discount of \$20.50 per tonne, laycan February 6-15.

BHP, tender, 80,000 tonnes of 60.8% Fe Mining Area C fines, laycan February 3-12.

BHP, tender, 90,000 tonnes of 60.8% Fe Mining Area C fines, laycan February 3-12.

BHP, tender, 80,000 tonnes of 60.8% Fe Mining Area C fines, laycan February 6-15.

BHP tender, 80,000 tonnes of 56.7% Fe Yandi fines, laycan February 8-17.

BHP tender, two 80,000-tonne cargoes of 56.7% Fe Yandi fines, laycan February 11-20.

Market participant indications

Fastmarkets index for iron ore 62% Fe fines

Pilbara Blend fines: \$124-127.20 per tonne cfr China

Brazilian Blend fines: \$126.57-133 per tonne cfr China

Newman fines: \$126.27-128.38 per tonne cfr China

Jimblebar fines: \$101.45-\$107.60 per tonne cfr China

Fastmarkets index for iron ore 65% Fe Brazil-origin fines

Iron Ore Carajas: \$155-158.50 per tonne cfr China

Port prices

Pilbara Blend fines were traded at 825-835 yuan per wmt in Shandong province, Tangshan and Lianyungang city on Friday, compared with 835-857 yuan per wmt on Thursday.

The latest range is equivalent to about \$120-121 per tonne in the seaborne market.

Dalian Commodity Exchange

The most-traded May iron ore futures contract closed at 722 yuan (\$113) per tonne on Thursday, down by 11.50 yuan per tonne from Wednesday's closing price.

Alice Li in Shanghai contributed to this article.

Strike ends at Shougang iron ore mine in Peru

By Renato Rostás - Friday 14 January

A month-long strike at iron ore producer Shougang Hierro Perú ended after workers accepted the latest wage offer, the company said on Thursday January 13.

The Mining Workers' Union at Shougang had gone on strike on December 17 after its members voted against a salary proposal and accused the mining company of unwillingness to negotiate. The matter then went to government mediation.

Shougang said on Thursday that mediation had ended and the labor authority at the Ica region ruled employees should return to work. That, the company added, concluded the 2021-2022 labor negotiations.

The Peruvian mine has capacity to produce 20 million tonnes per year of iron ore. The country as a whole produced 11.39 million tonnes in January-November 2021, a 43.98% year-on-year increase from 7.91 million tonnes, with Shougang accounting for 98.3% of that total.

Seaborne iron ore prices had risen due to the supply disruptions in Brazil, but have since corrected amid weakening steel demand in China.

Fastmarkets calculated its index for iron ore 62% Fe fines, cfr Qingdao, at \$128.01 per tonne on Friday, down by 1.43% from \$129.87 per tonne a day earlier and 4.24% lower than Wednesday's \$133.68 per tonne, a three-month high.

Chinese spot HRC prices dip despite futures gain

By Paul Lim, Zihuan Pan - Friday 14 January

China's domestic hot-rolled coil prices ticked lower on Friday January 14, despite the product's futures contract resuming its rally after an output decline in early January.

Domestic

Eastern China (Shanghai): 4,900-4,920 yuan (\$772-775) per tonne, down by 20 yuan per tonne



Northern China (Tangshan) weekly assessment: 4,720-4,750 yuan per tonne, up by 30-50 yuan per tonne

Spot HRC prices in eastern China widened upward by 10 yuan per tonne from last Friday's price of 4,900-4,930 yuan per tonne.

The most-traded HRC contract on the Shanghai Futures Exchange resumed its rally on Friday after a slight pullback on Thursday and posted a second straight positive week.

The **China Iron and Steel Association** said on Friday that daily crude steel output from its member mills averaged 1.97 million tonnes during the first 10 days of January. That was down by 6% from a four-month high of 2.09 million tonnes recorded in late December and down by over 10% from the same period a year earlier.

In the spot market, trading remained thin in a seasonal lull, which weighed on spot prices, traders said.

Export

Fastmarkets' **steel hot-rolled coil index export, fob main port China:** \$758.68 per tonne, up by \$2.93 per tonne

Most major mills offered SS400 HRC at \$765-770 per tonne fob China on Friday, with recent gains in futures prices preventing them from following other markets to lower their offers.

Market participants indicated that mills might be willing to sell at \$750-760 per tonne fob China, but added that buyers overseas are unlikely to buy at these levels.

Premiums of Chinese cargoes over other-origin offers in major markets such as Southeast Asia and South America subdued trading for Chinese HRC exports, sources said.

Uncompetitive prices for Chinese HRC and volatile futures prices have dented the appeal of Chinese materials in the export markets, a Hangzhou-based trader said.

In the Vietnam market, local producer Formosa Ha Tinh Steel lowered its offer for March-shipment and -delivery cargoes by \$70 per tonne.

This decision, coupled with similar cuts by its domestic peer Hoa Phat Group, surprised market participants, and made it harder to sell Chinese HRC in Vietnam. It was already a struggle to sell Chinese HRC to Vietnam prior to Formosa's sharp offer cut due to cheaper offers for cargoes from regions such as India, the Hangzhou-based trader added.

China's exports of finished steel increased month on month in December, after falling for five months in a row. Data from China's General Administration of Customs showed that China's **finished steel exports** stood at 5.03 million tonnes in December, up by 3.6% year on year and by 15.2% month on month.

Despite the export increase, the likelihood of the introduction of export duties on Chinese steel exports remains low because of the downward pressure they would add to China's economy, sources said.

Market chatter

"Chinese steel prices have come off from record highs. That, coupled with existing headwinds against the economy, dissipates market concerns over possible duties [on Chinese steel]," the Hangzhou-based trader said.

Shanghai Futures Exchange

The most-traded May HRC contract closed at 4,772 yuan per tonne on Friday, up by 33 yuan per tonne **from Thursday's close**.

CIS export pig iron market remained muted; price trend unclear

By Marina Shulga - Friday 14 January

Activity in the export pig iron market in the Commonwealth of Independent States has not yet rebounded after the holiday period and the future price trend is unclear, sources told Fastmarkets.

Fastmarkets assessed **high-manganese pig iron, export, fob main port Black Sea, CIS** at \$490-500 per tonne on Thursday January 13, unchanged week on week.

Predominantly, pig iron exporters from the CIS remained inactive. Offers were heard from only one supplier at \$500 per tonne fob.

Meanwhile, several sources said that suppliers are planning to come back to the market with offers at least \$10 per tonne higher.

"Suppliers are citing that pig iron availability globally is low and the flat steel market seems to be bottoming [in neighboring pig iron-consuming regions - Italy and Turkey], so they will increase pig iron prices," one trader said. "But for the moment the market is not ready for higher prices."

The latest workable level for sources from the buyer side was indicated at about \$490 per tonne fob.

Fastmarkets' weekly price assessment for **pig iron, import, cfr Italy** was \$530-540 per tonne on Thursday, narrowing downward by \$5 from \$530-545 per tonne cfr.

The price assessment for **low-manganese pig iron, export, fob main port Baltic Sea, CIS** was \$550 per tonne on Thursday, unchanged week on week with no activity reported.

Pakistan extends anti-dumping duties on imports of Chinese CRC for five years

By Zihuan Pan - Friday 14 January

Pakistan's National Tariff Commission (NTC) has extended definitive anti-dumping duties for another five years on imports of cold-rolled coil and sheet from China, retroactively effective from January 13, 2021, according to a notice released by China's Commerce Ministry on January 13, 2022.

The decision came after an investigation of the sunset review of the AD duties initiated on January 8, 2021 recommended that there is a "strong" likelihood of continued dumping of the products under review from China and of "material injury" to the domestic industry if the duties are terminated.

The products under this review are flat-rolled products of iron or non-alloy steel of a thickness ranging from 0.15 mm to 3.00 mm and a width up to 1250mm, cold- rolled (cold-reduced), not clad, plated or coated, of prime and secondary quality, of in rolls or slit to length sheets. CR coils and sheets used in automotive outer skins of four-wheeler vehicles of certain auto grades and Tin Mill Black Plate (TMBP) are excluded.

The products are under Pakistan Customs Tariff Heading Nos. 7209.1510, 7209.1590, 7209.1610, 7209.1690, 7209.1710, 7209.1790, 7209.1810, 7209.1899, 7209.2510, 7209.2590, 7209.2610, 7209.2690, 7209.2710, 7209.2790, 7209.2810 and 7209.2890.

The definitive anti-dumping duty for CR coil and sheet from China's Beijing Shougang Cold Rolling Co is 16.27%. Handan Iron & Steel Group Han-Bao Co faces duties of 13.17%. Shougang Casey Steel Co, Shougang Jingtang United



Iron & Steel, Maanshan Iron & Steel Co, and all others face import duties of 19.04%.

Pakistan imposed AD duties from 13.17% to 19.04% on CR coils and sheets imported from China and Ukraine **from January 13, 2016 for a period of five years.**

The sunset review determined that the termination of AD duties will not lead to the recurrence of imports of the products under review from Ukraine. Thus, Pakistan's NTC has decided to remove the AD duties on imports of CR coil and sheet under review from Ukraine.

Fastmarkets' weekly price assessment for **steel CRC, export fob China main port** was \$850-860 per tonne on January 11, and the assessment for **steel CRC, domestic delivered Eastern China** was 5,410-5,450 (\$850-857) yuan per tonne on January 14.

Fastmarkets' weekly price assessment for **steel CRC export, fob Black Sea, CIS** was \$895-905 per tonne on January 10.

Vietnamese scrap market surges after Kanto Tetsugen auction sets price floor

By Paul Lim - Friday 14 January

Prices for imported scrap in Vietnam continued to surge after the much-anticipated conclusion of the Kanto Tetsugen auction set a more transparent price level for spot prices in the region, market participants told Fastmarkets in the week to Friday January 14.

Both winners of the Kanto Tetsugen auction are sending their materials to Vietnam, amid increased demand from buyers and bullish ferrous markets in Asia.

Bulk Japanese H2 scrap was offered at \$495 per tonne cfr southern Vietnam and at \$505 per tonne cfr northern Vietnam.

Offers for Hong Kong-origin H1&H2 (50:50) were heard at \$476 per tonne cfr Vietnam before the Kanto Tetsugen auction, although bids were at \$480 per tonne cfr Vietnam after that.

Higher-grade bulk Japanese heavy scrap (HS) was heard offered at \$530 per tonne cfr Vietnam, an end user said, although other market participants did not agree.

"With export prices at around \$500-505 per tonne fob Tokyo Bay, and freight of around \$55 per tonne, offers for HS should be around \$560 per tonne cfr Vietnam," a Japanese trader told Fastmarkets on Thursday.

Fastmarkets' weekly price assessment for **steel scrap H2, Japan-origin import, cfr Vietnam** was \$495-505 per tonne on Friday, increasing by \$10-15 per tonne from \$485-490 per tonne **a week earlier.**

Offers for bulk cargoes of heavy melting scrap (HMS) 1&2 (80:20) from the United States West Coast increased rapidly in the second half of the week to \$530-535 per tonne cfr Vietnam, compared with \$520 per tonne cfr Vietnam earlier in the week.

Bids from buyers were at \$500-515 per tonne cfr Vietnam.

But it was unlikely that such bids would result in any transactions, traders said. This was especially because South Korean buyers were already negotiating at \$520-530 per tonne cfr for bulk cargoes.

Vietnamese buyers were also bidding for Southeast Asian barge-shipment HMS 1&2 (80:20) at \$500 per tonne cfr, although a seller said he was not willing to sell at such a price.

"\$510 per tonne cfr Vietnam for barge cargoes is more appropriate, especially

with limited scrap being processed ahead of the upcoming Lunar New Year festival in the region," the seller said.

Bids for containerized HMS 1&2 (80:20) were at \$460 per tonne cfr northern Vietnam.

Fastmarkets' weekly price assessment for deep-sea bulk cargoes of **steel scrap, HMS 1&2 (80:20), cfr Vietnam** was \$530 per tonne on Friday, increasing by \$30 per tonne from \$500 per tonne a week earlier.

Vietnam gets competitive on HRC exports after producers slash offers

By Paul Lim - Friday 14 January

Vietnamese HRC is shaping up to be a competitive export supply source after the latest price announcement by major domestic producer Formosa Ha Tinh Steel Corp, market sources told Fastmarkets.

The blast furnace-based producer cut its March-shipment and delivery offers by \$70 per tonne on Wednesday January 12 in light of the weak HRC markets in Asia.

It is now offering SAE1006 HRC without skinpass at \$750 per tonne cif for Vietnamese customers and at \$740 per tonne fob for overseas buyers. It is also offering SAE1006 HRC with skin pass at \$755 per tonne cif and SS400-grade/pipemaking-grade HRC at \$745 per tonne cif.

A seller source close to the company said aggressive offers by Indian producers, as well as weaker demand in the United States, Europe and other parts of Asia, were among the main reasons for the lower offers.

Market participants were surprised by the hefty cuts, with multiple buyers expressing interest in purchasing.

"Formosa Ha Tinh is getting a lot of inquiries from buyers now. I think it will be easy for them to sell out March-shipment materials," a Vietnamese trader told Fastmarkets on Thursday.

It also cut its wire rod offers by \$10 per tonne.

Domestic peer Hoa Phat Group released its HRC offer on Thursday, continuing its typical pattern of offering below Formosa Ha Tinh Steel Corp. Market sources said the discount this time was the narrowest they had ever seen.

Hoa Phat offered March/April-delivery SAE1006/SS400 HRC at 16,700 Vietnamese Dong per kg (\$740 per tonne) to buyers in northern Vietnam, 16,750 Vietnamese Dong per kg to buyers in central Vietnam and 16,800 Vietnamese Dong per kg to buyers in southern Vietnam.

"It didn't cut prices by too much because Formosa's price is already quite low," a second Vietnamese trader told Fastmarkets on Thursday, estimating that it could be only \$5-10 per tonne lower.

Any offers for imported cargoes now would be irrelevant, especially with buyers negotiating with Formosa Ha Tinh Steel Corp and Hoa Phat Group for March-delivery quantities.

"Sellers offering imported HRC will have to offer at \$730-740 per tonne cfr in order to gather any interest. Who will sell at such a low price?" the first Vietnamese trader told Fastmarkets.

There was talk in the market that an Indian steelmaker had sold two vessels of HRC to Vietnam in the past week, including SS400 HRC at \$748-752 per tonne cfr Vietnam and SAE1006 HRC at \$755 per tonne cfr Vietnam. The purported seller confirmed only the price level for SAE1006 HRC.

"Anything lower than \$755 per tonne cfr are actually close to bid levels by Vietnamese buyers," a seller source close to the steelmaker said.

Fastmarkets' assessment of [steel HRC import, cfr Vietnam](#), which mainly looks at 2-3mm rerolling-grade SAE1006 HRC and equivalent products, was \$750-760 per tonne cfr Vietnam on Friday, [unchanged week on week](#).

In the wider Asian markets, a major South Korean steelmaker sold 3,000 tonnes of March-delivery HRC to Thailand at \$780 per tonne cfr this week. Other market sources said they had heard lower.

A major Japanese steelmaker was heard offering HRC at \$765 per tonne cfr Vietnam, while another Japanese steelmaker was heard offering HRC to Taiwan at \$775 per tonne cfr.

Seller sources estimated that spot prices for Japan-, South Korea- and Taiwan-origin HRC sold into Vietnam were at \$765-770 per tonne cfr, based on these transactions and offers.

Fastmarkets' assessment of [steel HRC \(Japan, Korea, Taiwan-origin\), import, cfr Vietnam](#), was \$765-770 per tonne on Friday, down by \$15-20 per tonne from \$785 per tonne a week earlier.

Taiwan sees increased trades for imported scrap amid warming sentiment

By Paul Lim - Friday 14 January

Spot prices for imported containerized ferrous scrap in Taiwan were on a upward trend in the week to Friday January 14 amid warming sentiment caused by increased demand from South Korea and Vietnam.

Fastmarkets' daily price assessment for [containerized steel scrap, heavy melting scrap 1&2 \(80:20 mix\), United States material import, cfr main port Taiwan](#) was \$438-440 per tonne on Friday, unchanged day on day, but narrowing upward by \$6 per tonne from \$432-440 per tonne [a week earlier](#).

A major electric-arc furnace operator in Taiwan kept its purchase price for local scrap but dropped its domestic selling price for rebar by NT\$400 (\$14.45) per tonne during the week.

There were transactions for containerized US-origin ferrous scrap concluded at increasingly higher prices throughout the week, including at \$435 per tonne, \$437 per tonne, \$438 per tonne and \$440 per tonne cfr Taiwan.

There was also market chatter of non-US origin containers being sold at \$435 per tonne cfr Taiwan this week.

Buyers had initially maintained bids at \$430-435 per tonne cfr Taiwan, resisting higher offers by sellers, who wanted to offload materials at \$440 per tonne and above only.

Buying interest had been piqued by the return of Vietnamese and South Korean buyers, which are out in the spot market for Japanese materials. Vietnamese buyers were bidding for Japanese H2 cargoes, while also engaging in negotiations for shredded and HS materials.

A major South Korean blast furnace-based producer also increased its bids for bulk Japanese scrap, including ¥49,000 (\$425.76) per tonne fob for H2, ¥56,000 per tonne fob for shredded scrap, ¥58,000 per tonne fob for heavy scrap (HS) and ¥57,000 per tonne for Shindachi Bara.

The conclusion of the Kanto Tetsugen auction on Wednesday has also provided more transparency to the spot markets, with buyers clearer of workable spot price levels.

Active purchasing by Turkish steelmakers has also supported sentiment, with a flurry of transactions for US, Canadian and Baltic Sea cargoes in the past

two weeks.

Bulk cargoes of Japanese H1&H2 scrap (50:50) had earlier been offered at \$470-475 per tonne cfr Taiwan before the Kanto Tetsugen auction, with market chatter of a recent transaction concluded at \$468 per tonne cfr Taiwan. This could not be confirmed with the parties involved.

But prices for Japanese scrap in Taiwan are expected to increase, especially after the Kanto Tetsugen auction concluded this week, with market sources looking to see firmer offers from next week onward.

Eastern China rebar prices flat ahead of cold snap

By Jessica Zong - Friday 14 January

Eastern China rebar prices were unchanged on Friday January 14 amid soft demand ahead of cold weather expected in the next three days.

Domestic

Eastern China (Shanghai): 4,680-4,720 yuan (\$736-742) per tonne, unchanged

Northern China (Beijing) weekly assessment: 4,580-4,640 yuan per tonne, up by 80-90 yuan per tonne

A cold wave will grip eastern and southern China from January 15 to 17 causing a temperature drop of 4-6 degrees Celsius and heavy rain in certain regions.

End users have reduced procurement rates of rebar ahead of the anticipated cold spell, market sources said.

Eastern China's rebar prices dropped by 20 yuan per tonne from last Friday due to the reduced demand in the region.

In northern China, prices were flat on Friday, but the early-week rise led to a week-on-week increase of 80-90 yuan per tonne.

Some stockists in northern China increased procurement rates early this week to replenish inventories before more truck drivers take their holiday leave for the Chinese New Year, which also pushed up prices.

Market chatter

"Rebar producers running electric arc furnaces have lost around 100 yuan per tonne, so they are reducing production rates. This might release pressure on the rebar price to some extent," an industry analyst said.

Billet

As of 3pm in Shanghai, billet was being traded at 4,430 yuan per tonne including value-added tax in Tangshan, unchanged from the previous day.

Shanghai Futures Exchange

The most-traded May rebar futures contract closed at 4,664 yuan per tonne on Friday, up by 31 yuan per tonne from the previous day.



Cisa member mills' steel output falls in early January after late-December surge

By Tianran Zhao - Friday 14 January

Member mills of the China Iron & Steel Association (Cisa) lowered their production rates for hot metal, crude steel, and finished steel in early January compared with the preceding 11 days, according to data published by the association on Friday January 14.

January 1-10 output

Crude steel: 1.97 million tonnes per day, down 6%

Finished steel: 1.89 million tpd, down 3.76%

Hot metal: 1.75 million tpd, down 7.22%

Mill finished steel inventories

12.92 million tonnes, up by 1.63 million tonnes (14.39%)

Spot market inventories

Hot-rolled coil: 1.58 million tonnes, up 20,000 tonnes (1.3%)

Cold-rolled coil: 1.13 million tonnes, up 10,000 tonnes (0.9%)

Plate: 0.91 million tonnes, unchanged

Wire rod: 1.27 million tonnes, up 10,000 tonnes (0.8%)

Rebar: 3.04 million tonnes, up 10,000 tonnes (0.3%)

Total (all five major products): 7.93 million tonnes, up 50,000 tonnes (0.6%)

Cisa included Gansu province's Lanzhou city in the list of spot markets it monitors from January 2022, taking the total to 21 cities. Cisa's output data for the preceding 11 days can be found here.

Industrial minerals

Kenmare reports 'records for safety, production and sales' in 2021

By Claire Patel-Campbell - Friday 14 January

Titanium minerals and zircon producer Kenmare Resources achieved records for safety, production and sales in 2021, the company said in a trading update for the full year and fourth quarter ended December 31, 2021.

In the fourth quarter, the company produced 246,000 tonnes of ilmenite, 12,400 tonnes of primary zircon, and 2,100 tonnes of rutile, up 12%, 11% and 50% respectively from the corresponding period of 2020.

For the full year, it produced 1.12 million tonnes of ilmenite, 56,300 tonnes of primary zircon, and 8,900 tonnes of rutile, up 48%, 30% and 48% respectively year on year.

The company achieved its full-year 2021 production guidance for ilmenite, primary zircon and concentrates, it said, with ilmenite benefiting primarily from a 38% increase in heavy mineral concentrate (HMC) processed.

Concentrates production, which includes secondary zircon and mineral sands concentrate, rose to 11,300 tonnes for the fourth quarter, up 31% compared with the fourth quarter of 2020, while full-year production rose to 43,900 tonnes, up 25% year on year.

HMC production increased to a record 1.56 million tonnes for the full year in 2021, up 30% year on year, it said. But fourth-quarter HMC output was lower at 343,900 tonnes, down 11% from the final three months of 2020.

Kenmare attributed the full-year rise to a 19% increase in ore grades and a 14% increase in excavated ore volumes, while the fourth-quarter decrease was linked to a 24% reduction in ore grades year on year.

Shipments of finished products for the full year rose by 51% compared with 2020, at 1.29 million tonnes, reflecting increased production and improved trans-shipment capacity, Kenmare said.

Shipments during the year included 1.19 million tonnes of ilmenite, 52,900 tonnes of primary zircon, 3,700 tonnes of rutile and 41,800 tonnes of concentrates.

In terms of safety, the company reported its lowest-ever Lost Time Injury

Frequency Rate (LTIFR) of 0.03 per 200,000 hours worked to 31 December, representing an 88% improvement year on year. It also achieved one year without a Lost Time Injury as of January 6, 2022.

Kenmare achieved higher average prices for all of its products in 2021, it said, without specifying exact price levels. It added that this has continued into 2022 as a result of "strong demand for Kenmare's products and low ilmenite inventories in the global supply chain."

The strength of demand was linked to global pigment production, which reached a record high in 2021, according to Kenmare.

Alongside the improving titanium metal market, demand for ilmenite was "well supported", the company said, adding that it had exceeded its ability to supply.

Meanwhile, global supply of ilmenite increased in 2021 - from Kenmare and from producers in China and Norway.

The zircon market stabilized in the first quarter, according to the company, followed by improved market conditions in the second quarter, before demand increased in the second half with economies looking toward recovery from Covid-19 and restrictions being lifted.

But Covid-19 continued to present a challenge in 2021, with first-half operations at the Moma Titanium Minerals mine in northern Mozambique affected by limited availability of staff, including senior management, because of the virus, Kenmare said.

The company experienced a pronounced rise in Covid cases in the second half of December, with the number of employees in isolation on site following a positive test result rising as high as 326 on January 6, 2022. This number has since fallen to 168 as of 11 January.

No one has been seriously ill, according to Kenmare, but the increased number of employees in isolation has affected work routines. It added that the business continues to be managed to reduce the impact and production has continued.

For the full year 2022, the company expects ilmenite production to be between 1.125 million and 1.225 million tonnes, it said.

"In 2021 we received higher average prices for all products compared to 2020 and the outlook for 2022 remains buoyant," Michael Carvill, Kenmare managing director, said in a statement.

"We were delighted to return almost \$100 million to shareholders during the year, through dividend payments and a share buy-back, and we continue to



target a 25% profit after tax total dividend payment in respect of 2021," he added.

Magnesia price support expected to continue

By Sofia Okun - Friday 14 January

Magnesia producers outside of China saw good demand in 2021 and ramped up production while market participants have seen several factors supporting prices early in 2022.

The past year brought increased prices across the range of raw materials, triggered by increased costs for logistics and production while the global economy was recovering from the Covid-19 pandemic.

By early 2021, global magnesia prices had been under sustained pressure from oversupply and heavy stock accumulation, which have weighed on prices since 2018, with falling demand in 2019 and 2020 extending the decline.

Later through the year, inventory stocks depleted. From the summer of 2021, the market slipped into tightness. Fastmarkets' price assessment for magnesia, fused, 97% MgO, cif Europe, jumped to \$1,200-1,500 per tonne on November 16.

The magnesia industry in China went through environmental checks and consolidation in the first half of 2021, reducing supply. In October, electricity rationing in major Chinese production hubs such as Liaoning province added further pressure on the supply.

China accounted for the majority of global magnesia production and 60% of special magnesia grades (CCM, FM, DBM) imported to the US in 2015-18, with the trends staying similar in subsequent years.

Production in China resumed in early November and brought local prices down. But market participants expect further closures during the Winter Olympic Games in Beijing in February 2022, while the Chinese government tries to improve the ecological situation during the event. Local governments have instructed China's magnesia producers to limit production during the Olympic Games but the scope of closures is unclear, according to sources.

A European market participant told Fastmarkets that, across the industry, people are "fed up with China's unpredictability." Another European source said: "It is risky to depend on China 100%."

Non-Chinese production boosted

In 2021, overseas buyers started looking for more material from magnesia suppliers outside China to guarantee supply. One trader told about requests for non-Chinese synthetic magnesia and recycled magnesia bricks. Mostly, these requests brought increased demands for non-Chinese magnesia.

"The demand is insane; the market is overheated," a European producer source said.

Martin Marietta, a US-based construction materials group, reported 30% increased revenues year-on-year for its magnesia specialties division in the third quarter of 2021, "driven by improving domestic steel production and global demand for magnesia chemicals products."

Kümaş Manyezit, a part of Turkish steel and refractory material group Kümaş, said that its pellet, iron and magnesite ore products output reached 1,947 kilotonnes over the first nine months of 2021, a 26% increase year-on-year.

"We see customers coming to us who we have not seen for 10 years, because they cannot find anything from China," a European producer source told Fastmarkets in October, calling the situation "crazy".

Magnezit, a Russian producer, reported increased production capacity for magnesia fireproof materials in December 2021. A source familiar with Magnezit production said that they were seeing demand exceed pre-pandemic levels by 10-15%.

"It was a good year for us," another European production source said, adding that by August their production was sold out for the rest of the year, and in December they were fully booked for the first half of 2022. But the benefits were offset by fuel costs, including gas prices, the source added.

Natural gas and oil prices showed rises throughout the year.

Logistics problems continue

Transportation costs and unpredictability of deliveries were among the key factors affecting the industry at the end of 2021, and are likely to continue into the first half of 2022, three magnesia market participants said.

Since January 2021, the shipping industry has been facing a lack of containers and available vessels, due to reduced production during 2020. This resulted in increased delivery times and shipping costs. "Delivery takes around seven months instead of three," a European buyer complained at the end of the year.

In early December, price indicator the Drewry World Container Index – a composite of 40-foot ocean container freight rates on eight major routes to/from the United States, Europe and Asia – remained 196% higher than a year before. Logistics costs, as well as raw materials costs, have driven major refractory materials producers to increase prices.

Inflationary pressure

After the third quarter of 2021, global materials makers RHI Magnesita, Imerys and Vesuvius announced price increases for their production. In October, Imerys said it would pursue the implementation of price increases "ranging from 5% to 15% - and in a few unique situations, greater than 15%" for its Performance Minerals materials.

A European producer source told Fastmarkets in December that they had implemented a 15-25% rise for their production toward the end of the year.

During 2021, supply disruptions, which have hit commodity markets, were among the "structural" factors that have prompted the recent Eurozone inflation, the European Central Bank (ECB) said in October.

In November, inflation in the Eurozone reached 4.9%, the highest since the euro was introduced, and 6.8% in the United States, the highest rate since 1991.

A European magnesia buyer said: "2022 is going to be another interesting year."

Uncertainty about China's magnesia market drivers encourages caution

By Carrie Shi - Friday 14 January

Most market participants are adopting a cautious attitude to the magnesia market in 2022, with uncertainties about China's industrial policies, power cuts and electricity costs, as well as magnesia industry consolidation and environmental rules, overshadowing the entire magnesia sector.

Although the price of some grades of magnesia in China drifted lower in late November and early December 2021, most magnesia prices had just hit a two-year high due to supply constraints caused by a series of factors, including industrial policies such as strict environmental regulations, power cuts, and rising production costs resulting from higher coal prices.

Overcapacity in China's magnesia market has been a long-term problem in recent years, with accumulated stocks usually at a high level around 5 million tonnes, according to sources.

The Liaoning provincial government continued its efforts in 2021 to promote the healthy development of the market, and introduced continuous

environmental restrictions on magnesite mining activities.

Under strict environmental regulations, supplies for caustic calcined magnesia and dead burned magnesia have been squeezed, with some small producers stopping production after having failed to reach the environmental standards.

At the same time, falling production caused by higher coal prices, especially in September and October, together with suspended production amid snowy weather during winter, pushed magnesia prices upward at the end of 2021.

Fastmarkets' price assessment for magnesia, dead burned, 97.5% MgO, lump, fob China, was \$580-630 per tonne on December 7, unchanged since October 26, but up from \$380-450 per tonne at the start of January 2021. This was similar to the \$550-650 per tonne reached on September 17, 2019.

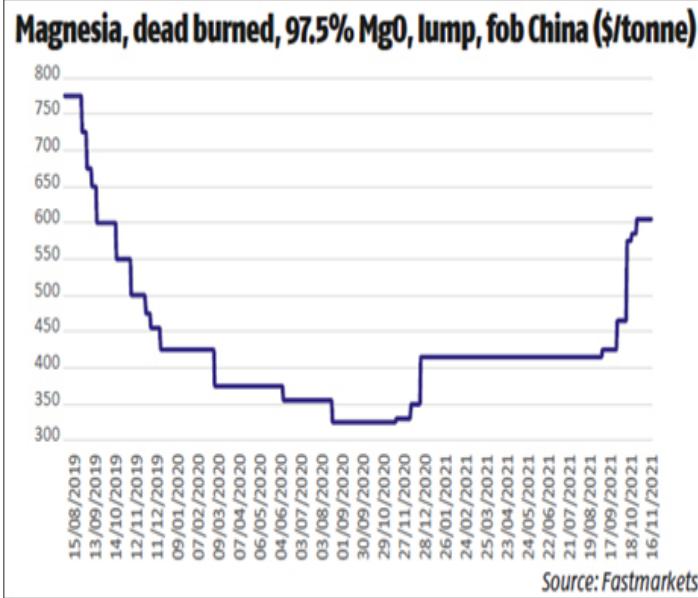
Fastmarkets' price assessment for magnesia, calcined, 90-92% MgO, fob China, was \$220-270 per tonne on December 7, unchanged since November 9, but up from \$150-180 per tonne on January 5, 2021.

High stocks were rapidly consumed, especially for fused magnesia, from late September until early November because of production halts among magnesia producers when there were power cuts for around one month in Liaoning province.

Production of fused magnesia recovered from November 5, following the end of the power cuts, and magnesia prices fell to a more reasonable level from a previous surge in October. But market participants were uncertain whether there would be further power cuts in 2022, and remained cautious.

"Whether there will be some power cuts policy coming in 2022, currently it is hard to say. As production of fused magnesia requires lots of electricity, a power cuts policy will have big effect on it," a producer said.

Fastmarkets assessed the price of magnesia, fused, 97% MgO, Ca:Si 2:1, lump, fob China, at \$850-900 per tonne on December 7, down by \$50 per tonne from \$900-950 per tonne a week earlier, but up from \$550-630 per tonne at the start of 2021. This was also similar to the level of \$850-950 per tonne on August 20, 2019.



Many uncertain factors

In addition to the uncertainty about power cuts policy in 2022, several other factors in the magnesia industry - such as electricity fee reform in Liaoning, the consequences for production during the Winter Olympics, and consolidation in the industry - have made most market participants cautious.

First, the latest reform of electricity fees caused some concerns about magnesia production costs, especially for the fused magnesia sector.

Liaoning carried out electricity reform in December and collected electricity fees for different time periods.

The Liaoning government divides electricity consumption in the province into four periods – low, normal, high and peak consumption – and has announced price changes for each time period.

The high consumption period, from 7:30am to 11:30am and 7:00pm to 9:00pm, attracts a price 50% higher than the average electricity price during the normal consumption periods of 5:00am-7:30am, 11:30am-5:00 pm and 9:00pm-10:00pm. For the peak period of 5:00pm-7:00pm, the cost of electricity will be higher than the high consumption period by an additional 25%. But for the low consumption period, 10:00pm-5:00am, electricity prices will be 50% lower than that normal period.

Because the electricity fee reform was due to last only for the month of December 2021, at the time of writing the reform has not had any significant effect on magnesia prices, but market participants wondered whether there would be more changes in 2022.

"There are lots of uncertainties in the magnesia market, and we don't know whether electricity fees will go even higher in 2022, which will keep raising the production cost for magnesia, especially fused magnesia. We are still waiting to see whether the government will have further changes for electricity fees for next year," a second producer told Fastmarkets.

Second, the possibility of a halt in production during the Winter Olympics in early 2022 stirred up supply concerns for the first quarter of the year. Most producers in Liaoning received verbal notice that magnesia production might stop, to guarantee better air quality from the middle of January until early March, because of the Winter Olympic Games being held in February 2022.

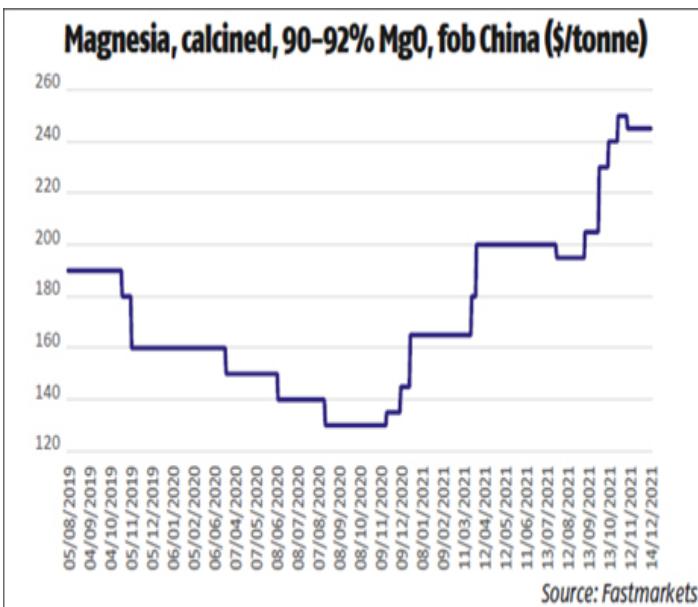
"Magnesia supply will be constrained in the first quarter of 2022 if production totally halts during the Winter Olympics period, but because there is still no specific notice – just a verbal notice, according to our suppliers – we will take a watchful attitude," a magnesia buyer said.

Third, the consolidation in magnesia consolidation will continue in 2022, and if further progress is made, magnesia prices would be supported to some degree. The Liaoning government, together with authorities in different cities in the province, continued to push for the consolidation of the domestic magnesia industry throughout 2021 by trying to implement quotas on magnesite production to curb overall output.

In September, Liaoning's government made plans to reduce the number of magnesite mining rights to 23 from 40 in Haicheng, and it will also try to achieve its target of having just two mining groups in Haicheng more quickly.

Furthermore, the local government in the city of Anshan, in Liaoning's Xiuyan county, released its latest plan for consolidation of the magnesite industry on September 2. In this process, Xiuyan will go from 23 magnesite mining rights to 14.

"Next year, Liaoning's government will definitely keep pushing the consolidation plan for magnesia, and if more progress is made, the market is expected to become firm, supported by more centralization of the industry," a third producer said.



Mixed views for 2022

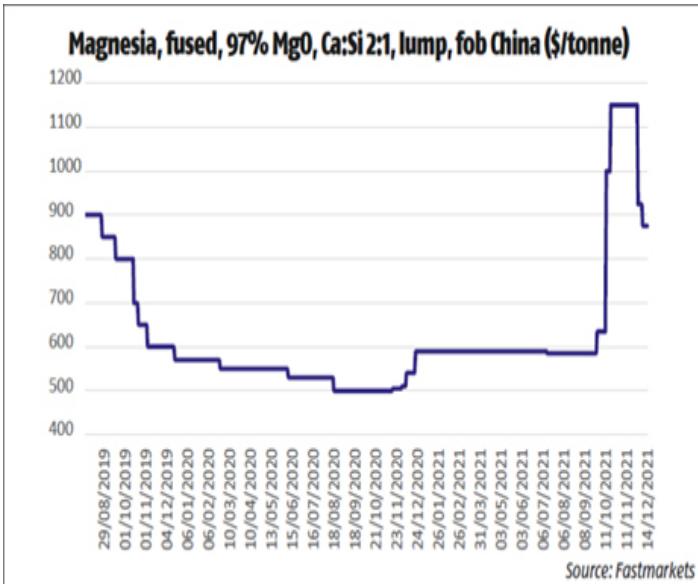
Given the uncertainties about the effects of industrial policies on the magnesia industry in 2022, most producers expect firm or higher magnesia prices during the year because of the potential tensions in supply.

"I think magnesia prices will not fall, and will stay firm in 2022 because the magnesia market is a policy-led industry at the moment. If policies such as power cuts are carried out again, or electricity fees rise further, magnesia supply and production costs will be affected," a fourth producer said.

But some downstream buyers were cautious, expecting lower prices from the second quarter of 2022, but they will also remain vigilant over policy changes.

"The Winter Olympics in China will possibly affect magnesia supply in the first quarter, but I think prices will become soft after that because supply will largely be unaffected by other factors, in my opinion," a second buyer said.

"I think magnesia prices will be mostly firm until March 2022, but then a decrease will start," a distributor added. "But prices will fluctuate through 2022 depending on environmental factors and other industrial policies set by China's government. I'm not really sure about the exact trend."



Tight China supply likely to support graphite flake price

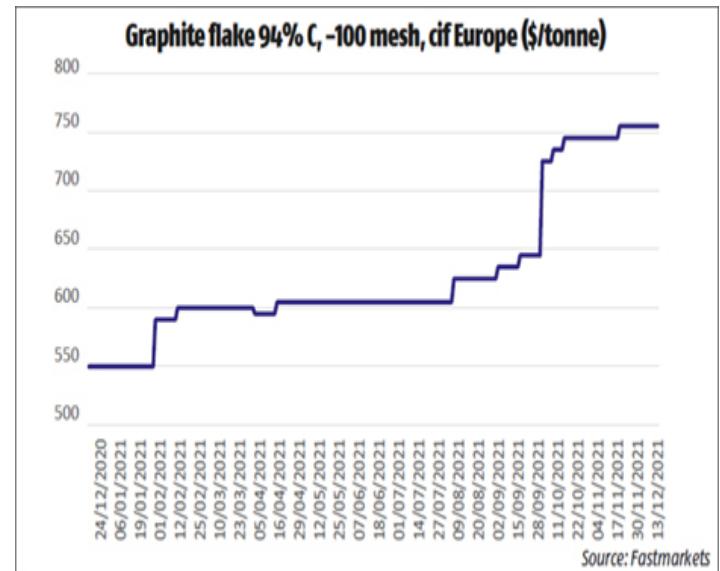
By Jon Stibbs, Sybil Pan - Friday 14 January

Graphite flake prices bounced back in 2021 due to evolving market dynamics amid global logistics issues, China's power crunch and its environmental inspections. These factors look likely to continue to drive the graphite flake market into 2022, report Sybil Pan and Jon Stibbs.

The new-energy vehicle sector is becoming a major downstream consumer of fine graphite flake, with solid support for the material since the end of 2020. Intensifying global shipping issues, China's power crunch, its environmental inspections and suspension of production in winter have combined to send fine flake prices soaring in the second half of 2021.

Fastmarkets' assessments for graphite flake 94% C, -100 mesh, fob China and graphite flake 94% C, -100 mesh, cif Europe jumped to \$700 per tonne and \$755 per tonne on December 2, respectively, up by 34.62% and 24.79% from the middle of the year.

With demand from the anode sector set to remain strong and ongoing uncertainty caused by the Covid-19 pandemic, graphite flake industry participants expect the market to remain bullish at least in the first quarter of 2022.



Solid demand, uncertain supply

According to market participants, fine flake prices in China are likely to stay near record highs for most of the first three months of 2022 due to solid demand for spherical graphite production to meet growing use in anode production, supply interruptions in major regions for production, and logistical issues.

In addition, demand from major consuming countries, such as South Korea and Japan, have been trending upward over the past two years despite the Covid-19 pandemic.

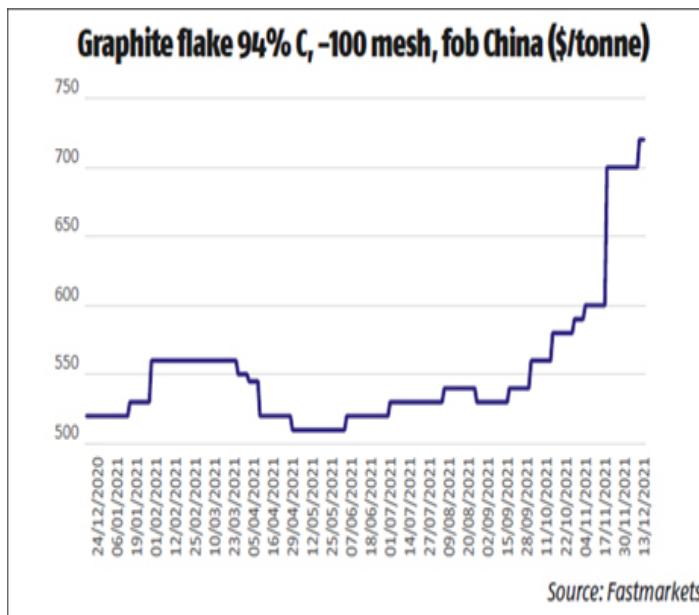
Total shipments of uncoated spherical graphite from China to South Korea and Japan were 30,040 tonnes and 14,877 tonnes from January to October in 2021, respectively, up by 14.56% and 3.33% from a year earlier, according to China's customs data.

Sources say that expansion of spherical graphite production in China is also driving up demand for fine graphite flake, which is used as a feedstock.

Total spherical graphite shipments in China's domestic market were estimated to be around 95,000 tonnes in 2020, in contrast with 130,000 tonnes just in the first half of 2021.

The spherical graphite price has also been rising strongly this year in response to demand and supply side factors, while the battery anode market develops

Fastmarkets' graphite spherical 99.95% C, 15 microns, fob China was \$3,100/3,300 per tonne on December 2, up by about a quarter from \$2,350-2,800 per tonne on July 1, 2021.



Multi-year high

"Chinese spherical graphite prices are at seven-year highs, and we would not be surprised to see the 2012 peak of \$4,000 per tonne breached over the coming years," said Amy Bennett, Fastmarkets' graphite analyst.

"Demand for active anode materials from the EV battery sector is rising sharply, while Chinese spherical graphite producers are also facing rising power costs. We expect to see upward pricing momentum maintained well into 2022," she added.

While demand is showing strong growth, uncertainties in flake supply from China will continue from January to March 2022 because of a seasonal halt to production over the winter period and the 2022 Winter Olympics, sources told Fastmarkets. The games will be held in Beijing, February 4-20.

"There is limited spot supply for flake graphite, which will last until April of next year. Prices for flake graphite will be at a high level considering the uncertain supply situation in the major production region of Heilongjiang," a flake graphite producer source in China said.

"There have been many new operation lines for spherical graphite in the past couple of years, indicating solid demand for flake fines as the raw material. Meanwhile, with artificial graphite operation for anode material being interrupted by energy controls in major production regions like Inner Mongolia, there could be more growing space for its alternative, natural graphite, in the future," a second flake producer source said.

Production of fine flake is expected to remain relatively steady despite the current high price acting as an incentive for producers to increase their output.

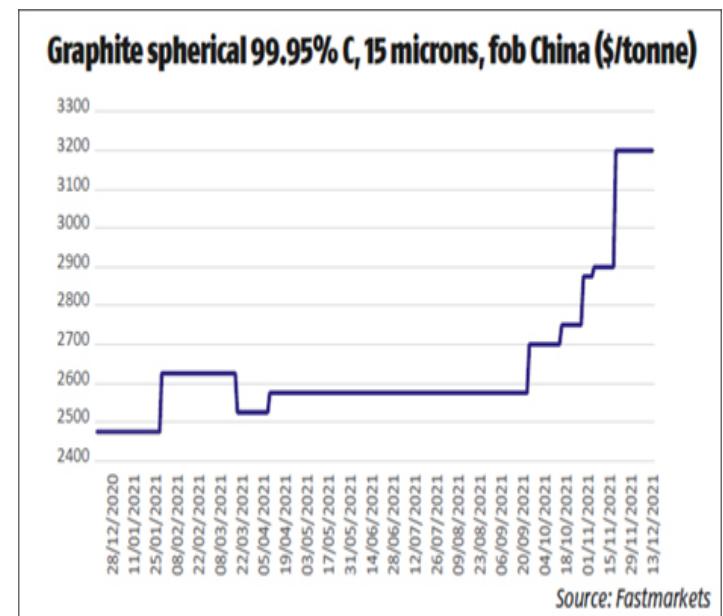
"We don't see too much other incremental supply coming online in the short to medium term – although there may be some increased future production in Madagascar and also Heilongjiang," a third producer source said.

"Providing there remains robust demand from EVs, we expect prices to be supported."

There is concern among producers to limit the volumes they offer into the market despite the current robust demand. Oversupply meant prices for graphite flake 94% C, -100 mesh, cif Europe, were significantly lower before November.

"We want to maintain balance in the market and the biggest limitation to our activity is containers and shipping line reliability," the third producer source said.

The availability of containers and problems finding space on vessels has hampered producers' ability to export, according to multiple sources.



Logistical costs

Additionally, logistics have added significantly to the producers' costs if they sell on a cif basis. Several producers in China have responded to the logistical problems by marketing their material on a fob basis and handed the issue of transportation over to the buyer.

Chinese exports have been hardest hit by soaring logistical costs, but they have also risen elsewhere.

"Furthermore, logistics will remain a problem for shipments from outside China, especially Mozambique for flake fines. Freight costs [from Mozambique to China] have been rising to \$110-140 per tonne from \$40 per tonne under normal circumstances," the second source said.

Should the logistics problems ease for producers outside of China, it would allow increased volumes to come on to the market and offer prices could be lowered.

"We anticipate reduced availability from China with continued high freight rates. However, there could be a recovery in delivery options from Africa and this could lead to a price reduction for these grades again, in particular for the specific grades from Mozambique, such as -194," a fourth flake producer source said. "Otherwise, we are assuming stable price levels in Europe at a relatively high level for 2022."

But the importance of freight rates in setting spot prices in China should not be overestimated, according to the third producer source, who stated the Chinese domestic price was more important than supply-chain issues.

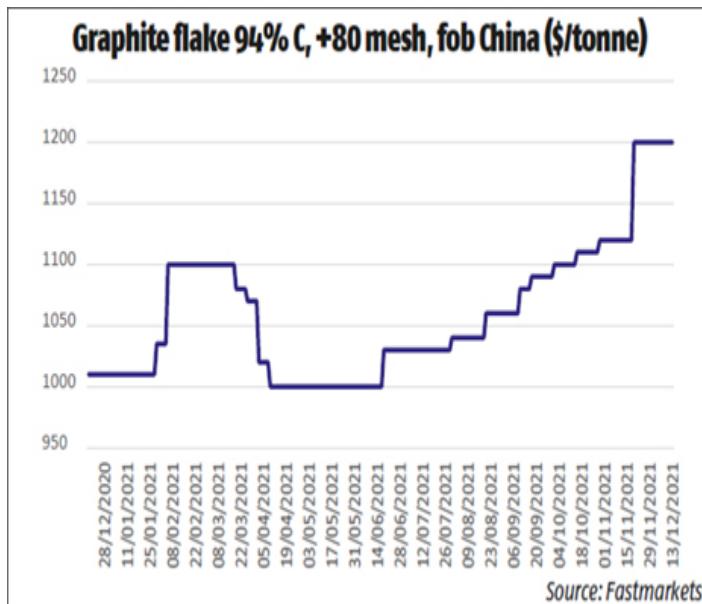
"The China market is by far the largest from a supply and demand perspective, so the price is set domestically based on in-land delivery on a

short-term spot basis. Delivery from imports takes quite a lot longer to fulfil sales and therefore the realization of spot prices is at a lag to the situation on the ground in China," he said.

"As freight prices reduce, and freight availability opens up, it's unlikely the price will move at this time due to balancing short supply conditions and strong demand growth," he added.

The cif Europe market could see price falls if the freight market softens, assuming the Chinese market does not absorb the material, according to the source.

"If freight rates do drop, then flake prices in the rest of the world are likely to soften, providing there is enough material and supply in China to satisfy local demand," he said.



Olympics and beyond

Fastmarkets research expects flake prices of all sizes to remain elevated through the first quarter of 2022, at least until after the Winter Olympics.

"We expect China's production to remain restricted during that period, however, from the second quarter of 2022 onwards we may see some modest downward correction in prices as China's production returns to more normal levels," said Bennett.

"Rising demand and production restraints will limit any potential price declines, however, with annual average prices in 2022 expected to remain above this year's levels," she explained.

Once production resumes following the winter halt in Heilongjiang, consumers in China may also increase the pressure for prices to be reduced.

"The current high prices are unsustainable and difficult for downstream consumers to accept. They have resulted from a combination of extreme factors, including the power crunch, environmental inspections, reduced shipments from outside China and the winter halt. Things might improve when spring comes [and operations restart in Heilongjiang]," a spherical graphite source in China told Fastmarkets.

Traders may have sufficient inventory for the winter season. However, refractories – the traditional major downstream consumer for fine flakes – face pressure in China, with steel mills' output cut in line with China's decarbonization policies. Therefore, there could be some downward adjustment in price next year, according to one trader source in China.

The impact of the policies to decarbonize China's economy may also be felt

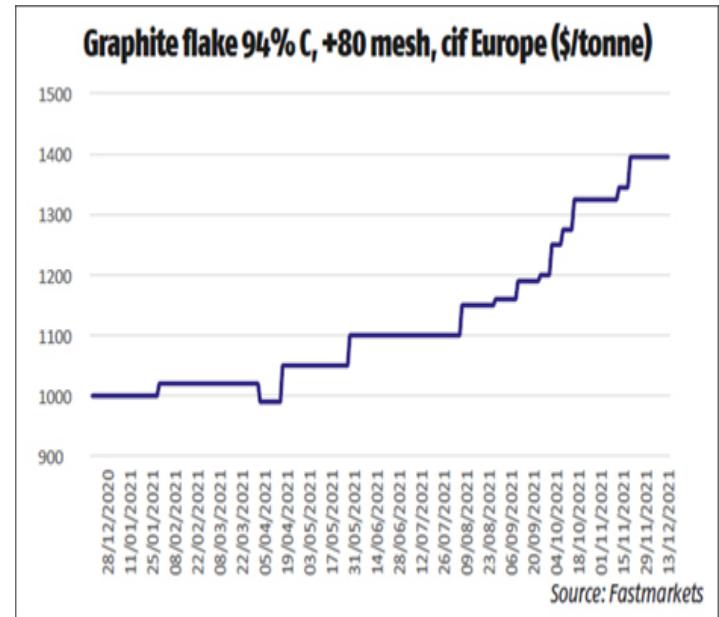
on the supply side, as well as in terms of domestic demand.

China's position as a significant net exporter of energy-intensive materials has been declining in numerous markets, such as in the energy-intensive ferro-alloys sector, according to Bennett, which has left less material available for export.

"We can see similar developments for the Chinese graphite industry in the coming years, reflecting both the rapid expansion in demand for graphite from the EV battery sector and environmental controls and persistent issues with electricity costs and availability," she said.

While Chinese production has been hampered by rising costs and falling flake reserves, other producers in Africa and elsewhere sought to increase their market share.

"The domestic supply chain is about to be broken in China," a market participant said. "We think their problems will remain when Chinese manufacturers restart production in 2022. These problems occurred before they stop their production and will exist after they return."



Large flake's strength

The first quarter of 2022 will define the outlook for the market for larger graphite flake, according to a fifth graphite flake producer source.

Some producers expect to increase their capacity, but this material will be absorbed primarily in China, where supply is tight.

"While most of the new capacity will continue to come from outside China, for 2022 China will remain the primary location for downstream processing. Thus the new capacities outside China would fill the non-Chinese upstream markets to some extent and the rest getting to China for further processing," Shishir Poddar, managing director of Tirupati Graphite, told Fastmarkets.

"Overall therefore, we can say that we expect to see the prices remaining firm and diversity of source evolving through 2022," Poddar added.

Industry participants agreed that large graphite flake will remain bullish.

Meanwhile, the shift in demand for large graphite flake from China to overseas sources, especially Madagascar, will continue in the near term, given the interrupted global shipping conditions and supply tightness in China.

The graphite flake market has witnessed a major demand shift due to soaring freight costs from China to other suppliers since the end of 2020. The trend has developed throughout 2021 due to availability issues in China.



Fastmarkets assessed the price for graphite flake 94% C, +80 mesh (+894), fob China on December 2, 2021 at \$1,200 per tonne, which had surged by 18.81% from \$1,010 per tonne at the start of the year. Meanwhile, the corresponding cif Europe price for +894 jumped by 39.5% to \$1,395 per tonne on December 2 from the start of the year at \$1,000 per tonne.

At the time of writing, the latest freight costs were about \$8,000 per 20ft container from Qingdao port to Rotterdam, equivalent to \$400 per tonne. Meanwhile, shipment costs from Madagascar to main ports in Europe range from \$50 to \$90 per tonne, subject to different ports, according to one producer source outside China. This disparity in transportation costs has reduced the attraction of Chinese graphite and driven consumers towards other suppliers.

"We expect Chinese graphite exports to remain below 2018 peaks, with non-Chinese material continuing to gain market share in Europe, as the Chinese industry increasingly consumes greater quantities of graphite domestically.

Using Germany as a proxy for Europe, the Chinese share of total German imports of graphite fell from 45% in 2018 to 37% in the first nine months of 2021, with this trend expected to continue," Bennett said.

Limited availability will continue to support price for large graphite flake and the shift in demand away to the sources outside of China will be established as the "new normal", according to sources.

"Major refractory producers in Europe are showing interests in diversifying their sourcing channels, especially with the skyrocketing freight rates making it extremely costly to ship material from China, the traditional major supplier," a second trader source said.

"Despite limited growth for global refractories, we are seeing the new sector of expandable graphite triggering increasing demand for large flake graphite," the source added.



Manganese ore & alloys

Source: dashboard.fastmarkets.com/m/d73a1ad8-bcee-4a7e-911a-5c69669337c7

Weekly ore indices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-MNO-0002	Manganese ore 37% Mn, fob Port Elizabeth, \$/dmtu	14 Jan 2022	3.38	4.64%	Dec 2021	3.21
MB-MNO-0001	Manganese ore 44% Mn, cif Tianjin, \$/dmtu	14 Jan 2022	5.44	-0.37%	Dec 2021	5.52
MB-MNO-0003	Manganese ore index 37% Mn, cif Tianjin, \$/dmtu	14 Jan 2022	4.51	0.00%	Dec 2021	4.54
MB-MNO-0004	Manganese ore port index, base 37% Mn, range 35-39%, fot Tianjin China, yuan/dmtu	14 Jan 2022	34.3	1.18%	Dec 2021	33.94
MB-MNO-0005	Manganese ore port index, base 44% Mn, range 42-48%, fot Tianjin China, yuan/dmtu	14 Jan 2022	43.2	2.61%	Dec 2021	42.24

Silico-manganese prices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-SIM-0001	Silico-manganese 65% Mn min, max 17% Si, in-whs China, yuan/tonne	14 Jan 2022	7900 - 8200	1.90%	Dec 2021	7680 - 7900
MB-SIM-0004	Silico-manganese 65% Mn min, min 16% Si, fob India, \$/tonne	14 Jan 2022	1450 - 1520	0.68%	Dec 2021	1445 - 1495
MB-SIM-0002	Silico-manganese lumpy 65-75% Mn, basis 15-19% Si (scale pro rata), major European destinations €/tonne	14 Jan 2022	1550 - 1600	0.00%	Dec 2021	1620 - 1720
MB-SIM-0005	Silico-manganese 65% Mn min, min 16% Si, in-whs Pittsburgh, \$/lb	13 Jan 2022	1.2 - 1.25	0.00%	Dec 2021	
MB-SIM-0003	Silico-manganese 65% Mn min, min 16% Si, in-whs Pittsburgh, US cents/lb	13 Jan 2022	120 - 125	0.00%	Dec 2021	120 - 125

Ferro-manganese prices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-FEM-0007	Ferro-manganese 65% Mn min, max 7% C, in-whs China, yuan/tonne	14 Jan 2022	7400 - 7600	2.04%	Dec 2021	6920 - 7060
MB-FEM-0006	Ferro-manganese basis 78% Mn max, standard 7.5% C, delivered Europe, €/tonne	14 Jan 2022	1500 - 1550	0.00%	Dec 2021	1670 - 1770
MB-FEM-0002	Ferro-manganese low carbon 80% Mn, max 0.80% C, in-whs Pittsburgh, US cents/lb	13 Jan 2022	315 - 320	0.00%	Dec 2021	315 - 320
MB-FEM-0004	Ferro-manganese medium carbon 80% Mn, max 1.50% C, in-whs Pittsburgh, \$/lb	13 Jan 2022	2.55 - 2.6	0.00%	Dec 2021	
MB-FEM-0003	Ferro-manganese medium carbon 80% Mn, max 1.50% C, in-whs Pittsburgh, US cents/lb	13 Jan 2022	255 - 260	0.00%	Dec 2021	249 - 254
MB-FEM-0001	Ferro-manganese high carbon 78% Mn, standard 7.5% C, in-whs Pittsburgh, \$/long ton	13 Jan 2022	2600 - 2650	0.00%	Dec 2021	2600 - 2650

**Manganese ore news****Offers rise for portside manganese ore in China on logistical problems**

By Declan Conway, Chris Kavanagh, Jon Stibbs, Siyi Liu - Friday 14 January

Key data from Fastmarkets' pricing sessions in China, India, Europe and the United States on Friday January 14.

GLOBAL MANGANESE ORE AND ALLOY PRICES			
	New price	Previous price	% Change
Manganese ore 44% Mn, cif Tianjin, \$/dmtu	5.44	5.46	▼0.4
Manganese ore 37% Mn, fob Port Elizabeth, \$/dmtu	3.38	3.23	▲4.6
Manganese ore index 37% Mn, cif Tianjin, \$/dmtu	4.51	4.51	0
Manganese ore port index, base 44% Mn, range 42-48%, fob Tianjin China, yuan/dmtu	43.20	42.10	▲2.6
Manganese ore port index, base 37% Mn, range 35-39%, fob Tianjin China, yuan/dmtu	34.30	33.90	▲1.2
Ferro-manganese high carbon 78% Mn, standard 7.5% C, in-whs Pittsburgh, \$/long ton	2,600 -2,650	2,600 -2,650	0
Ferro-manganese medium carbon 80% Mn, max 1.50% C, in-whs Pittsburgh, \$/lb	2.55 -2.60	2.55 -2.60	0
Ferro-manganese basis 78% Mn max, standard 7.5% C, delivered Europe, €/tonne	1,500 -1,550	1,500 -1,550	0
Ferro-manganese 65% Mn min, max 7% C, in-whs China, yuan/tonne	7,400 -7,600	7,200 -7,500	▲2.0
Silico-manganese lumpy 65-75% Mn, basis 15-19% Si (scale pro rata), major European destinations €/tonne	1,550 -1,600	1,550 -1,600	0
Silico-manganese 65% Mn min, min 16% Si, in-whs Pittsburgh, \$/lb	1.20 -1.25	1.20 -1.25	0
Silico-manganese 65% Mn min, max 17% Si, in-whs China, yuan/tonne	7,900 -8,200	7,800 -8,000	▲1.9
Silico-manganese 65% Mn min, min 16% Si, fob India, \$/tonne	1,450 -1,520	1,450 -1,500	▲0.7
Manganese ore inventories at the main Chinese ports of Tianjin and Qinzhou, million tonnes	5.11-5.27	5.05-5.29	▲0.4

Source: Fastmarkets

China

- Tianjin's mass Covid-19 testing continued to hammer port operation and transportation links, sparking concerns over the availability of ore should the situation be prolonged.
- Trading activity slowed amid logistics disruptions, and portside prices for low- and high-grade manganese ore prices ticked upward after sellers raised offers citing higher costs.
- Seaborne low- and high-grade manganese ore markets stabilized with fresh liquidity, good buying appetite was garnered by improved downstream alloys and steel performance.
- Spot ferro-manganese and silico-manganese markets continued to trend upward amid rising futures prices.
- The regional government of Ulanqab, Inner Mongolia, issued plans for alloys producers to lower their electricity usage from January 20, which could tighten the supply of material, market participants said.

Europe

- Manganese alloys markets stabilized, with suppliers reluctant to cut prices further in the hope of renewed consumer demand.
- Freight rates remain high and production has been reduced in Europe in the past 12 months amid reports of further domestic cuts this quarter.
- Container rates are also reported to be moving higher amid a renewed shortage due to Covid-related disruptions in China.
- Replacement costs look increasingly expensive in the coming weeks, shoring up support for ferro-alloys prices in the quarter, trade sources said.

India

- The silico-manganese market price has widened upward slightly after suppliers booked around 15,000 tonnes to buyers in the Middle East, and
- increased their offer prices amid steady domestic demand and expectation of renewed demand in Southeast Asia.
- Demand is expected to be higher than usual from Southeast Asia because China will be shutting down in a few weeks for the Lunar New Year holidays.

United States

- US alloys markets remained steady once again after consumers remained on the sidelines of the spot market.
- Current price levels continue to be underpinned by limited prompt supply options, despite the lower prices seen in global markets.
- Market participants expect these trends to continue over the near term while activity remains scant.

The global manganese snapshot will be discontinued after this week, allowing greater capacity for further editorial coverage. Fastmarkets' manganese prices and market commentary will remain available on the Dashboard.

Europe, US lithium prices rally on strength in domestic China, nickel sulfate prices track futures market up

By Dalila Ouerghi - Friday 14 January

An overview of the new energy materials markets and their price moves in the week to Friday January 14.

ENERGY TRANSITION RAW MATERIALS - 14/01				
Metal	Date of latest price assessment	Latest price	% change from previous assessment	Rationale
Cadmium				
Cadmium 99.99% min. cf global ports, cents/lb	14/01/2022	130-140	0	The price range for Cadmium min. 99.99% MB free market was unchanged, and interest in the material remains strong in Asia.
Cobalt				
Cobalt standard grade, in-whs Rotterdam, \$/lb	14/01/2022	34-34.40	0	Cobalt metal prices held steady amid thin trading and stable assessments.
Cobalt 99.8% Co min, ex-works China, yuan/tonne	14/01/2022	500,000-515,000	▲ 0.1	Spot prices rose due to higher local future prices and increase in international benchmark metal price. Spot market was active in the second half of the week because buyers feared further price rise and supply shortage due to production pause of some producers.
Cobalt sulfate 20.5% Co basis, exw China, yuan/tonne	14/01/2022	104,000-105,000	▲ 0.5	Prices stabilized at current level. While most sellers insisted on higher offers due to rising production costs, buyers remained cautious and did not accept those high offers.
Cobalt hydroxide index 30% Co min, cif China, \$/lb	14/01/2022	29.71-29.71	▲ 1.4	The cobalt hydroxide index rose week on week amid higher assessments in a quiet market but with firm offers due to tight supply and ongoing logistic delays.
Cobalt hydroxide payable indicator, min 30% Co, % payable of Fastmarkets' standard-grade cobalt price (low-end)	14/01/2022	88-90	0	The cobalt hydroxide payable indicator held steady over the pricing session with business reported within the current range and assessments mostly stable.
Graphite				
Graphite flake 94% C, -100 mesh, fob China, \$/tonne	13/01/2022	760	0	The flake fines market remained stable with downstream buyers finishing their procurement activities before China's Lunar New Year holiday, January 31 - February 6.
Graphite spherical 99.95% C, 15 microns, fob China, \$/tonne	13/01/2022	3,100-3,300	0	Spherical graphite prices have been stable since the middle of November with sound demand from the downstream anode sector.
Lithium				
Lithium carbonate 99.5% Li2CO3 min, battery grade, spot price range exw domestic China, yuan/tonne	13/01/2022	330,000-360,000	▲ 9.5	Spot battery-grade lithium carbonate price in China continued to rise amid even tighter spot availability and firm demand from strong LFP battery momentum and consumers' topping up inventories in the year end.
Lithium hydroxide monohydrate 56.5% LiOH·H2O min, battery grade, spot price range exw domestic China, yuan/tonne	13/01/2022	265,000-280,000	▲ 11.2	China's battery-grade lithium hydroxide price moved up amid tight availability and rising battery-grade lithium carbonate price.
Lithium carbonate 99.5% Li2CO3 min, battery grade, spot prices of China, Japan & Korea, \$/kg	13/01/2022	42-45	0	The seaborne battery-grade lithium carbonate price held steady amid a quiet market, and spot units remained light.
Lithium hydroxide monohydrate 56.5% LiOH·H2O min, battery grade, spot price of China, Japan & Korea, \$/kg	13/01/2022	36-38	0	Seaborne battery-grade lithium hydroxide price held steady amid a quiet market while spot units remained thin.
Lithium carbonate 99.5% Li2CO3 min, battery grade, spot price ddp Europe and US, \$/kg	13/01/2022	36-39	▲ 7.1	Battery-grade spot lithium prices jumped week on week in Europe and the United States, tracking ongoing strength in domestic China and the seaborne Asia market.
Lithium hydroxide monohydrate 56.5% LiOH·H2O min, battery grade, spot price ddp Europe and US, \$/kg	13/01/2022	36-40	▲ 7.0	Battery-grade spot lithium prices jumped week on week in Europe and the United States, tracking ongoing strength in domestic China and the seaborne Asia market.
Spodumene min 6% Li2O min, fob China, \$/tonne	05/01/2022	2400.00-2600.00	▲ 8.7	The range moved up in line with higher assessments, with rare spot units available.
Manganese				
Manganese 99.7% electrolytic manganese flake, in-whs Rotterdam, \$/tonne	14/01/2022	7,100-7,400	0	Manganese flake remained flat on thin trading. European sentiment has languished despite production cuts in China.
Manganese ore index 37% Mn, fob Tianjin, \$/dmtu	14/01/2022	4.51	0	The market was stable, with large volumes of liquidity reflecting a market currently in balance, with portside prices at an equivalent level to seaborne.
Nickel				
Laterite ore with 1.5% Ni content, fob China, \$/tonne	14/01/2022	81-83	0	1.5% Ni ore of price was stable during the pricing session, underpinned by the strong LME nickel price.
			0	The spot market has been quiet while the availability of ores has still been low during the rainy season in the Philippines.
			0	Shanghai nickel briquette premium increased amid low supply of duty-free briquettes following the increased of premiums of non-duty-free briquettes.
Nickel premium, 99.80% purity, briquette, duty free, of Shanghai, \$/tonne	29/12/2021	400-500	▲ 28.6	As the duty-free materials are mostly secured by long-term contracts, the liquidity in the spot market has still been low.
			0	Long-term contracts negotiation for 2022 is almost over with premiums around \$500-600/t, Fastmarkets heard.
			0	LME stocks is still low.
Nickel sulfate min 21%, max 22.5%; cobalt 10ppm max, exw China, yuan/tonne	14/01/2022	36,000-37,000	▲ 2.8	Nickel sulfate price moved up during the pricing session amid a surge in the LME nickel price. Market sentiment turned cautious in response to the higher price, leading to an inactive spot market.
Soda ash				
Soda ash, natural and synthetic, dense and light, large contracts, delivered Europe, €/tonne	30/12/2021	290-340	0	Soda ash export prices eased back slightly in China as energy issues lessened, and prices in Southeast Asia increased to narrow the gap with the Chinese FOB basis. In Europe, prices remained stable, though anticipation for supply tightness in 2022 continues.
Tellurium				
Tellurium 99.99-99.99% Te min, in-whs Rotterdam, \$/kg	14/01/2022	60-75	0	The price for Tellurium 99.99-99.99% was unchanged in thin trading.
Vanadium				
Vanadium pentoxide 98% V2O5 min, in-whs Rotterdam, \$lb V2O5	14/01/2022	8.50-9	0	Vanadium pentoxide remains steady now, but trade remains limited with most of the market focused on vanadium alloys, there is potential for the market to go up along with the metal, market sources said.

Source: Fastmarkets

Yingchi Yang and Sybil Pan in Shanghai; Carrie Shi in Beijing; and Fola Malomo, Cristina Belda Janie Davies and John Stibbs in London contributed to this report.



Iron ore markets

Source: dashboard.fastmarkets.com/m/74f0932b-34c8-430d-a2b6-2402986448e2

News

Iron ore prices continue to ease amid weakened demand from mills

By Alex Theo - Friday 14 January

Seaborne iron ore prices continued to trend downward on Friday January 14 amid sustained demand weakness from mills, sources told Fastmarkets.

Key drivers

Overall market sentiment was weighed down because most mills have finished restocking iron ore at China's ports ahead of the upcoming Lunar New Year, according to a Shanghai-based trader source.

Additionally, some small and mid-sized trading houses were heard to be in no hurry to take in seaborne mid-high grade iron ore cargoes, the same trader said.

Speculative buying interest for Yandi fines and Mining Area C fines increased due to being more cost-effective compared with other brands. But this also narrowed their reselling margins at China's ports, according to a Beijing-based trader source.

The reselling margin for Yandi fines at China's ports has dipped to around 15 yuan per tonne as of Friday, compared with 20 yuan per tonne on Thursday, the Beijing-based trader said.

The most-traded May iron ore futures contract on the Dalian Commodity Exchange traded largely sideways, ending the day down by 0.6% from its closing price of 726 yuan (\$114) per tonne on Thursday.

The forward-month iron ore swaps contracts on the Singapore Exchange followed a similar trend. By 6:26pm Singapore time, the most-traded February contract eased by \$0.74 per tonne compared with Thursday's settlement price of \$128.14 per tonne.

Fastmarkets iron ore indices

62% Fe fines, cfr Qingdao: \$128.01 per tonne, down \$1.86 per tonne

62% Fe low-alumina fines, cfr Qingdao: \$130.51 per tonne, down \$2.78 per tonne

58% Fe fines high-grade premium, cfr Qingdao: \$100.83 per tonne, down \$1.96 per tonne

65% Fe Brazil-origin fines, cfr Qingdao: \$156.60 per tonne, down \$1.20 per tonne

63% Fe Australia-origin lump ore premium, cfr Qingdao: \$0.2900 per dry metric tonne unit (dmtu), down \$0.0100 per dmtu

62% Fe fines, fot Qingdao: 847 yuan per wet metric tonne (implied 62% Fe China Port Price: \$123 per dry tonne), down by 15 yuan per wmt

Quote of the day

"Most steelmakers have already completed their restocking of iron ore. Should steelmakers still need to replenish any stocks, inventory at the Chinese ports should be sufficient. Some steel mills were also heard to be uncertain about the government's stance for production after the Lunar New Year holiday, so they have likely limited their restocking volumes," a Shanghai-based trader source said.

Trades/offers/bids heard in the market

BHP, Globalore, 90,000 tonnes of 62% Fe Mining Area C fines, traded at \$118.60 per tonne cfr China, laycan February 3-12.

BHP, Globalore, 80,000 tonnes of 62% Fe Jimblebar fines, offered at the February average of two 62% Fe indices plus a discount of \$20.50 per tonne, laycan February 6-15.

BHP, tender, 80,000 tonnes of 60.8% Fe Mining Area C fines, laycan February 3-12.

BHP, tender, 90,000 tonnes of 60.8% Fe Mining Area C fines, laycan February 3-12.

BHP, tender, 80,000 tonnes of 60.8% Fe Mining Area C fines, laycan February 6-15.

BHP tender, 80,000 tonnes of 56.7% Fe Yandi fines, laycan February 8-17.

BHP tender, two 80,000-tonne cargoes of 56.7% Fe Yandi fines, laycan February 11-20.

Market participant indications

Fastmarkets index for iron ore 62% Fe fines

Pilbara Blend fines: \$124-127.20 per tonne cfr China
Brazilian Blend fines: \$126.57-133 per tonne cfr China
Newman fines: \$126.27-128.38 per tonne cfr China
Jumblebar fines: \$101.45-\$107.60 per tonne cfr China

Fastmarkets index for iron ore 65% Fe Brazil-origin fines

Iron Ore Carajas: \$155-158.50 per tonne cfr China

Port prices

Pilbara Blend fines were traded at 825-835 yuan per wmt in Shandong province, Tangshan and Lianyungang city on Friday, compared with 835-857 yuan per wmt on Thursday.

The latest range is equivalent to about \$120-121 per tonne in the seaborne market.

Dalian Commodity Exchange

The most-traded May iron ore futures contract closed at 722 yuan (\$113) per tonne on Thursday, down by 11.50 yuan per tonne from Wednesday's closing price.



Alice Li in Shanghai contributed to this article.

Strike ends at Shougang iron ore mine in Peru

By Renato Rostás - Friday 14 January

A month-long strike at iron ore producer Shougang Hierro Perú ended after workers accepted the latest wage offer, the company said on Thursday January 13.

The Mining Workers' Union at Shougang had gone on strike on December 17 after its members voted against a salary proposal and accused the mining company of unwillingness to negotiate. The matter then went to government mediation.

Shougang said on Thursday that mediation had ended and the labor authority at the Ica region ruled employees should return to work. That, the company added, concluded the 2021-2022 labor negotiations.

The Peruvian mine has capacity to produce 20 million tonnes per year of iron ore. The country as a whole produced 11.39 million tonnes in January–November 2021, a 43.98% year-on-year increase from 7.91 million tonnes, with Shougang accounting for 98.3% of that total.

Seaborne iron ore prices had risen due to the supply disruptions in Brazil, but have since corrected amid weakening steel demand in China.

Fastmarkets calculated its index for iron ore 62% Fe fines, cfr Qingdao, at \$128.01 per tonne on Friday, down by 1.43% from \$129.87 per tonne a day earlier and 4.24% lower than Wednesday's \$133.68 per tonne, a three-month high.

Daily indices price table

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-IRO-0009	Iron ore 65% Fe Brazil-origin fines, cfr Qingdao, \$/tonne	14 Jan 2022	156.6	-0.76%	Dec 2021	132.02
MB-IRO-0144	Iron ore 62% Fe low-alumina fines, cfr Qingdao, \$/tonne	14 Jan 2022	130.51	-2.09%	Dec 2021	115.83
MB-IRO-0008	Iron ore 62% Fe fines, cfr Qingdao, \$/tonne	14 Jan 2022	128.01	-1.43%	Dec 2021	115.25
MB-IRO-0017	Iron ore 58% Fe fines high-grade premium index, cfr Qingdao, \$/tonne	14 Jan 2022	100.83	-1.91%	Dec 2021	88.14
MB-IRO-0016	Iron ore 58% Fe fines high-grade premium, cfr Qingdao, \$/tonne	14 Jan 2022	24.5	-3.92%	Dec 2021	18.54
MB-IRO-0015	Iron ore 58% Fe fines, cfr Qingdao, \$/tonne	14 Jan 2022	76.33	-1.24%	Dec 2021	69.6
MB-IRO-0010	Iron ore 63% Fe Australia-origin lump ore premium, cfr Qingdao, US cents/dmtu	14 Jan 2022	29	-3.33%	Dec 2021	15.17
MB-IRO-0022	Iron ore 62% Fe fines, fot Qingdao, \$/tonne conversion	14 Jan 2022	123	-1.85%	Dec 2021	109.62
MB-IRO-0011	Iron ore 62% Fe fines, fot Qingdao, yuan/wet tonne	14 Jan 2022	847	-1.74%	Dec 2021	758.57
MB-IRO-0076	Iron ore product differential - 62% Fe Pilbara Blend Fines, cfr Qingdao, \$/tonne	31 Dec 2021	(0.75)		Dec 2021	(1.2)
MB-IRO-0114	Iron ore 62% Fe Pilbara blend fines, cfr Qingdao, \$/tonne	31 Dec 2021	120	0.77%	Dec 2021	94.12

Weekly and monthly indices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-IRO-0012	Iron ore 65% Fe blast furnace pellet, cfr Qingdao, \$/tonne	14 Jan 2022	210.44	3.36%	Dec 2021	185.02
MB-IRO-0013	Iron ore 66% Fe concentrate, cfr Qingdao, \$/tonne	14 Jan 2022	163.12	4.72%	Dec 2021	138.88
MB-IRO-0077	Iron ore DR-grade pellet premium to 65% Fe fines index, Middle East reference, \$/tonne	31 Dec 2021	50	0.00%	Dec 2021	50
MB-IRO-0177	Iron ore pellet premium over 65% Fe fines, cfr China, \$/tonne	14 Jan 2022	54.8	0.00%	Dec 2021	52.2

Weekly value-in-use indices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-IRO-0021	Iron ore 62% Fe fines, % Al2O3 VIU, cfr Qingdao, \$/tonne	14 Jan 2022	(6.21)		Dec 2021	(6.33)
MB-IRO-0018	Iron ore 62% Fe fines, % Fe VIU, cfr Qingdao, \$/tonne	14 Jan 2022	2.14	0.00%	Dec 2021	2.11
MB-IRO-0020	Iron ore 62% Fe fines, % Si VIU, cfr Qingdao, \$/tonne	14 Jan 2022	(5.69)		Dec 2021	(4.94)
MB-IRO-0024	Iron ore 62% Fe fines, 0.01% P VIU, cfr Qingdao, \$/tonne	14 Jan 2022	(0.83)		Dec 2021	(0.82)



Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-IRO-0019	Iron ore 65% Fe fines, % Fe VIU, cfr Qingdao \$/tonne	14 Jan 2022	2.81	0.00%	Dec 2021	2.29

Ferro-alloy markets

Source: dashboard.fastmarkets.com/m/1746b0c9-25c5-4ffd-b531-bdec474d8481

Bulk ores & alloys news

Global ferro-silicon prices stable amid year-start lull in demand

By Declan Conway, Chris Kavanagh, Jessica Long - Friday 14 January

Key data from Fastmarkets' pricing sessions in China, Europe and the United States on Friday January 14.

GLOBAL FERRO-SILICON PRICES

	New price	Previous price	% Change
Ferro-silicon 75% Si min export, fob China, \$/tonne	2,000-2,050	2,000-2,050	0
Ferro-silicon 75% Si min, in-whs China, yuan/tonne	9,300-9,500	9,300-9,500	0
Ferro-silicon 75% Si min , cif Japan, \$/tonne	2,050-2,100	2,030-2,080	▲0.97%
Ferro-silicon lumpy basis 75% Si (scale pro rata), delivered Europe, €/tonne	2,800-3,300	2,800-3,300	0
Ferro-silicon 75% Si, in-whs Pittsburgh, \$/lb	3.30-3.40	3.30-3.40	0%

Source: Fastmarkets

China

- The China ferro silicon market was stable over the week, but market sentiments improved slightly with more active inquiries.
- With the Chinese new year approaching, steel mills were stocking up. Transportation difficulties, plus the effects of Covid-19 infections, will give some support to the price.
- Currently, the domestic market was a little oversupplied because many steel mills have replaced some stock before the new year, and downstream steel demand was not very strong.
- Semi-coke enterprises in Yulin, Shaanxi province, were undergoing security and environmental checks, and semi-coke prices have gone up, which boosted market confidence.

Europe

- The market extended its steady start to the year in the week to January 14, despite few deals being reported and no sign yet of renewed consumer buying inquiries.
- One deal was reported for about 100 tonnes of standard grade material, slightly above the top end of the current range, although it was for delivery later this quarter and with special qualities.
- Suppliers were holding their offer prices steady, however, in expectation of a quick return by consumers to the spot and longer-term markets, confirmed to Fastmarkets by some consumers this week.
- Ferro-silicon production has been reduced in Europe in the past 12 months or more, and replacement costs appear more expensive currently, with persistently high freight rates and worries about container availability due to Covid-affected port disruptions in China, such as at Tianjin; international container costs were already reported to be climbing again after easing from record peaks last year.

United States

- The US ferro-silicon market remained steady once again over the week with consumer buying interest thin at the start of the year.
- Current prices continued to be underpinned by the limited stocks available, despite the declines in prices seen globally during the latter part of 2021.

- Market participants suspected that prices would be held over for the near term while activity remained low.

Offers rise for portside manganese ore in China on logistical problems

By Declan Conway, Chris Kavanagh, Jon Stibbs, Siyi Liu - Friday 14 January

Key data from Fastmarkets' pricing sessions in China, India, Europe and the United States on Friday January 14.

GLOBAL MANGANESE ORE AND ALLOY PRICES

	New price	Previous price	% Change
Manganese ore 44% Mn, cif Tianjin, \$/dmtu	5.44	5.46	▼0.4
Manganese ore 37% Mn, fob Port Elizabeth, \$/dmtu	3.38	3.23	▲4.6
Manganese ore index 37% Mn, cif Tianjin, \$/dmtu	4.51	4.51	0
Manganese ore port index, base 44% Mn, range 42-48%, fob Tianjin China, yuan/dmtu	43.20	42.10	▲2.6
Manganese ore port index, base 37% Mn, range 35-39%, fob Tianjin China, yuan/dmtu	34.30	33.90	▲1.2
Ferro-manganese high carbon 78% Mn, standard 7.5% C, in-whs Pittsburgh, \$/long ton	2,600-2,650	2,600-2,650	0
Ferro-manganese medium carbon 80% Mn, max 1.50% C, in-whs Pittsburgh, \$/lb	2.55-2.60	2.55-2.60	0
Ferro-manganese basis 78% Mn max, standard 7.5% C, delivered Europe, €/tonne	1,500-1,550	1,500-1,550	0
Ferro-manganese 65% Mn min, max 7% C, in-whs China, yuan/tonne	7,400-7,600	7,200-7,500	▲2.0
Silico-manganese lumpy 65-75% Mn, basis 15-19% Si (scale pro rata), major European destinations €/tonne	1,550-1,600	1,550-1,600	0
Silico-manganese 65% Mn min, min 16% Si, in-whs Pittsburgh, \$/lb	1.20-1.25	1.20-1.25	0
Silico-manganese 65% Mn min, max 17% Si, in-whs China, yuan/tonne	7,900-8,200	7,800-8,000	▲1.9
Silico-manganese 65% Mn min, min 16% Si, fob India, \$/tonne	1,450-1,520	1,450-1,500	▲0.7
Manganese ore inventories at the main Chinese ports of Tianjin and Qinzhou, million tonnes	5.11-5.27	5.05-5.29	▲0.4

Source: Fastmarkets



China

- Tianjin's mass Covid-19 testing continued to hammer port operation and transportation links, sparking concerns over the availability of ore should the situation be prolonged.
- Trading activity slowed amid logistics disruptions, and portside prices for low- and high-grade manganese ore prices ticked upward after sellers raised offers citing higher costs.
- Seaborne low- and high-grade manganese ore markets stabilized with fresh liquidity, good buying appetite was garnered by improved downstream alloys and steel performance.
- Spot ferro-manganese and silico-manganese markets continued to trend upward amid rising futures prices.
- The regional government of Ulanqab, Inner Mongolia, issued plans for alloys producers to lower their electricity usage from January 20, which could tighten the supply of material, market participants said.

Europe

- Manganese alloys markets stabilized, with suppliers reluctant to cut prices further in the hope of renewed consumer demand.
- Freight rates remain high and production has been reduced in Europe in the past 12 months amid reports of further domestic cuts this quarter.
- Container rates are also reported to be moving higher amid a renewed shortage due to Covid-related disruptions in China.
- Replacement costs look increasingly expensive in the coming weeks, shoring up support for ferro-alloys prices in the quarter, trade sources said.

India

- The silico-manganese market price has widened upward slightly after suppliers booked around 15,000 tonnes to buyers in the Middle East, and
- increased their offer prices amid steady domestic demand and expectation of renewed demand in Southeast Asia.
- Demand is expected to be higher than usual from Southeast Asia because China will be shutting down in a few weeks for the Lunar New Year holidays.

United States

- US alloys markets remained steady once again after consumers remained on the sidelines of the spot market.
- Current price levels continue to be underpinned by limited prompt supply options, despite the lower prices seen in global markets.
- Market participants expect these trends to continue over the near term while activity remains scant.

The global manganese snapshot will be discontinued after this week, allowing greater capacity for further editorial coverage. Fastmarkets' manganese prices and market commentary will remain available on the Dashboard.

Europe, US lithium prices rally on strength in domestic China, nickel sulfate prices track futures market up

By Dalila Ouerghi - Friday 14 January

An overview of the new energy materials markets and their price moves in the week to Friday January 14.

ENERGY TRANSITION RAW MATERIALS - 14/01				
Metal	Date of latest price assessment	Latest price	% change from previous assessment	Rationale
Cadmium				
Cadmium 99.99% min, cif global ports, cents/lb	14/01/2022	130-140	0	The price range for Cadmium min. 99.99% MB free market was unchanged, and interest in the material remains strong in Asia.
Cobalt				
Cobalt standard grade, in-whs Rotterdam, \$/lb	14/01/2022	34-34.40	0	Cobalt metal prices held steady amid thin trading and stable assessments.
Cobalt 99.8% Co min, ex-works China, yuan/tonne	14/01/2022	500,000-515,000	▲ 0.7	Spot prices rose due to higher local future prices and increase in international benchmark metal price. Spot market was active in the second half of the week because buyers feared further price rise and supply shortage due to production pause of some producers.
Cobalt sulfate 20.5% Co basis, exw China, yuan/tonne	14/01/2022	104,000-105,000	▲ 0.5	Prices stabilized at current level. While most sellers insisted on higher offers due to rising production costs, buyers remained cautious and did not accept those high offers.
Cobalt hydroxide index 30% Co min, cif China, \$/lb	14/01/2022	29.71-29.71	▲ 1.4	The cobalt hydroxide index rose week on week amid higher assessments in a quiet market but with firm offers due to tight supply and ongoing logistic delays.
Cobalt hydroxide payable indicator, min 30% Co of China, % payable of Fastmarkets' standard-grade cobalt price (low-end)	14/01/2022	88-90	0	The cobalt hydroxide payable indicator held steady over the pricing session with business reported within the current range and assessments mostly stable.
Graphite				
Graphite flake 94% C, -100 mesh, fob China, \$/tonne	13/01/2022	760	0	The flake fines market remained stable with downstream buyers finishing their procurement activities before China's Lunar New Year holiday, January 31 - February 8.
Graphite spherical 99.95% C, 15 microns, fob China, \$/tonne	13/01/2022	3,100-3,300	0	Spherical graphite prices have been stable since the middle of November with sound demand from the downstream anode sector.
Lithium				
Lithium carbonate 99.5% Li2CO3 min, battery grade, spot price range exw domestic China, yuan/tonne	13/01/2022	330,000-360,000	▲ 9.5	Spot battery-grade lithium carbonate price in China continued to rise amid even tighter spot availability and firm demand from strong LFP battery momentum and consumers' topping up inventories in the year end.
Lithium hydroxide monohydrate 56.5% LiOH H2O min, battery grade, spot price range exw domestic China, yuan/tonne	13/01/2022	265,000-280,000	▲ 11.2	China's battery-grade lithium hydroxide price moved up amid tight availability and rising battery-grade lithium carbonate price.
Lithium carbonate 99.5% Li2CO3 min, battery grade, spot price of China, Japan & Korea, \$/kg	13/01/2022	42-45	0	The seaborne battery-grade lithium carbonate price held steady amid a quiet market, and spot units remained tight.
Lithium hydroxide monohydrate 56.5% LiOH H2O min, battery grade, spot price of China, Japan & Korea, \$/kg	13/01/2022	36-38	0	Seaborne battery-grade lithium hydroxide price held steady amid a quiet market while spot units remained thin.
Lithium carbonate 99.5% Li2CO3 min, battery grade, spot price ddp Europe and US, \$/kg	13/01/2022	38-39	▲ 7.1	Battery-grade spot lithium prices jumped week on week in Europe and the United States, tracking ongoing strength in domestic China and the seaborne Asia market.
Lithium hydroxide monohydrate 56.5% LiOH H2O min, battery grade, spot price ddp Europe and US, \$/kg	13/01/2022	36-40	▲ 7.0	Battery-grade spot lithium prices jumped week on week in Europe and the United States, tracking ongoing strength in domestic China and the seaborne Asia market.
Spodumene min 6% Li2O min, cif China, \$/mt	06/01/2022	2400-2600.00	▲ 8.1	The range moved up in line with higher assessments, with rare spot units available.
Manganese				
Manganese 99.7% electrolytic manganese flake, in-whs Rotterdam, \$/tonne	14/01/2022	7,100-7,400	0	Manganese flake remained flat on thin trading. European sentiment has languished despite production cuts in China.
Manganese ore index 37% Mn, cif Tianjin, \$/mt	14/01/2022	4.51	0	The market was stable, with large volumes of liquidity reflecting a market currently in balance, with portside prices at an equivalent level to seaborne.
Nickel				
Laterite ore with 1.5% Ni content, cif China, \$/tonne	14/01/2022	81-83	0	1.5% Ni ore price was stable during the pricing session, underpinned by the strong LME nickel price.
Nickel premium, 99.80% purity, briquette, duty free, of Shanghai, \$/tonne	29/12/2021	400-500	▲ 28.6	The spot market has been quiet while the availability of ores has still been low during the rainy season in the Philippines.
Nickel sulfate min 21%, max 22.5%, cobalt 10ppm max, exw China, yuan/tonne	14/01/2022	36,000-37,000	▲ 2.8	Shanghai nickel briquette premium increased amid low supply of duty-free briquettes following the increased of premiums of non-duty-free briquettes.
Nickel sulfate min 21%, max 22.5%, cobalt 10ppm max, exw China, yuan/tonne	14/01/2022	36,000-37,000	▲ 2.8	As the duty-free products are mostly secured by long-term contracts, the liquidity in the spot market has still been low.
Nickel sulfate price moved up during this pricing session amid a surge in the LME nickel price. Market sentiment turned cautious in response to the higher price, leading to an inactive spot market.				Long-term contracts negotiation for 2022 is almost over with premiums around \$500-600/t, Fastmarkets heard.
Soda ash				
Soda ash, natural and synthetic, dense and light, large contracts, delivered Europe, €/tonne	30/12/2021	280-340	0	LME stocks is still low.
Tellurium				
Tellurium 99.9-99.99% Te min, in-whs Rotterdam, \$/kg	14/01/2022	60-75	0	Soda ash export prices eased back slightly in China as energy issues lessened, and prices in Southeast Asia increased to narrow the gap with the Chinese FOB basis. In Europe, prices remained stable, though anticipation for supply tightness in 2022 continues.
Vanadium				
Vanadium pentoxide 98% V2O5 min, in-whs Rotterdam, \$/lb V2O5	14/01/2022	8.50-9	0	The price for Tellurium 99.9-99.99% was unchanged in thin trading.
Source: Fastmarkets				

Yingchi Yang and Sybil Pan in Shanghai; Carrie Shi in Beijing; and Fola Malomo, Cristina Belda Janie Davies and John Stibbs in London contributed to this report.



Attributable FeCr output up year on year at Glencore-Merafe chrome venture in South Africa

By Claire Patel-Campbell - Friday 14 January

Annual attributable ferro-chrome output from the Glencore-Merafe chrome joint venture in South Africa increased by 42.7% year on year in 2021 after a positive end to the year, according to the latest production report from Merafe Resources.

Full-year production was 379,000 tonnes in 2021, compared 265,000 tonnes in 2020.

Fourth quarter output was up by 5.1% compared with the same period in 2020.

In the three months to December 31, 2021, the joint venture achieved 102,000 tonnes of attributable ferro-chrome production, compared with 97,000 tonnes in the last quarter of 2020.

The increase was largely due to recent output being less affected by Covid-19 restrictions and benefiting from improved plant efficiencies at the company's smelters, Merafe said in a notice to the Johannesburg Stock Exchange.

Glencore has a 97.5% stake in the joint venture and Merafe 20.5%.

Merafe and Glencore Operations South Africa (Glencore SA) have also reached an agreement to add a new platinum group metal (PGM) production plant to the joint venture. This is under construction at the Kroondal Mine.

The new PGM plant's main operations will be the treatment of PGM-bearing material from the mining operations at the joint venture's western chrome mines, as well as material available in applicable tailings facilities, dams and from certain mining operations near the Kroondal Mine to which Glencore SA and/or Merafe directly or indirectly have rights related to PGMs.

Merafe is also responsible for announcing the European charge and high-carbon ferro-chrome benchmark settlement on a quarterly basis. For the first quarter of 2022, the benchmark for **ferro-chrome lumpy Cr charge quarterly, basis 52% Cr (and high carbon), delivered Europe**, rolled over from the fourth quarter of 2021, remaining at \$1.80 per lb Cr.

Chrome ore

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-CHO-0003	Chrome ore South Africa UG2/MG concentrates index, cif China, \$/tonne	11 Jan 2022	171	0.00%	Dec 2021	170.75
MB-CHO-0002	Chrome ore Turkish lumpy 40-42%, cfr main Chinese ports, \$/tonne	11 Jan 2022	300 - 310	0.00%	Dec 2021	290 - 308.75

Ferro-chrome

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-FEC-0012	Ferro-chrome high carbon 6-8% C, basis 60-65% Cr, max 2% Si, in-whs Pittsburgh, \$/lb	13 Jan 2022	2.1 - 2.25	0.00%	Dec 2021	
MB-FEC-0004	Ferro-chrome high carbon 6-8.5% C, basis 60-70% Cr, max 1.5% Si, delivered Europe, \$/lb Cr	28 Dec 2021	1.72 - 1.92	0.00%	Dec 2021	1.72 - 1.92
MB-FEC-0001	Ferro-chrome low phosphorous, min 65% Cr, max 0.015% P, delivered Europe, \$/lb	04 Jan 2022	1.77 - 1.99	0.00%	Dec 2021	1.77 - 1.99
MB-FEC-0017	Ferro-chrome high carbon 57-65% Cr, cif dup Japan, \$/lb	13 Jan 2022	1.06 - 1.08	0.00%	Dec 2021	1.17 - 1.19
MB-FEC-0018	Ferro-chrome high carbon 57-65% Cr, cif dup South Korea, \$/lb	13 Jan 2022	1.05 - 1.07	0.00%	Dec 2021	1.15 - 1.17
MB-FEC-0021	Ferro-chrome high carbon 6-8.5% C, basis 65-70% Cr, max 1.5% Si, delivered Europe, \$/lb Cr	11 Jan 2022	1.73 - 1.95	1.10%	Dec 2021	1.72 - 1.92
MB-FEC-0020	Ferro-chrome high carbon 6-8.5% C, basis 60-64.9% Cr, max 3% Si, cif Europe, \$/lb Cr	11 Jan 2022	1.28 - 1.5	-4.79%	Dec 2021	1.42 - 1.5
MB-FEC-0011	Ferro-chrome 50% Cr import, cif main Chinese ports, \$/lb contained Cr	11 Jan 2022	1.07	0.00%	Dec 2021	1.16
MB-FEC-0006	Ferro-chrome spot 6-8% C, basis 50% Cr, ddp China, yuan/tonne	11 Jan 2022	8200 - 8500	1.21%	Dec 2021	8725 - 9000
MB-FEC-0005	Ferro-chrome contract 6-8% C, basis 50% Cr, ddp China, yuan/tonne	11 Jan 2022	8195 - 9600	0.00%	Dec 2021	9098.75 - 9600
MB-FEC-0019	Ferro-chrome lumpy Cr benchmark indicator, charge basis 52% (and high carbon), Europe, \$/lb	11 Jan 2022	1.72	0.58%	Dec 2021	1.81
MB-FEC-0016	Ferro-chrome lumpy Cr charge quarterly, basis 52% Cr (and high carbon), delivered Europe, \$/lb Cr (rounded to the closest 2 decimal places)	01 Jan 2022	1.8	0.00%	Dec 2021	1.8
MB-FEC-0014	Ferro-chrome low carbon 0.10% C, 62% Cr min, in-whs Pittsburgh, \$/lb	13 Jan 2022	3.65 - 3.75	0.00%	Dec 2021	
MB-FEC-0013	Ferro-chrome low carbon 0.05% C, 65% Cr min, in-whs Pittsburgh, \$/lb	13 Jan 2022	3.8 - 3.85	0.00%	Dec 2021	



Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-FEC-0015	Ferro-chrome low carbon 0.15%C, 60% Cr min, in-whs Pittsburgh, \$/lb	13 Jan 2022	3.55 - 3.6	0.00%	Dec 2021	
MB-FEC-0003	Ferro-chrome 0.10% C, average 65-70% Cr, delivered Europe, \$/lb Cr	04 Jan 2022	3.65 - 4.28	0.00%	Dec 2021	3.63 - 4.27
MB-FEC-0002	Ferro-chrome low carbon, 65% Cr, max 0.06% C, delivered Europe, \$/lb Cr	04 Jan 2022	3.69 - 4.32	0.00%	Dec 2021	3.67 - 4.31

Manganese ore

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-MNO-0002	Manganese ore 37% Mn, fob Port Elizabeth, \$/dmtu	14 Jan 2022	3.38	4.64%	Dec 2021	3.21
MB-MNO-0001	Manganese ore 44% Mn, cif Tianjin, \$/dmtu	14 Jan 2022	5.44	-0.37%	Dec 2021	5.52
MB-MNO-0003	Manganese ore index 37% Mn, cif Tianjin, \$/dmtu	14 Jan 2022	4.51	0.00%	Dec 2021	4.54
MB-MNO-0004	Manganese ore port index, base 37% Mn, range 35-39%, fot Tianjin China, yuan/dmtu	14 Jan 2022	34.3	1.18%	Dec 2021	33.94
MB-MNO-0005	Manganese ore port index, base 44% Mn, range 42-48%, fot Tianjin China, yuan/dmtu	14 Jan 2022	43.2	2.61%	Dec 2021	42.24

Ferro-manganese

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-FEM-0007	Ferro-manganese 65% Mn min, max 7% C, in-whs China, yuan/tonne	14 Jan 2022	7400 - 7600	2.04%	Dec 2021	6920 - 7060
MB-FEM-0006	Ferro-manganese basis 78% Mn max, standard 7.5% C, delivered Europe, €/tonne	14 Jan 2022	1500 - 1550	0.00%	Dec 2021	1670 - 1770
MB-FEM-0002	Ferro-manganese low carbon 80% Mn, max 0.80% C, in-whs Pittsburgh, US cents/lb	13 Jan 2022	315 - 320	0.00%	Dec 2021	315 - 320
MB-FEM-0004	Ferro-manganese medium carbon 80% Mn, max 1.50% C, in-whs Pittsburgh, \$/lb	13 Jan 2022	2.55 - 2.6	0.00%	Dec 2021	
MB-FEM-0003	Ferro-manganese medium carbon 80% Mn, max 1.50% C, in-whs Pittsburgh, US cents/lb	13 Jan 2022	255 - 260	0.00%	Dec 2021	249 - 254
MB-FEM-0001	Ferro-manganese high carbon 78% Mn, standard 7.5% C, in-whs Pittsburgh, \$/long ton	13 Jan 2022	2600 - 2650	0.00%	Dec 2021	2600 - 2650

Silico-manganese

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-SIM-0001	Silico-manganese 65% Mn min, max 17% Si, in-whs China, yuan/tonne	14 Jan 2022	7900 - 8200	1.90%	Dec 2021	7680 - 7900
MB-SIM-0004	Silico-manganese 65% Mn min, min 16% Si, fob India, \$/tonne	14 Jan 2022	1450 - 1520	0.68%	Dec 2021	1445 - 1495
MB-SIM-0002	Silico-manganese lumpy 65-75% Mn, basis 15-19% Si (scale pro rata), major European destinations €/tonne	14 Jan 2022	1550 - 1600	0.00%	Dec 2021	1620 - 1720
MB-SIM-0005	Silico-manganese 65% Mn min, min 16% Si, in-whs Pittsburgh, \$/lb	13 Jan 2022	1.2 - 1.25	0.00%	Dec 2021	
MB-SIM-0003	Silico-manganese 65% Mn min, min 16% Si, in-whs Pittsburgh, US cents/lb	13 Jan 2022	120 - 125	0.00%	Dec 2021	120 - 125

Ferro-silicon

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-FES-0003	Ferro-silicon 75% Si, in-whs Pittsburgh, \$/lb	13 Jan 2022	3.3 - 3.4	0.00%	Dec 2021	
MB-FES-0005	Ferro-silicon lumpy basis 75% Si (scale pro rata), delivered Europe, €/tonne	14 Jan 2022	2800 - 3300	0.00%	Dec 2021	3060 - 3460



Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-FES-0004	Ferro-silicon 75% Si min export, fob China, \$/tonne	12 Jan 2022	2000	- 2050	0.00%	Dec 2021 2070 - 2170
MB-FES-0001	Ferro-silicon 75% Si min, in-whs China, yuan/tonne	12 Jan 2022	9300	- 9500	0.00%	Dec 2021 9360 - 9600

Noble ores & alloys news

Magnesium prices drop in China after Tianjin Covid disruptions pushes exporters out of market

By Janie Davies - Friday 14 January

An overview of the aerospace materials markets and the latest price moves.

AEROSPACE RAW MATERIALS - JANUARY 14, 2022					
Metal	Date of latest price assessment	Latest price	% change from previous assessment	Rationale	
Chromium					
Chromium alumino-thermic 99% min, in-whs Rotterdam, \$/tonne	1/14/2022	11,700-12,850	▼2.0	The price range for chromium alumino-thermic moved downward after multiple deals were recorded at lower levels.	
Chromium alumino-thermic 99% min ex-US \$/lb	1/13/2022	4.85-5	0	The US chromium metal market remained static again this week; consumers continued to hold out on the sidelines in the first half of January.	
Cobalt					
Cobalt alloy grade, in-whs Rotterdam, \$/lb	1/14/2022	34-34.40	0	Cobalt metal prices across alloy and standard grade held steady amid thin trading and stable assessments.	
Cobalt 99.8% Co min, ex-works China, yuan/tonne	1/14/2022	500,000-515,000	▲0.7	China's cobalt metal price continued to trend upwards amid light availability of spot units and a higher international benchmark cobalt price.	
Hafnium					
Hafnium, max 1% Zr, in-whs global locations, \$/kg	1/14/2022	900-1,100	0	The price range for hafnium was unchanged in thin trading.	
Magnesium					
Magnesium 99.9% Mg min, fob China main ports, \$/tonne	1/14/2022	7,200-7,300	▼13.7	Export prices fell following a weakened domestic market.	
Magnesium 99.9%, exw China, yuan/tonne	1/14/2022	41,000-43,000	▼18.4	Domestic prices fell amid weak market demand; exporters did not purchase material because they couldn't deliver the cargo to Tianjin port due to city-wide mass Covid testing; domestic demand from downstream alloy plants in Henan also declined because the covid-19 situation.	
Magnesium 99.9%, in-whs Rotterdam, \$/tonne	1/14/2022	8,550-9,050	0	The price for Magnesium MB remained unchanged; traders are waiting for information about developments in the Port of Tianjin in China.	
Rhenium					
Rhenium APR catalytic grade, in-whs dup Rotterdam, \$/kg	1/14/2022	995-1,100	▲5.3	The price range for rhenium APR narrowed upward after the lower end of the range was no longer considered to represent a tradable level.	
Rhenium metal pellets 99.9% Re min, in-whs dup, Rotterdam \$/lb	1/14/2022	360-600	▼9.4	The price range for rhenium metal pellets narrowed downward in thin trading.	
Tantalum					
Tantalite, basis 25% min Ta205, cif China, \$/lb Ta205	1/14/2022	82-85	▲1.8	Increasing demand from the electrical sector and high logistical costs supported the market.	
Titanium					
Titanium ingot 6Al-4V, fob shipping point US, \$/lb	1/10/2022	8.850	0	Prices held quarter on quarter in thin trading.	
Titanium plate alloy AMS 4911, fob shipping point US, \$/lb	1/10/2022	27-28	0		
Vanadium					
Vanadium pentoxide 98% V2O5 min, fob China, \$/lb V2O5	1/13/2022	8.55-8.83	▼1.8	The vanadium pentoxide price edged lower because many traders are destocking to recoup funds as the Chinese New Year approaches.	
Vanadium pentoxide 98% V2O5 min, in-whs Rotterdam, \$/lb V2O5	1/14/2022	8.50-9	0	Vanadium pentoxide remained steady but trade was limited, with most of the market focused on vanadium alloys; there is potential for the market to go up along with the metal, market sources said.	

Source: Fastmarkets

Jessica Long, Zihao Li and Ruby Liu in Shanghai, Fola Malomo, Dalila Ouerghi, Jon Stibbs and Cristina Belda in London; and Chris Kavanagh and Thorsten Schier in New York contributed to this article.

Trade log: Tungsten APT 88.5% WO3 min cif Rotterdam and Baltimore duty-free, \$/mtu WO3

By pricing@fastmarkets.com - Friday 14 January

The Tungsten APT 88.5% WO3 min cif Rotterdam and Baltimore duty-free, \$/mtu WO3 trade log including business, bids and offers reported to Fastmarkets.

Fastmarkets publishes trades logs for its key price assessments and indices to bring more transparency into the markets it covers and the pricing process it applies.

Fastmarkets assessed Tungsten APT 88.5% WO3 min cif Rotterdam and Baltimore duty-free, \$/mtu WO3 at 326.00-330.00 on Friday January 14, 2022.

- Prices indicated at \$325.00-330.00
- Sale at \$325.00 for 15 tonnes (discarded, outside specifications)
- Prices indicated at \$326.00-330.00
- Purchase at \$330.00 for 24 tonnes
- Offer at \$330.00
- Prices indicated at \$330.00-335.00
- Prices indicated at \$330.00-332.00
- Prices indicated at \$326.00-332.00
- Sale at \$326.00 for 20 tonnes
- Sale at \$328.00 for 20 tonnes
- Offer at \$330.00
- Sale at \$330.00 for 40 tonnes
- Offer at \$330.00
- Prices indicated at \$330.00-335.00

Any data submitted under a Data Submitter Agreement (DSA) will not be published.

To see all Fastmarkets' pricing methodology and specification documents, go to <https://www.fastmarkets.com/about-us/methodology>.

Fastmarkets uses its expert judgment to exclude outlying or unrepresentative numbers, and discount or discard prices that it believes may otherwise be questionable and/or unreliable.

Trade log: Vanadium pentoxide 98% V2O5 min, in-whs Rotterdam, \$/lb V2O5

By pricing@fastmarkets.com - Friday 14 January

The Vanadium pentoxide 98% V2O5 min, in-whs Rotterdam, \$/lb V2O5 trade log including business, bids and offers reported to Fastmarkets.

Fastmarkets publishes trades logs for its key price assessments and indices to bring more transparency into the markets it covers and the pricing process it applies.

Fastmarkets assessed Vanadium pentoxide 98% V2O5 min, in-whs Rotterdam, \$/lb V2O5 at 8.50-9.00 on Friday January 14, 2022.



- Prices indicated at \$9.00
- Prices indicated at \$9.00
- Prices indicated at \$9.00
- Prices indicated at \$8.50-9.00

Any data submitted under a Data Submitter Agreement (DSA) will not be published.

To see all Fastmarkets' pricing methodology and specification documents, go to <https://www.fastmarkets.com/about-us/methodology>.

Fastmarkets uses its expert judgment to exclude outlying or unrepresentative numbers, and discount or discard prices that it believes may otherwise be questionable and/or unreliable.

Trade log: Ferro-tungsten basis 75% W, in-whs dup Rotterdam, \$/kg W

By pricing@fastmarkets.com - Friday 14 January

The Ferro-tungsten basis 75% W, in-whs dup Rotterdam, \$/kg W trade log including business, bids and offers reported to Fastmarkets.

Fastmarkets publishes trades logs for its key price assessments and indices to bring more transparency into the markets it covers and the pricing process it applies.

Fastmarkets assessed Ferro-tungsten basis 75% W, in-whs dup Rotterdam, \$/kg W at 39.90-40.80 on Friday January 14, 2022.

- Offer at \$40.00
- Sale at \$38.00 (discarded, outside Fastmarkets' specifications)
- Prices indicated at \$38.00-40.00
- Purchase at \$36.80 for 20 tonnes (discarded, outside of Fasmarkets's specifications)
- Sale at \$40.75 for 10 tonnes
- Purchase at \$40.25 for 10 tonnes
- Offer at \$40.00
- Offer at \$41.00 for 5 tonnes
- Prices indicated at \$40.00-41.00
- Bid at \$39.90
- Sale at \$40.80 for 10 tonnes
- Sale at \$41.50 for 5 tonnes (discarded, outside of Fastmarkets specifications)

Any data submitted under a Data Submitter Agreement (DSA) will not be published.

To see all Fastmarkets' pricing methodology and specification documents, go to <https://www.fastmarkets.com/about-us/methodology>.

Fastmarkets uses its expert judgment to exclude outlying or unrepresentative numbers, and discount or discard prices that it believes may otherwise be questionable and/or unreliable.

Trade log: Ferro-vanadium basis 78% V min, 1st grade, ddp Western Europe, \$/kg V

By pricing@fastmarkets.com - Friday 14 January

The Ferro-vanadium basis 78% V min, 1st grade, ddp Western Europe, \$/kg V trade log including business, bids and offers reported to Fastmarkets.

Fastmarkets publishes trades logs for its key price assessments and indices to bring more transparency into the markets it covers and the pricing process it applies.

Fastmarkets assessed Ferro-vanadium basis 78% V min, 1st grade, ddp Western Europe, \$/kg V at 34.00-37.00 on Friday January 14, 2022.

- Sale at \$39.00 for 5 tonnes
- Sale at \$36.10 for 3 tonnes (discarded)
- Prices indicated at \$34.00-36.50
- Sale at \$35.50 for 40 tonnes
- Sale at \$36.10 for 5 tonnes
- Prices indicated at \$34.50-35.50
- Sale at \$36.15
- Sale at \$36.50
- Sale at \$36.90 for 5 tonnes
- Purchase at \$36.90 for 15 tonnes
- Sale at \$37.00 for 5 tonnes
- Prices indicated at \$35.00-36.00
- Sale at \$34.40
- Purchase at \$34.00
- Offer at \$34.50
- Deal heard at \$36.50
- Offer at \$37.50
- Sale at \$34.50 for 3 tonnes (discarded)
- Sale at \$35.50 for 1 tonne (discarded)
- Deal heard at \$35.50 for 5 tonnes
- Deal heard at \$34.00
- Purchase at \$34.00 for 5 tonnes
- Deal heard at \$35.50
- Prices indicated at \$34.00-35.50
- Purchase at \$34.00 for 20 tonnes
- Sale at \$34.50 for 20 tonnes
- Offer at \$35.50
- Offer at \$37.50
- Prices indicated at \$34.00-38.00
- Deal heard at \$34.50-35.50
- Bid at \$36.25
- Sale at \$33.50 for 10 tonnes

Any data submitted under a Data Submitter Agreement (DSA) will not be published.

To see all Fastmarkets' pricing methodology and specification documents, go to <https://www.fastmarkets.com/about-us/methodology>.

Fastmarkets uses its expert judgment to exclude outlying or unrepresentative numbers, and discount or discard prices that it believes may otherwise be questionable and/or unreliable.



Trade log: Ferro-molybdenum 65% Mo min, in-whs Rotterdam, \$/kg Mo

By pricing@fastmarkets.com - Friday 14 January

The Ferro-molybdenum 65% Mo min, in-whs Rotterdam, \$/kg Mo trade log including business, bids and offers reported to Fastmarkets.

Fastmarkets publishes trades logs for its key price assessments and indices to bring more transparency into the markets it covers and the pricing process it applies.

Fastmarkets assessed Ferro-molybdenum 65% Mo min, in-whs Rotterdam, \$/kg Mo at 44.80-45.50 on Friday January 14, 2022.

- Prices indicated at \$45.00-45.20
- Deal heard at \$45.50 for 72 tonnes
- Offer at \$45.00
- Prices indicated at \$44.80
- Bid at \$45.00
- Offer at \$45.20 for 40 tonnes
- Offer at \$45.50
- Prices indicated at \$44.80
- Prices indicated at \$45.00-45.50
- Purchase at \$44.80 for 20 tonnes

Any data submitted under a Data Submitter Agreement (DSA) will not be published.

To see all Fastmarkets' pricing methodology and specification documents, go to <https://www.fastmarkets.com/about-us/methodology>.

Fastmarkets uses its expert judgment to exclude outlying or unrepresentative numbers, and discount or discard prices that it believes may otherwise be questionable and/or unreliable.

Molybdenum/ferro-molybdenum

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-MO-0001	Molybdenum canned molybdic oxide, in-whs Pittsburgh, \$/lb	13 Jan 2022	19 - 19.5	0.26%	Dec 2021	18.81 - 19.5
MB-FEO-0003	Molybdenum drummed molybdic oxide 57% Mo min, in-whs Rotterdam, \$/lb Mo	14 Jan 2022	19.1 - 19.25	0.16%	Dec 2021	18.84 - 19.05
MB-FEO-0004	Molybdenum MB drummed molybdic oxide Mo, in-whs Busan, \$/lb	14 Jan 2022	18.85 - 19.1	0.00%	Dec 2021	18.3 - 18.6
MB-FEO-0002	Ferro-molybdenum 65-70% Mo, in-whs Pittsburgh, \$/lb	13 Jan 2022	20.5 - 21	0.58%	Dec 2021	20.4 - 21.1
MB-FEO-0001	Ferro-molybdenum 65% Mo min, in-whs Rotterdam, \$/kg Mo	14 Jan 2022	44.8 - 45.5	0.33%	Dec 2021	43.31 - 44.46

Ferro-niobium/ferro-titanium

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-FN-0001	Ferro-niobium 63-67% delivered consumer works, dp, Europe \$ per kg Nb	12 Jan 2022	44.8 - 45.5	0.67%	Dec 2021	44.32 - 45.7
MB-FET-0001	Ferro-titanium 70% Ti, max 4.5% Al, ddp Europe, \$/kg Ti	12 Jan 2022	7.7 - 8	0.00%	Dec 2021	7.7 - 8.04
MB-FET-0002	Ferro-titanium 68-72% Ti, ex-whs US, \$/lb	13 Jan 2022	3.6 - 3.85	0.00%	Dec 2021	3.6 - 3.85

Tungsten/ferro-tungsten

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-W-0001	Tungsten APT 88.5% WO3 min cif Rotterdam and Baltimore duty-free, \$/mtu WO3	14 Jan 2022	326 - 330	0.77%	Dec 2021	320 - 325
MB-W-0003	Tungsten APT 88.5% WO3 min, fob main ports China, \$/mtu WO3	12 Jan 2022	320 - 325	1.57%	Dec 2021	313.8 - 319.4
MB-W-0002	Tungsten concentrate 65% WO3, in-whs China, yuan/tonne	12 Jan 2022	115000 - 115500	1.54%	Dec 2021	108500 - 109800
MB-FEU-0001	Ferro-tungsten basis 75% W, in-whs dup Rotterdam, \$/kg W	14 Jan 2022	39.9 - 40.8	2.15%	Dec 2021	36.75 - 38.5
MB-FEU-0003	Ferro-tungsten export, min 75% fob China, \$/kg W	12 Jan 2022	38.8 - 40.5	0.38%	Dec 2021	38.1 - 40.1

Vanadium pentoxide/ferro-vanadium

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-V-0001	Vanadium pentoxide 98% V2O5 min, in-whs Rotterdam, \$/lb V2O5	14 Jan 2022	8.5 - 9	0.00%	Dec 2021	8.5 - 9



Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-V-0002	Vanadium pentoxide 98% V2O5 min, fob China, \$/lb V2O5	13 Jan 2022	8.55 - 8.83	-1.81%	Dec 2021	8.76 - 8.91
MB-V-0004	Vanadium pentoxide 98% V2O5 min, exw China, yuan/tonne	13 Jan 2022	120000 - 124000	-1.61%	Dec 2021	122900 - 125000
MB-FEV-0002	Ferro-vanadium 70-80% V, in-whs Pittsburgh, \$/lb	13 Jan 2022	16 - 16.5	7.40%	Dec 2021	14.9 - 15.25
MB-FEV-0001	Ferro-vanadium basis 78% V min, 1st grade, ddp Western Europe, \$/kg V	14 Jan 2022	34 - 37	4.41%	Dec 2021	32.28 - 33
MB-FEV-0003	Ferro-vanadium 78% V min, fob China, \$/kg V	13 Jan 2022	37.74 - 38.76	-0.13%	Dec 2021	37.78 - 38.52



Copper raw materials

Source: dashboard.fastmarkets.com/m/00000004-0000-4000-8000-000000000000

Copper concentrate news

Copper TC/RC reaches \$60/6 mark for first time since Oct

By Sally Zhang, Julian Luk - Friday 14 January

Copper concentrates treatment charge/ refining charge reached \$60 per tonne/ 6 cents per lb for the first time in three months.

Spot trading remained minimal, with limited buying appetite from smelters ahead of Lunar New Year. Bids at high \$60s did not materialize.

A tender of Carmen concentrates was assessed at high 40s for first-quarter shipment.

COPPER CONCENTRATE TC INDEX (cif Asia Pacific, \$/tonne)

New price	Previous price	Change	% Change
60	58.7	▲ 1.3	▲ 2.21

COPPER CONCENTRATE RC INDEX (cif Asia Pacific, US cents/lb)

New price	Previous price	Change	% Change
6	5.87	▲ 0.13	▲ 2.21

Source: Fastmarkets

Logistics in Kazakhstan of base metals largely resumed normal after disruptions led by protests last week, sources said.

Key coverage this week:

Teck gets strike notice at Highland Valley Copper
Tianjin's mass Covid-19 testing hammers commodity port ops, transport
Saudi Arabia to auction major copper, zinc deposit soon- Reuters
Kamoa-Kakula to produce 290,000-340,000 tonnes of copper in 2022
Taseko says Gibraltar mine produced 112mln lb of copper in 2021
Snap reshuffle at Chiho raises questions about scrap metal giant's future



Whither base metal markets in 2022?

By Myra Pinkham - Friday 14 January

As a new year begins, the global Covid-19 pandemic, China's economic policies and global geopolitics continue to make the task of base metal market forecasters tough. Myra Pinkham asked experts to review the past certainties of 2021 and consider the uncertainties of 2022 and to give their views on the outlook.



Base metals could be facing something of a tug of war in 2022, with the big question being how much the positive impact on demand from the green energy transition will compensate for certain other more moderating factors. This comes after what many industry observers describe as a very positive year – even an exceptional year – in 2021, marked by multi-year and even in



some cases record high prices.

But that is certainly not to say that the base metals markets did not also face some challenges last year, Andrew Cole, principal metals analyst for Fastmarkets MB, said, including some that were at least partly responsible for those high prices.

Gregory Shearer, head of metal research at JP Morgan, agreed, noting that due to a combination of supply disruptions and logistics and supply-chain issues, inventories were very tight, and supply struggled to catch up to what he described as very robust post-recessionary base-metal demand growth.

Another contributor was soaring energy prices, which were a double-edged sword. Cole said that those prices were positive for companies that have been able to avoid them, including companies that use low-cost alternative energy, such as hydropower, to produce their metal, but that other producers have been hurt by the high energy prices, with aluminium producers dependent on fossil fuels suffering the most from the high energy costs, resulting in the idling of some smelters.

"The base metals market entered 2021 on an upbeat note, with prices showing a lot of upward momentum that had carried through the year," John Mothersole, director of IHS Markit's pricing and purchasing service, observed. According to Christian Georges, head of metal and mining equity research for Société Générale, that occurred since it had become apparent that the downturn in 2020 related to the Covid-19 pandemic was different from what the market went through during the global financial crisis.

"It was actually surprisingly strong," Matt Aboud, senior vice president for strategy and business development for Century Aluminum, declared, given all the uncertainty about what impact spikes in Covid cases would have. "While people had expected it to be a recovery year, they thought that demand would remain below pre-pandemic levels. But they were proven wrong," he said. "Even with its headwinds, 2021 was a very powerful year – truly a V-shaped recovery."

That was especially the case in the first half of the year, helped by monetary and fiscal stimulus spending around the globe, which resulted in high demand for most base metals, said Ryan McKay, a commodities strategist for TD Securities, who noted that even though in the second half of last year there was a little cooling of demand, base metal prices continued to stay fairly strong, and in some cases continued to go higher because of an extremely disrupted supply chain.

Copper's high

Copper, a flagship of the base metals complex, recorded an all-time record high price of nearly \$10,500 per tonne on the London Metal Exchange in May, and the other base metals experienced multi-year highs, including aluminium, which exceeded \$3,000 per tonne. Mothersole noted that while they have come back down a little since mid-year, most base prices are still at 10-year highs.

While the details vary by metal, Cole said that most base metal prices have been taking two steps forward and one back for most of 2021 and that he is somewhat bullish that the general uptrends will continue into this year, albeit with a bit of volatility as certain macroeconomic and geopolitical uncertainties play out.

And there is also the looming question of whether base metals, as well as some other commodities, are heading for another supercycle. While their forward curves started to adjust in 2021 and are looking more like they did in 2000-2018, Michael Haigh, head of commodities research and strategy for Société Générale, said it is still a bit early to say if they are entering another supercycle. "But of all the commodities, it seems that base metals would be most likely to do so," he said.

As usual, the base metals story over 2021 and into this year has been largely about China, which, Mothersole pointed out, is not surprising given that China is responsible for about 50% of consumption or production for most base metals. He noted that while the biggest impact is how the Chinese economy is performing, it has also been an export engine that has been relied

on by the rest of the world to help global economies to get through the pandemic by being a reliable supply base. "But recently that has been changing," Mothersole noted, with the Chinese mandates to reduce electricity use impacting a range of heavy industries, including base metals.

Shearer said that in 2021 the star performer in the base metals complex had been nickel, which had seen close to 16% year-on-year demand growth due to both the surprising strength in Chinese stainless steel production and emerging battery demand.

Geordie Wilkes, head of research for Sucden Financial, pointed out that due to some of the new battery technologies being developed, and given that the conversion process from low-grade nickel is so energy intensive, there is a shortage of the Class 1 nickel that is used in electric vehicle and energy storage batteries. He also noted that Chinese nickel ore inventories have been drawing down to the point that there is a need for additional nickel pig iron to produce some of these products. "But there have been several Chinese investments in Indonesia to address that," he also pointed out.

Meanwhile, global copper demand growth was less steep last year – but still a healthy number of about 8.8% according to Cole, who noted that while it is not as affected by energy shortages as some other base metals, copper is very sensitive to China's economy and Chinese industrial production and that construction-sector growth peaked in the first quarter of 2021 and has slowed since then.

Carlos Risopatron, director of economics and environment for the International Copper Study Group (ICSG) pointed out that, in addition to its supply-demand dynamics, one reason for the high copper price peak was speculative activity and that with copper prices going so high so fast, it actually had a somewhat moderating effect upon demand, with some fabricators slowing down their use of refined copper toward the end of the year, and instead using more copper scrap.

But while copper's price has eased from its highs, with some investors rotating out of copper into such other base metals as aluminium, zinc and nickel, Cole noted that copper prices had been oscillating sideways, refusing to go below \$9,000 before they spiked to about \$9,500 per tonne in mid-December on the news that, due to logistics issues, MMG was suspending copper production at its Las Bambas copper mine in Peru (now restored). Mothersole pointed out that even prior to that announcement, concerns about Chilean and Peruvian production, given geopolitical uncertainties in those two countries, had been a contributing factor to the recent strength in copper prices.

Overall, however, after slow growth over the past several years, Risopatron said that global copper mine production was up 2.1% in 2021. Also, according to Shearer, due to a "slew" of projects that were green-lighted in 2017-18, there could be another 3% growth in 2022 and 5% growth in 2023.

Risopatron said that there has also been a push for additional copper foil capacity to meet its growing demand in batteries for electric vehicles. To date, most of that growth has been in China, although there are plans for new capacity to be built elsewhere as well over the next three to four years.

Aluminium deficit

Despite the headwinds affecting the global automotive market, demand for aluminium rebounded by about 9% last year, according to Shearer, who said that aluminium has been the most transformational base metal on the supply side, with China starkly reversing earlier moves to increase production in the third quarter of 2021 due to its policies to limit energy consumption.

Wilkes said this came amid unprecedented struggles with electrical power there. He noted that in Yunnan province, where smelters are largely hydropowered, there had been drought conditions last year, which resulted in power rationing. Meanwhile flooding in other regions of China caused coal, and therefore electricity, prices to spike, affecting smelter profitability. "With that, as well as the rationing of electricity and emission controls in China, a lot of aluminium smelter capacity was taken offline, resulting in about a 390,000-tonne aluminium deficit in 2021," Wilkes said, adding that it could grow quite significantly globally this year – possibly surpassing 1 million



tonnes.

That deficit is also the result of strength on the demand side, Aboud said, including pent up demand from the lockdowns in 2020, the huge influx of stimulus worldwide, consumers spending from savings and from businesses repairing their balance sheets and finding money to make capital improvements.

The push for electrification is another contributing factor, Shearer said, observing that while light-vehicle production is down year on year, automakers are prioritizing the use of the microchips that they do have available (given last year's shortage) to produce battery electric (BEV) and higher end vehicles, both of which are more aluminium intensive than more "run of the mill" internal combustion engine (ICE) models. Shearer also noted that BEVs have about 1.5 times more aluminium, as well as about four times more copper, than ICE vehicles.

While there is some give and take, given that there are a lot of aluminium castings in engines, Aboud said that aluminium is a winning material for electric vehicles, as it is lightweight and therefore helpful to increase an electric vehicle's range. Like copper, it is also used in the cables for EV charging infrastructure. While they are gaining market traction, McKay pointed out that EVs still account for a small share of the total auto fleet and that they are, therefore, not a game-changer yet for aluminium and other base metal demand. Nevertheless, Georges said that by the second half of 2021 all the rhetoric about the energy transition and electrification was supportive of such base metals as copper and aluminium, especially with China becoming more willing to commit to the energy transition.

Shearer said that there has already been an acceleration in the energy transition that will continue through the next decade and propel base metal demand, noting that in 2022 it will contribute to about 40% of the anticipated copper demand growth. But he said that through 2025 this green demand will just largely function as an offset to the slowing of traditional Chinese demand.

Cole said that zinc was the base metal price that struggled the most in 2021 – at least until it jumped up in October when energy shortages impacted its production, given that it is the second most energy-intensive base metal to produce behind aluminium. Joao Jorge, director of market research and statistics for the International Lead and Zinc Study Group (ILZSG), partly attributed its weakness earlier in the year to slower Chinese economic growth, particularly in its construction and real estate sectors, and especially given that China accounts for more than 50% of zinc's production and consumption. But he noted that in the first half, that weakness was countered by increased global auto demand, albeit that was compared to the first half of 2020 when many auto plants were in lockdown.

Jorge noted that with the huge increase of secondary lead smelter production capacity coming online over the last few years, China is well supplied with lead, although it is tighter elsewhere, with the US, for example, reliant on lead imports.

Trends for 2022

In general, the trends seen for base metals last year should continue at least through early 2022, Cole said, predicting that this year will be another one of strong economic growth, which, in turn, should continue to drive base metal demand. But he said it is not clear-cut what this "bullish backdrop" will actually mean for prices, given that at the same time central banks starting to taper their monetary policies, the Chinese economy is starting to slow and there are certain geopolitical issues, the macroeconomic picture is rather mixed. "We are bullish, but not so super bullish that we will see higher prices given that there are risks on the horizon outside of supply-demand fundamentals that could change things," he said.

Some other industry observers, such as Mothersole, are actually predicting a price correction for the base metals complex this year, but, "it isn't that we expect prices to collapse anywhere like they did during the first half of 2020," he said.

Georges said that while mining profits might decline in 2022, that is only

because in 2021 they had been so exceptional. "It won't be a bad year," he said.

Shearer said it is also possible that the dynamics will vary half-by-half, given that the current low inventory position is likely to continue to be supportive during the first half. But what happens beyond that will depend upon China. "We are expecting Chinese GDP growth to be only about 4.7% in 2022, and we aren't expecting to see a broad-based turnaround from the tightening of China's real estate policies." Because of this, he said, Chinese copper and aluminium demand growth is likely to only be about 1% in 2022.

The outlook also depends on supply, and McKay said that the current attractive prices and other factors, including a waning of Covid-19 issues, should, on net, result in greater supply with a lot of smelter capacity that was idled during the pandemic, particularly for aluminium but also for copper and zinc – other than the capacity that has been constrained by high-energy costs – coming back online. He forecasts that aluminium production capacity will increase by about 4.5% in 2022 and that copper and zinc capacity will be up by 3-3.5%, while nickel will be up about 7%.

Georges said that, near term, with the high energy costs, there could be some further idling of smelter capacity beyond such moves as have recently been seen at some European zinc smelters. "But one big question for 2022 will be the tug of war between the slowing growth environment in China and the emerging energy transition," Shearer said.

Cole agreed, saying that the impact of the energy transition upon base metals is hard to quantify. He said that while at the moment the biggest impact has been on sentiment, there are some base metals – particularly nickel, copper and aluminium – that are already very exposed to this green revolution, especially with the support it is receiving from certain governmental policies, prompting more investments in EVs and new battery technologies.

Jorge said that lead demand could eventually be affected by the push for more EVs, but that the impact will be moderated by the fact that the replacement-battery market is more important than that for new auto battery units, that EVs still use lead auxiliary batteries, and that the energy storage systems needed for intermittent sources of renewable energy, such as wind and solar power, still often need to utilize lead batteries.

"Any real change relating to this green transition is still a few years down the road," Cole said, especially given that the current high inflation could slow the rate of transition because the raw materials needed to keep pace with some of the governmental targets might not be readily available due to supply-chain issues.

"The decarbonization push is here, and it will continue," Aboud said, noting that in addition to changes in the energy mix, it could be accomplished by finding ways with a lower carbon footprint to produce raw materials. For aluminium, this includes new technologies under development, such as inert-anode carbon-free electrolysis and carbon capture. He noted that Century Aluminum and certain other producers have pilot projects to enable carbon capture at aluminium smelter sites.

Overall, it is expected that there will be a better balance of supply and demand in the base metals market in 2022, barring any unexpected events. "If there is any wobble in the market – either because of Covid or another demand disruption – that could affect speculative interest," Haigh admitted. "But given that the underlying fundamentals are so robust, I don't think there will be a large downward adjustment or that prices will stay down for very long."

Base metals annual supply-demand balance and price forecasts (kt, \$/t)		
	2021	2022
Aluminium		
Supply	67,026	69,003
Demand	67,850	70,441
Balance	-825	-1,438
Balance as % of market	-1.2%	-2.0%
Price	2,468	2,813
Copper		
Supply	25,043	26,327
Demand	25,613	26,782
Balance	-571	-455
Balance as % of market	-2.2%	-1.7%
Price	9,319	10,202
Lead		
Supply	12,492	12,507
Demand	12,341	12,563
Balance	151	-56
Balance as % of market	1.2%	-0.4%
Price	2,193	2,293
Nickel		
Supply	2,591	2,927
Demand	2,758	2,984
Balance	-166	-57
Balance as % of market	-6.0%	-1.9%
Price	18,414	21,451
Tin		
Supply	413	423
Demand	425	428
Balance	-13	-5
Balance as % of market	-3.0%	-1.2%
Price	32,573	39,274
Zinc		
Supply	13,975	14,293
Demand	14,092	14,423
Balance	-117	-130
Balance as % of market	-0.8%	-0.9%
Price	2,998	3,173

Source: Fastmarkets

This article was first published in the [January 2022 issue of the Metal Market Magazine](#)

Saudi Arabia to auction major copper, zinc deposit soon, Reuters reports

By Julian Luk - Friday 14 January

Saudi Arabia intends to auction three mining licenses for its mineral deposits, including the major copper-zinc deposit of Khnaiguiyah, in the next few months, according to a report by news agency Reuters.

The bidding process for the copper and zinc deposit, believed to contain 26 million tonnes, could start by the end of this quarter, or early in the second quarter, the kingdom's mining minister, Bandar Al Khorayef, told Reuters on Wednesday January 12.

The bidding process will take around six months, the official said on the sidelines of a mining conference in Riyadh.

Exploration and production from Khnaiguiyah would add to the supplies of copper concentrate from the Middle Eastern country.

Canada-based Barrick Gold is one of the few foreign companies that could mine copper in Saudi Arabia, and has a 50% stake in the Jabal Sayid project.

In June 2020, Saudi Arabia passed a new mining law to shorten the approval process for foreign mining investment in an attempt to diversify away from a reliance on oil revenues.

SHFE base metals inventories mostly down; tin stocks surge by 69%

By Sally Zhang - Friday 14 January

Deliverable stocks of base metals in Shanghai Futures Exchange-registered warehouses mostly fell in the week to Friday January 14. Copper and tin stocks rose, however, with the latter leading the gains in percentage terms.

SHFE tin stocks totaled 2,905 tonnes this week, up by 1,182 tonnes (or 68.6%) from last Friday, according to the exchange's weekly stock report. The largest inflow of tin was recorded at Nanchu warehouses in Guangdong, where stocks rose by 437 tonnes to 440 tonnes against a mere 3 tonnes a week earlier.

A jump in the SHFE tin price prompted cargo-holders to deliver material onto the exchange, participants told Fastmarkets, which explains the increase in SHFE stock levels.

"The SHFE tin price was rising, attracting deliveries, but overall stocks remain low," a Shanghai-based trader said.

The [January tin contract on the SHFE](#) was 320,980 yuan (\$50,444) per tonne on Friday, up by 12,730 per tonne (or 4.13%) from 308,250 yuan per tonne a week earlier.

Other base metal stock changes

- Copper stocks up by 1,148 tonnes (3.9%) to 30,330 tonnes.
- Aluminium stocks down by 4,259 tonnes (1.4%) to 310,600 tonnes.
- Zinc stocks down by 1,239 tonnes (1.9%) to 63,097 tonnes.
- Nickel stocks down by 148 tonnes (3.0%) to 4,711 tonnes.
- Lead stocks down by 4,396 tonnes (4.9%) to 84,751 tonnes.



LME base metal prices mostly up; nickel opens 2.6% higher

By Callum Perry - Friday 14 January

Base metal futures on the London Metal Exchange were mostly higher at the 9am open on Friday January 14, with nickel once again leading the rally.

While many will be keeping a keen eye on the signs that central banks globally are getting more hawkish, at present signals remain supportive of prices.

"Overall, the inflationary outlook and generally strong economic activity bode well for the outlook for demand, and while shipping disruptions remain, supplies are likely to remain tight," Fastmarkets head of base metals and battery research William Adams said in a note.

The three-month nickel price continued its week-long strong performance, which has seen the metal gain 9.4% since the 5pm close on January 10.

Nickel increased by a further 2.6% at the 9am open on Friday to \$22,760 per tonne, from \$22,176 per tonne at the previous 5pm close. Current price levels are the highest since August 2011.

"It looks as if a storm may be brewing in the nickel market," Kingdom Futures director Malcolm Freeman said.

"For some time now, the LME stock has been falling very steadily to the point that free metals stand at some 45,000 tonnes or about one week's global consumption," he added.

Global stock levels in LME warehouses stand at 98,364 tonnes, with 45,438 tonnes on warrant. A further 2,874 tonnes were canceled on Friday.

The current tight supply situation may have driven consumers to turn to LME warehouse stocks more aggressively to cover their positions, which in turn has forced premium levels higher in the physical market.

"We suspect that the tightness in the class 1 market has prompted battery/precursor makers to unload nickel briquette [the main LME nickel type and one of the feedstocks to produce sulfate] out of the exchange sheds to secure their supply," ING senior commodity strategist Wenyu Yao said in a note on Thursday.

Elsewhere, the three-month aluminium price also continued its strong week-long uptick, though only posting a modest 0.4% increase to open at \$2,964.50 per tonne, from \$2,952 per tonne at the previous close.

Stocks of the light metal continued to be drawn down from LME sheds, with a further 11,775 tonnes canceled on Friday, largely from Port Klang, Malaysia.

Total on-warrant stock levels are at 501,175 tonnes.

Three-month copper opened at \$9,959 per tonne, stable from \$9,958.50 at the close on Thursday, but has recorded a modestly choppy day so far.

Key copper raw materials prices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-CU-0287	Copper concentrates TC index, cif Asia Pacific, \$/tonne	14 Jan 2022	60	2.21%	Dec 2021	56.44
MB-CU-0288	Copper concentrates RC index, cif Asia Pacific, US cents/lb	14 Jan 2022	6	2.21%	Dec 2021	5.64
MB-CU-0409	Copper blister 98-99% RC annual benchmark, cif China, \$/tonne	31 Dec 2021	145 - 165	6.90%	Dec 2021	145 - 165



Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-CU-0408	Copper blister 98-99% RC spot, cif China, \$/tonne	31 Dec 2021	150 - 170	0.00%	Dec 2021	150 - 170
MB-CU-0512	No1 copper material, RCu-2A,1B (candy/berry), cif China, LME/Comex discount, US cents per lb	27 Dec 2021	9 - 13	0.00%	Dec 2021	9 - 13
MB-CU-0360	No2 copper material, RCu-2B (birch/cliff), cif China, LME/Comex discount, US cents per lb	27 Dec 2021	24 - 28	0.00%	Dec 2021	24 - 28
MB-CU-0422	Copper concentrates counterparty spread, \$/tonne	04 Jan 2022	9.58	-8.33%	Dec 2021	10.45
MB-CU-0423	Copper Concentrates Co-VIU, \$/tonne	04 Jan 2022	(0.45)		Dec 2021	0.28
MB-CU-0508	Copper concentrates TC implied smelters purchase, cif Asia Pacific, \$/tonne	14 Jan 2022	64.79	2.05%	Dec 2021	61.67
MB-CU-0510	Copper concentrates RC implied smelters purchase, cif Asia Pacific, cents/lb	14 Jan 2022	6.48	2.05%	Dec 2021	6.17
MB-CU-0509	Copper concentrates TC implied traders purchase, cif Asia Pacific, \$/tonne	14 Jan 2022	55.21	2.41%	Dec 2021	51.22
MB-CU-0511	Copper concentrates RC implied traders purchase, cif Asia Pacific, cents/lb	14 Jan 2022	5.52	2.41%	Dec 2021	5.12



Coking coal/coke markets

Source: dashboard.fastmarkets.com/m/00000021-0000-4000-8000-000000000000

Coking coal/coke/PCI news

Latest trade confirms uptrend in premium hard coking coal fob price

By Min Li - Friday 14 January

Premium hard coking coal fob prices continued to their upward trend on Friday January 14 following news of a deal sealed at \$410 per tonne fob Australia, with seaborne cfr prices also rising.

Seaborne low-volatility pulverized coal injection (low-vol PCI) cfr prices, meanwhile, jumped in the week to Friday, boosted by tight supplies and blast furnace resumptions.

Fastmarkets coking coal indices

Premium hard coking coal, cfr Jingtang: \$391.02 per tonne, up \$10.91 per tonne

Hard coking coal, cfr Jingtang: \$353.60 per tonne, up \$6.31 per tonne

Premium hard coking coal, fob DBCT: \$413.68 per tonne, up \$11.35 per tonne

Hard coking coal, fob DBCT: \$350.16 per tonne, up \$0.09 per tonne

Fastmarkets Weekly PCI indices

PCI low-vol, cfr Jingtang: \$282.56 per tonne, up by \$48.04 per tonne

PCI low-vol, fob DBCT: \$250.09 per tonne, up by \$5.01 per tonne

In the fob Australia market, a 75,000-tonne cargo of premium low-vol hard coking coal, with March 11-20 laycan, was traded at \$410 per tonne fob Australia on the Globalcoal platform on Friday, sources told Fastmarkets.

Coking coal/coke/PCI prices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-COA-0003	Premium hard coking coal, fob DBCT, \$/dmt	14 Jan 2022	413.68	2.82%	Dec 2021	340.4
MB-COA-0005	Premium hard coking coal, cfr Jingtang, \$/dmt	14 Jan 2022	391.02	2.87%	Dec 2021	355.52
MB-COA-0004	Hard coking coal, fob DBCT, \$/dmt	14 Jan 2022	350.16	0.03%	Dec 2021	287.44
MB-COA-0002	Hard coking coal, cfr Jingtang, \$/dmt	14 Jan 2022	353.6	1.82%	Dec 2021	325.14
MB-COA-0001	Hard coking coal domestic China spot market, Shanxi-origin, delivered Tangshan, yuan/tonne	10 Jan 2022	2475 - 2920	8.44%	Dec 2021	2175 - 2692
MB-COA-0008	PCI low-vol, fob DBCT, \$/dmt	14 Jan 2022	250.09	2.04%	Dec 2021	235.28
MB-COA-0007	PCI low-vol, cfr Jingtang, \$/dmt	14 Jan 2022	282.56	20.48%	Dec 2021	218.74
MB-COA-0006	Coke 65% CSR, fob China, \$/tonne	11 Jan 2022	565 - 590	6.45%	Dec 2021	497.5 - 526.25

The trade pushed seaborne premium hard coking coal fob prices to a higher level, indicating extremely tight Australian supply for the spot market.

A trading source in India said that the uptrend in the seaborne fob Australia market will continue, but the market may take a breather next week. A coke producer in India also believed the uptrend will continue.

In the cfr China market, offer prices for a February-laycan vessel of United States-origin Buchanan hard coking coal reached \$386 per tonne cfr China, sources told Fastmarkets on Friday.

A trading source in Beijing said that only a small number of mills in China preferred Buchanan, but added that he did not know if those mills had demand for it at that price level.

"The premium hard coking coal fob price is higher than the cfr price now, so North American premium hard coking coal will be redirected to ex-China markets," a second trading source in Beijing said.

The seaborne low-volatility pulverized coal injection (low-vol PCI) cfr price jumped in the week to January 14 on tight seaborne supplies and relatively good demand - partly caused by a resumption in blast furnace operations in some areas of China. A February-laycan Panamax vessel of Russia-origin low-vol PCI was heard traded late this week at around \$290 per tonne cfr China, several sources in China said on Friday.

Chinese domestic low-vol PCI, meanwhile, reached 2,200 yuan per tonne this week, two trading sources in Beijing said on Friday.

Dalian Commodity Exchange

The most-traded May coking coal futures contract closed at 2,299.50 yuan (\$361.38) per tonne on Friday, down by 5 yuan per tonne.

The most-traded May coke contract closed at 3,082 yuan per tonne, down by 24 yuan per tonne.



Base metals premiums

Source: dashboard.fastmarkets.com/m/30e12191-84d2-4805-a994-4c1c21976c25

Alumina index, aluminium premiums

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-ALU-0002	Alumina index, fob Australia, \$/tonne	14 Jan 2022	345.96	-0.14%	Dec 2021	356.24
MB-AL-0329	Aluminium P1020A premium, cif Taiwan, \$/tonne	11 Jan 2022	160 - 200	0.00%	Dec 2021	167.5 - 200
MB-AL-0001	Aluminium P1020A (MJP) quarterly premium, cif Japan, \$/tonne	07 Jan 2022	177	-18.62%	Dec 2021	215 - 220
MB-AL-0343	Aluminium P1020A (MJP) spot premium, cif Japan, \$/tonne	14 Jan 2022	160 - 180	0.00%	Dec 2021	161.67 - 180
MB-AL-0328	Aluminium P1020A premium, bonded in-whs, Shanghai, \$/tonne	29 Dec 2021	50 - 80	-13.33%	Dec 2021	50 - 80
MB-AL-0345	Aluminium P1020A premium, cif Shanghai, \$/tonne	29 Dec 2021	50 - 70	-7.69%	Dec 2021	50 - 70
MB-AL-0307	Aluminium P1020A premium, fca South Korea, \$/tonne	11 Jan 2022	175 - 185	0.00%	Dec 2021	175 - 185
MB-AL-0344	Aluminium P1020A premium, cif South Korea, \$/tonne	11 Jan 2022	170 - 180	6.06%	Dec 2021	160 - 170
MB-AL-0316	Aluminium P1020A premium, fca dp Italy, \$/tonne	11 Jan 2022	490 - 510	14.94%	Dec 2021	377.5 - 396.25
MB-AL-0346	Aluminium P1020A premium, in-whs dup Rotterdam, \$/tonne	14 Jan 2022	350 - 360	3.65%	Dec 2021	250.24 - 266.43
MB-AL-0004	Aluminium P1020A premium, in-whs dp Rotterdam, \$/tonne	14 Jan 2022	430 - 460	0.57%	Dec 2021	321.11 - 345
MB-AL-0319	Aluminium P1020A premium, fca dp Spain, \$/tonne	11 Jan 2022	490 - 500	20.73%	Dec 2021	382.5 - 397.5
MB-AL-0337	Aluminium P1020A premium, cif dup Turkey, \$/tonne	11 Jan 2022	340 - 350	4.55%	Dec 2021	295 - 310
MB-AL-0020	Aluminium P1020A premium, ddp Midwest US, US cents/lb	14 Jan 2022	31.5 - 34.5	5.16%	Dec 2021	27.22 - 29.78
MB-AL-0021	Aluminium P1020A premium, delivered Sao Paulo region, \$/tonne	11 Jan 2022	400 - 450	13.33%	Dec 2021	375 - 425
MB-AL-0022	Aluminium P1020A premium, cif dup Brazilian main ports, \$/tonne	11 Jan 2022	380 - 410	1.28%	Dec 2021	380 - 400
MB-AL-0381	Aluminium low-carbon differential P1020A, Europe, \$/tonne	07 Jan 2022	0 - 10	0.00%	Dec 2021	0 - 10
MB-AL-0377	Aluminium P1020A premium, in-whs dup Rotterdam, inferred low-carbon midpoint, \$/tonne	14 Jan 2022	360	3.60%	Dec 2021	263.33
MB-AL-0378	Aluminium P1020A premium, in-whs dp Rotterdam, inferred low-carbon midpoint, \$/tonne	14 Jan 2022	450	0.56%	Dec 2021	338.06

Copper premiums

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-CU-0386	Copper grade A cathode premium, cif Taiwan, \$/tonne	11 Jan 2022	75 - 90	0.00%	Dec 2021	75 - 90
MB-CU-0405	Copper grade A cathode premium, in-whs Shanghai, \$/tonne	14 Jan 2022	60 - 75	0.00%	Dec 2021	84.52 - 104.9
MB-CU-0383	Copper grade A cathode ER premium, bonded in-whs Shanghai, \$/tonne	14 Jan 2022	66 - 75	0.00%	Dec 2021	94.52 - 104.9
MB-CU-0382	Copper grade A cathode SX-EW premium, bonded in-whs Shanghai, \$/tonne	14 Jan 2022	60 - 66	0.00%	Dec 2021	84.52 - 93.67
MB-CU-0403	Copper grade A cathode premium, cif Shanghai, \$/tonne	14 Jan 2022	55 - 72	0.00%	Dec 2021	75.24 - 94.62
MB-CU-0380	Copper grade A cathode ER premium, cif Shanghai, \$/tonne	14 Jan 2022	65 - 72	0.00%	Dec 2021	84.14 - 94.62
MB-CU-0384	Copper grade A cathode SX-EW premium, cif Shanghai, \$/tonne	14 Jan 2022	55 - 62	0.00%	Dec 2021	75.24 - 81.81
MB-CU-0399	Copper grade A cathode premium, cif Southeast Asia, \$/tonne	11 Jan 2022	80 - 90	0.00%	Dec 2021	80 - 90
MB-CU-0404	Copper grade A cathode premium, cif South Korea, \$/tonne	11 Jan 2022	75 - 85	0.00%	Dec 2021	75 - 85
MB-CU-0372	Copper grade A cathode premium, delivered Germany, \$/tonne	11 Jan 2022	110 - 130	41.18%	Dec 2021	80 - 90
MB-CU-0406	Copper grade A cathode premium, cif Leghorn, \$/tonne	11 Jan 2022	85 - 95	9.09%	Dec 2021	75 - 90



Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-CU-0369	Copper grade A cathode premium, cif Rotterdam, \$/tonne	11 Jan 2022	50 - 60	10.00%	Dec 2021	45 - 55
MB-CU-0002	Copper grade 1 cathode premium, ddp Midwest US, US cents/lb	11 Jan 2022	8 - 10	0.00%	Dec 2021	8 - 10
MB-CU-0411	Copper EQ cathode premium, cif Europe, \$/tonne	11 Jan 2022	20 - 30	0.00%	Dec 2021	20 - 30
MB-CU-0412	Copper EQ cathode premium, cif Shanghai, \$/tonne	11 Jan 2022	(15) - 0		Dec 2021	5 - 20

Lead premiums

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-PB-0084	Lead 99.97% ingot premium, cif Taiwan, \$/tonne	11 Jan 2022	100 - 120	2.33%	Dec 2021	100 - 115
MB-PB-0083	Lead 99.99% ingot premium, cif Taiwan, \$/tonne	11 Jan 2022	140 - 150	3.57%	Dec 2021	135 - 145
MB-PB-0087	Lead 99.97% ingot premium, cif India, \$/tonne	04 Jan 2022	50 - 130	0.00%	Dec 2021	50 - 130
MB-PB-0086	Lead 99.99% ingot premium, cif India, \$/tonne	04 Jan 2022	140 - 150	0.00%	Dec 2021	140 - 150
MB-PB-0107	Lead 99.97% ingot premium, cif Southeast Asia, \$/tonne	07 Dec 2021	80 - 110	0.00%	Dec 2021	80 - 110
MB-PB-0108	Lead 99.99% ingot premium, cif Southeast Asia, \$/tonne	07 Dec 2021	125 - 145	-1.82%	Dec 2021	125 - 145
MB-PB-0099	Lead 99.99% ingot premium, delivered Midwest US, US cents/lb	11 Jan 2022	19 - 22	0.00%	Dec 2021	18 - 20.5
MB-PB-0006	Lead 99.97% ingot premium, ddp Midwest US, US cents/lb	11 Jan 2022	17 - 20	0.00%	Dec 2021	16 - 19

Tin premiums

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-SN-0038	Tin 99.9% ingot premium, cif Taiwan, \$/tonne	11 Jan 2022	350 - 500	0.00%	Dec 2021	325 - 450
MB-SN-0002	Tin 99.9% ingot premium, in-whs Rotterdam, \$ per tonne	11 Jan 2022	1000 - 1400	0.00%	Dec 2021	1050 - 1400
MB-SN-0029	Tin 99.9% low lead ingot premium, in-whs Rotterdam, \$/tonne	11 Jan 2022	1500 - 2000	0.00%	Dec 2021	1500 - 2000
MB-SN-0036	Tin 99.85% ingot premium, in-whs Baltimore, \$/tonne	11 Jan 2022	1900 - 2200	0.00%	Dec 2021	1900 - 2200
MB-SN-0011	Tin grade A min 99.85% ingot premium, ddp Midwest US, \$/tonne	11 Jan 2022	2100 - 2500	0.00%	Dec 2021	2100 - 2500

Zinc premiums

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-ZN-0116	Zinc SHG 99.995% ingot premium, cif Taiwan \$/tonne	11 Jan 2022	150 - 160	0.00%	Dec 2021	150 - 160
MB-ZN-0106	Zinc SHG min 99.995% ingot premium, cif Shanghai, \$/per tonne	11 Jan 2022	80 - 90	0.00%	Dec 2021	77.5 - 87.5
MB-ZN-0119	Zinc min 99.995% ingot premium, in-whs Shanghai, \$/tonne	11 Jan 2022	80 - 90	0.00%	Dec 2021	77.5 - 87.5
MB-ZN-0113	Zinc SHG 99.995% ingot premium, fca Singapore, \$/per tonne	11 Jan 2022	140 - 150	-3.33%	Dec 2021	140 - 155
MB-ZN-0115	Zinc SHG 99.995% ingot premium, fca Malaysia, \$/per tonne	11 Jan 2022	140 - 150	-3.33%	Dec 2021	140 - 155
MB-ZN-0093	Zinc SHG min 99.995% ingot premium, cif Southeast Asia, \$/tonne	11 Jan 2022	145 - 160	0.00%	Dec 2021	145 - 160
MB-ZN-0001	Zinc SHG min 99.995% ingot premium, dp fca Rotterdam, \$/tonne	11 Jan 2022	300 - 350	6.56%	Dec 2021	260 - 290
MB-ZN-0099	Zinc SHG min 99.995% ingot premium, dp fca Antwerp, \$/tonne	11 Jan 2022	300 - 350	6.56%	Dec 2021	260 - 290
MB-ZN-0103	Zinc SHG min 99.995% ingot premium, fca dp Italy, \$/tonne	11 Jan 2022	350 - 380	0.00%	Dec 2021	350 - 380
MB-ZN-0102	Zinc SHG min 99.995% ingot premium, ddp Italy, \$/per tonne	11 Jan 2022	380 - 420	0.00%	Dec 2021	380 - 420
MB-ZN-0005	Zinc SHG min 99.995% ingot premium, ddp Midwest US, US cents/lb	11 Jan 2022	18 - 22	17.65%	Dec 2021	15 - 19



Nickel premiums

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-NI-0245	Nickel min 99.8% briquette premium, cif Shanghai, \$/tonne	29 Dec 2021	400 - 500	28.57%	Dec 2021	400 - 500
MB-NI-0143	Nickel min 99.8% full plate premium, in-whs Shanghai, \$/tonne	11 Jan 2022	350 - 375	8.21%	Dec 2021	325 - 352.5
MB-NI-0142	Nickel min 99.8% full plate premium, cif Shanghai, \$/tonne	11 Jan 2022	330 - 350	7.94%	Dec 2021	305 - 335
MB-NI-0003	Nickel uncut cathode premium, in-whs Rotterdam, \$/tonne	11 Jan 2022	70 - 90	0.00%	Dec 2021	70 - 90
MB-NI-0001	Nickel 4x4 cathode premium, in-whs Rotterdam, \$/tonne	11 Jan 2022	220 - 290	0.00%	Dec 2021	220 - 290
MB-NI-0002	Nickel briquette premium, in-whs Rotterdam, \$/tonne	11 Jan 2022	150 - 170	0.00%	Dec 2021	150 - 170
MB-NI-0240	Nickel 4x4 cathode premium, delivered Midwest US, US cents/lb	11 Jan 2022	55 - 65	0.00%	Dec 2021	55 - 63.75
MB-NI-0241	Nickel briquette premium, delivered Midwest US, US cents/lb	11 Jan 2022	65 - 90	0.00%	Dec 2021	67.5 - 90

Base metals warrant premiums

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-AL-0334	Aluminium P1020A, warrant premium, in-whs East Asia, \$/tonne	12 Jan 2022	40 - 65	0.00%	Dec 2021	40 - 66
MB-AL-0333	Aluminium P1020A warrant premium, in-whs Southeast Asia, \$/tonne	12 Jan 2022	50 - 70	9.09%	Dec 2021	40 - 62
MB-AL-0338	Aluminium P1020A warrant premium, in-whs US, \$/tonne	12 Jan 2022	115 - 125	0.00%	Dec 2021	115 - 125
MB-CU-0398	Copper grade A cathode warrant premium, in-whs East Asia \$/tonne	12 Jan 2022	10 - 20	0.00%	Dec 2021	13 - 23
MB-CU-0397	Copper grade A cathode warrant premium, in-whs Southeast Asia, \$/tonne	12 Jan 2022	15 - 40	10.00%	Dec 2021	13 - 24
MB-CU-0400	Copper grade A cathode warrant premium, in-whs North Europe, \$/tonne	12 Jan 2022	5 - 10	0.00%	Dec 2021	5 - 10
MB-CU-0401	Copper grade A cathode warrant premium, in-whs South Europe, \$/tonne	12 Jan 2022	15 - 25	0.00%	Dec 2021	15 - 25
MB-CU-0377	Copper grade A cathode warrant premium, in-whs US, \$/tonne	12 Jan 2022	10 - 25	0.00%	Dec 2021	10 - 25
MB-PB-0106	Lead min 99.97% ingot warrant premium, in-whs East Asia \$/tonne	12 Jan 2022	5 - 20	0.00%	Dec 2021	5 - 20
MB-PB-0105	Lead min 99.97% ingot warrant premium, in-whs Southeast Asia \$/tonne	12 Jan 2022	5 - 20	0.00%	Dec 2021	5 - 20
MB-PB-0109	Lead 99.97% ingot warrant premium, in-whs North Europe, \$/tonne	12 Jan 2022	30 - 50	0.00%	Dec 2021	24 - 42
MB-PB-0110	Lead 99.97% ingot warrant premium, in-whs South Europe, \$/tonne	12 Jan 2022	30 - 50	0.00%	Dec 2021	24 - 38
MB-PB-0097	Lead 99.97% ingot warrant premium, in-whs US, \$/tonne	12 Jan 2022	20 - 30	0.00%	Dec 2021	20 - 30
MB-NI-0138	Nickel min 99.8% briquette warrant premium, in-whs Southeast Asia, \$/tonne	12 Jan 2022	50 - 60	0.00%	Dec 2021	50 - 60
MB-NI-0140	Nickel min 99.8% briquette warrant premium, in-whs East Asia, \$/tonne	12 Jan 2022	50 - 60	0.00%	Dec 2021	50 - 60
MB-NI-0137	Nickel min 99.8% full plate warrant premium, in-whs Southeast Asia, \$/tonne	12 Jan 2022	30 - 45	0.00%	Dec 2021	30 - 45
MB-NI-0139	Nickel min 99.8% full plate warrant premium, in-whs East Asia, \$/tonne	12 Jan 2022	30 - 45	0.00%	Dec 2021	30 - 43
MB-NI-0141	Nickel min 99.8% warrant premium, in-whs North Europe, \$/tonne	12 Jan 2022	50 - 175	0.00%	Dec 2021	38 - 157
MB-SN-0042	Tin min 99.85% ingot warrant premium, in-whs South East Asia, \$/tonne	12 Jan 2022	50 - 150	0.00%	Dec 2021	50 - 150
MB-ZN-0117	Zinc SHG min 99.995% warrant premium, in-whs North Europe, \$/tonne	12 Jan 2022	80 - 100	0.00%	Dec 2021	80 - 100
MB-ZN-0104	Zinc SHG min 99.995% warrant premium, in-whs US, \$/per tonne	12 Jan 2022	10 - 15	0.00%	Dec 2021	10 - 15
MB-ZN-0123	Zinc SHG min 99.995% warrant premium, in-whs Southeast Asia, \$/tonne	12 Jan 2022	10 - 30	0.00%	Dec 2021	10 - 20



Steel scrap prices

Source: dashboard.fastmarkets.com/m/6310df54-51f9-4441-9a17-47f6239159d5

Alabama

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0213	Steel scrap No1 heavy melt, consumer buying price, delivered mill Alabama, \$/gross ton	10 Jan 2022	400	-11.11%	Dec 2021	450
MB-STE-0214	Steel scrap No2 heavy melt, consumer buying price, delivered mill Alabama, \$/gross ton	10 Jan 2022	390	-11.36%	Dec 2021	440
MB-STE-0216	Steel scrap No1 busheling, consumer buying price, delivered mill Alabama, \$/gross ton	10 Jan 2022	515	-10.43%	Dec 2021	575
MB-STE-0215	Steel scrap No1 bundles, consumer buying price, delivered mill Alabama, \$/gross ton	10 Jan 2022	507	-10.58%	Dec 2021	567
MB-STE-0218	Steel scrap machine shop turnings, consumer buying price, delivered mill Alabama, \$/gross ton	10 Jan 2022	325	-13.33%	Dec 2021	375
MB-STE-0217	Steel scrap shredded auto scrap, consumer buying price, delivered mill Alabama, \$/gross ton	10 Jan 2022	468	-9.65%	Dec 2021	518
MB-STE-0219	Steel scrap cut structural/plate 3ft max, consumer buying price, delivered mill Alabama, \$/gross ton	10 Jan 2022	445	-10.10%	Dec 2021	495
MB-STE-0220	Steel scrap cut structural/plate 5ft max, consumer buying price, delivered mill Alabama, \$/gross ton	10 Jan 2022	420	-10.64%	Dec 2021	470

Arkansas/Tennessee

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0221	Steel scrap No1 heavy melt, consumer buying price, delivered mill Arkansas/Tenn, \$/gross ton	11 Jan 2022	415	-12.63%	Dec 2021	475
MB-STE-0224	Steel scrap No1 busheling, consumer buying price, delivered mill Arkansas/Tenn, \$/gross ton	11 Jan 2022	550	-9.84%	Dec 2021	610
MB-STE-0222	Steel scrap No1 bundles, consumer buying price, delivered mill Arkansas/Tenn, \$/gross ton	11 Jan 2022	545	-9.92%	Dec 2021	605
MB-STE-0223	Steel scrap No2 bundles, consumer buying price, delivered mill Arkansas/Tenn, \$/gross ton	11 Jan 2022	392	-13.27%	Dec 2021	452
MB-STE-0226	Steel scrap machine shop turnings, consumer buying price, delivered mill Arkansas/Tenn, \$/gross ton	11 Jan 2022	320	-13.51%	Dec 2021	370
MB-STE-0225	Steel scrap shredded auto scrap, consumer buying price, delivered mill Arkansas/Tenn, \$/gross ton	11 Jan 2022	465	-11.43%	Dec 2021	525
MB-STE-0227	Steel scrap cut structural/plate 5ft max, consumer buying price, delivered mill Arkansas/Tenn, \$/gross ton	11 Jan 2022	435	-12.12%	Dec 2021	495

Atlanta

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0340	Steel scrap No1 heavy melt, dealer selling price, fob dealer yard Atlanta, \$/gross ton	10 Jan 2022	366	-12.02%	Dec 2021	416
MB-STE-0341	Steel scrap No1 busheling, dealer selling price, fob dealer yard Atlanta, \$/gross ton	10 Jan 2022	463	-10.62%	Dec 2021	518
MB-STE-0343	Steel scrap machine shop turnings, dealer selling price, fob dealer yard Atlanta, \$/gross ton	10 Jan 2022	220	-18.52%	Dec 2021	270



Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0342	Steel scrap shredded auto scrap, dealer selling price, fob dealer yard Atlanta, \$/gross ton	10 Jan 2022	406	-10.96%	Dec 2021	456
MB-STE-0344	Steel scrap cut structural/plate 5ft max, dealer selling price, fob dealer yard Atlanta, \$/gross ton	10 Jan 2022	376	-11.74%	Dec 2021	426

Bajío

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0553	Steel scrap No1 heavy melt, consumer buying price, delivered mill Bajío, \$/tonne	11 Jan 2022	400	2.83%	Dec 2021	347.25
MB-STE-0551	Steel scrap No1 busheling, consumer buying price, delivered mill Bajío, \$/tonne	11 Jan 2022	540	0.56%	Dec 2021	531
MB-STE-0552	Steel scrap No1 busheling, consumer buying price, delivered mill Bajío, peso/tonne	11 Jan 2022	11050	0.00%	Dec 2021	11200
MB-STE-0549	Steel scrap machine shop turnings, consumer buying price, delivered mill Bajío, \$/tonne	11 Jan 2022	347	0.58%	Dec 2021	305.75
MB-STE-0550	Steel scrap machine shop turnings, consumer buying price, delivered mill Bajío, peso/tonne	11 Jan 2022	7100	0.00%	Dec 2021	6450
MB-STE-0556	Steel scrap shredded auto scrap, consumer buying price, delivered mill Bajío, peso/tonne	11 Jan 2022	10750	0.47%	Dec 2021	10637.5
MB-STE-0547	Steel scrap cut structural/plate 3ft max, consumer buying price, delivered mill Bajío, \$/tonne	11 Jan 2022	474	2.82%	Dec 2021	425
MB-STE-0548	Steel scrap cut structural/plate 3ft max, consumer buying price, delivered mill Bajío, peso/tonne	11 Jan 2022	9700	2.11%	Dec 2021	8962.5
MB-STE-0554	Steel scrap No1 heavy melt, consumer buying price, delivered mill Bajío, peso/tonne	11 Jan 2022	8200	2.50%	Dec 2021	7325
MB-STE-0555	Steel scrap shredded auto scrap, consumer buying price, delivered mill Bajío, \$/tonne	11 Jan 2022	525	0.96%	Dec 2021	504.25

Boston

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0366	Steel scrap No1 heavy melt, export yard buying price, delivered to yard Boston, \$/gross ton	10 Jan 2022	340	-4.23%	Dec 2021	358.75
MB-STE-0367	Steel scrap No2 bundles, export yard buying price, delivered to yard Boston, \$/gross ton	10 Jan 2022	260	-5.45%	Dec 2021	278.75
MB-STE-0370	Steel scrap auto bodies, export yard buying price, delivered to yard Boston, \$/gross ton	10 Jan 2022	225	0.00%	Dec 2021	235
MB-STE-0369	Steel scrap unstripped motor blocks, export yard buying price, delivered to yard Boston, \$/gross ton	10 Jan 2022	340	-4.23%	Dec 2021	358.75
MB-STE-0368	Steel scrap mixed cast, export yard buying price, delivered to yard Boston, \$/gross ton	10 Jan 2022	325	-4.41%	Dec 2021	343.75
MB-STE-0371	Steel scrap cut structural/plate 5ft max, export yard buying price, delivered to yard Boston, \$/gross ton	10 Jan 2022	350	-4.11%	Dec 2021	368.75

Chicago

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0228	Steel scrap No1 heavy melt, consumer buying price, delivered mill Chicago, \$/gross ton	10 Jan 2022	410	-14.58%	Dec 2021	480
MB-STE-0232	Steel scrap No1 busheling, consumer buying price, delivered mill Chicago, \$/gross ton	10 Jan 2022	520	-10.34%	Dec 2021	580



Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0230	Steel scrap No1 bundles, consumer buying price, delivered mill Chicago, \$/gross ton	10 Jan 2022	525	-10.26%	Dec 2021	585
MB-STE-0248	Steel scrap steel (tin) can bundles, consumer buying price, delivered mill Chicago, \$/gross ton	10 Jan 2022	420	-12.50%	Dec 2021	480
MB-STE-0231	Steel scrap No2 bundles, consumer buying price, delivered mill Chicago, \$/gross ton	10 Jan 2022	270	-20.59%	Dec 2021	340
MB-STE-0234	Steel scrap machine shop turnings, consumer buying price, delivered mill Chicago, \$/gross ton	10 Jan 2022	270	-18.18%	Dec 2021	330
MB-STE-0233	Steel scrap shredded auto scrap, consumer buying price, delivered mill Chicago, \$/gross ton	10 Jan 2022	480	-11.11%	Dec 2021	540
MB-STE-0578	Steel scrap low-residual, ductile-quality shredded clips, consumer buying price, delivered mill Chicago, \$/gross ton	10 Jan 2022	682	-8.09%	Dec 2021	742
MB-STE-0241	Steel scrap unstripped motor blocks, consumer buying price, delivered mill Chicago, \$/gross ton	10 Jan 2022	504	-9.03%	Dec 2021	554
MB-STE-0235	Steel scrap cast iron borings, consumer buying price, delivered mill Chicago, \$/gross ton	10 Jan 2022	300	-18.92%	Dec 2021	370
MB-STE-0239	Steel scrap cupola cast, consumer buying price, delivered mill Chicago, \$/gross ton	10 Jan 2022	559	-8.21%	Dec 2021	609
MB-STE-0240	Steel scrap clean auto cast, consumer buying price, delivered mill Chicago, \$/gross ton	10 Jan 2022	622	-7.44%	Dec 2021	672
MB-STE-0242	Steel scrap heavy breakable cast, consumer buying price, delivered mill Chicago, \$/gross ton	10 Jan 2022	502	-9.06%	Dec 2021	552
MB-STE-0243	Steel scrap drop broken machinery cast, consumer buying price, delivered mill Chicago, \$/gross ton	10 Jan 2022	537	-8.52%	Dec 2021	587
MB-STE-0238	Steel scrap foundry steel 2ft max, consumer buying price, delivered mill Chicago, \$/gross ton	10 Jan 2022	484	-11.03%	Dec 2021	544
MB-STE-0244	Steel scrap rail crops 2ft max, consumer buying price, delivered mill Chicago, \$/gross ton	10 Jan 2022	553	-8.29%	Dec 2021	603
MB-STE-0246	Steel scrap steel car wheels, consumer buying price, delivered mill Chicago, \$/gross ton	10 Jan 2022	485	-11.01%	Dec 2021	545
MB-STE-0577	Steel scrap low-residual, black foundry busheling, consumer buying price, delivered mill Chicago, \$/gross ton	10 Jan 2022	682	-8.09%	Dec 2021	742
MB-STE-0236	Steel scrap cut structural/plate 2ft max, consumer buying price, delivered mill Chicago, \$/gross ton	10 Jan 2022	584	-7.89%	Dec 2021	634
MB-STE-0237	Steel scrap cut structural/plate 5ft max, consumer buying price, delivered mill Chicago, \$/gross ton	10 Jan 2022	445	-11.88%	Dec 2021	505
MB-STE-0579	Steel scrap low-alloy punchings, consumer buying price, delivered mill Chicago, \$/gross ton	10 Jan 2022	702	-7.87%	Dec 2021	762
MB-STE-0229	Steel scrap No2 heavy melt, consumer buying price, delivered mill Chicago, \$/gross ton	10 Jan 2022	395	-15.05%	Dec 2021	465

Cincinnati

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0249	Steel scrap No1 heavy melt, consumer buying price, delivered mill Cincinnati, \$/gross ton	10 Jan 2022	400	-13.04%	Dec 2021	460
MB-STE-0251	Steel scrap No1 busheling, consumer buying price, delivered mill Cincinnati, \$/gross ton	10 Jan 2022	515	-10.43%	Dec 2021	575
MB-STE-0250	Steel scrap No1 bundles, consumer buying price, delivered mill Cincinnati, \$/gross ton	10 Jan 2022	515	-10.43%	Dec 2021	575



Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0253	Steel scrap machine shop turnings, consumer buying price, delivered mill Cincinnati, \$/gross ton	10 Jan 2022	227	-20.91%	Dec 2021	287
MB-STE-0252	Steel scrap shredded auto scrap, consumer buying price, delivered mill Cincinnati, \$/gross ton	10 Jan 2022	445	-11.88%	Dec 2021	505
MB-STE-0254	Steel scrap cut structural/plate 5ft max, consumer buying price, delivered mill Cincinnati, \$/gross ton	10 Jan 2022	425	-12.37%	Dec 2021	485

Cleveland

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0255	Steel scrap No1 heavy melt, consumer buying price, delivered mill Cleveland, \$/gross ton	10 Jan 2022	420	-12.50%	Dec 2021	480
MB-STE-0257	Steel scrap No1 busheling, consumer buying price, delivered mill Cleveland, \$/gross ton	10 Jan 2022	580	-9.38%	Dec 2021	640
MB-STE-0256	Steel scrap No1 bundles, consumer buying price, delivered mill Cleveland, \$/gross ton	10 Jan 2022	580	-9.38%	Dec 2021	640
MB-STE-0269	Steel scrap steel (tin) can bundles, consumer buying price, delivered mill Cleveland, \$/gross ton	10 Jan 2022	410	-12.77%	Dec 2021	470
MB-STE-0259	Steel scrap machine shop turnings, consumer buying price, delivered mill Cleveland, \$/gross ton	10 Jan 2022	245	-19.67%	Dec 2021	305
MB-STE-0258	Steel scrap shredded auto scrap, consumer buying price, delivered mill Cleveland, \$/gross ton	10 Jan 2022	470	-11.32%	Dec 2021	530
MB-STE-0260	Steel scrap cut structural/plate 5ft max, consumer buying price, delivered mill Cleveland, \$/gross ton	10 Jan 2022	440	-12.00%	Dec 2021	500
MB-STE-0653	Steel scrap punchings and plate, broker buying price, fob Cleveland, \$/gross ton	10 Jan 2022	725	-7.05%	Dec 2021	780

Detroit

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0272	Steel scrap No1 busheling, consumer buying price, delivered mill Detroit, \$/gross ton	10 Jan 2022	495	-10.81%	Dec 2021	555
MB-STE-0271	Steel scrap No1 bundles, consumer buying price, delivered mill Detroit, \$/gross ton	10 Jan 2022	485	-11.01%	Dec 2021	545
MB-STE-0279	Steel scrap steel (tin) can bundles, consumer buying price, delivered mill Detroit, \$/gross ton	10 Jan 2022	370	-13.95%	Dec 2021	430
MB-STE-0274	Steel scrap machine shop turnings, consumer buying price, delivered mill Detroit, \$/gross ton	10 Jan 2022	145	-29.27%	Dec 2021	205
MB-STE-0273	Steel scrap shredded auto scrap, consumer buying price, delivered mill Detroit, \$/gross ton	10 Jan 2022	460	-11.54%	Dec 2021	520
MB-STE-0277	Steel scrap cupola cast, consumer buying price, delivered mill Detroit, \$/gross ton	10 Jan 2022	395	-13.19%	Dec 2021	455
MB-STE-0278	Steel scrap clean auto cast, consumer buying price, delivered mill Detroit, \$/gross ton	10 Jan 2022	435	-12.12%	Dec 2021	495
MB-STE-0276	Steel scrap foundry steel 2ft max, consumer buying price, delivered mill Detroit, \$/gross ton	10 Jan 2022	410	-12.77%	Dec 2021	470
MB-STE-0275	Steel scrap cut structural/plate 5ft max, consumer buying price, delivered mill Detroit, \$/gross ton	10 Jan 2022	420	-12.50%	Dec 2021	480
MB-STE-0270	Steel scrap No1 heavy melt, consumer buying price, delivered mill Detroit, \$/gross ton	10 Jan 2022	405	-12.90%	Dec 2021	465

**Hamilton**

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0333	Steel scrap No1 heavy melt, consumer buying price, delivered mill Hamilton, Canadian \$/net ton	11 Jan 2022	339	-18.12%	Dec 2021	414
MB-STE-0335	Steel scrap No1 busheling, consumer buying price, delivered mill Hamilton, Canadian \$/net ton	11 Jan 2022	531	-12.38%	Dec 2021	606
MB-STE-0334	Steel scrap No1 bundles, consumer buying price, delivered mill Hamilton, Canadian \$/net ton	11 Jan 2022	545	-12.10%	Dec 2021	620
MB-STE-0336	Steel scrap shredded auto scrap, consumer buying price, delivered mill Hamilton, Canadian \$/net ton	11 Jan 2022	543	-12.14%	Dec 2021	618
MB-STE-0337	Steel scrap cut structural/plate 5ft max, consumer buying price, delivered mill Hamilton, Canadian \$/net ton	11 Jan 2022	362	-17.16%	Dec 2021	437

Houston

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0350	Steel scrap No1 heavy melt, dealer selling price, fob dealer yard Houston, \$/gross ton	11 Jan 2022	225	-21.05%	Dec 2021	285
MB-STE-0351	Steel scrap No1 busheling, dealer selling price, fob dealer yard Houston, \$/gross ton	11 Jan 2022	342	-14.93%	Dec 2021	402
MB-STE-0405	Steel scrap No1 busheling, consumer buying price trend, delivered mill Houston, \$/gross ton	11 Jan 2022	(60)		Dec 2021	0
MB-STE-0353	Steel scrap machine shop turnings, dealer selling price, fob dealer yard Houston, \$/gross ton	11 Jan 2022	145	-29.27%	Dec 2021	205
MB-STE-0352	Steel scrap shredded auto scrap, dealer selling price, fob dealer yard Houston, \$/gross ton	11 Jan 2022	275	-17.91%	Dec 2021	335
MB-STE-0354	Steel scrap cut structural/plate 5ft max, dealer selling price, fob dealer yard Houston, \$/gross ton	11 Jan 2022	260	-18.75%	Dec 2021	320
MB-STE-0408	Steel scrap cut structural/plate 5ft max, consumer buying price trend, delivered mill Houston, \$/gross ton	11 Jan 2022	(60)		Dec 2021	0
MB-STE-0404	Steel scrap No1 heavy melt, consumer buying price trend, delivered mill Houston, \$/gross ton	11 Jan 2022	(60)		Dec 2021	0
MB-STE-0407	Steel scrap machine shop turnings, consumer buying price trend, delivered mill Houston, \$/gross ton	11 Jan 2022	(60)		Dec 2021	0
MB-STE-0406	Steel scrap shredded auto scrap, consumer buying price trend, delivered mill Houston, \$/gross ton	11 Jan 2022	(60)		Dec 2021	0

Los Angeles

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0372	Steel scrap No1 heavy melt, export yard buying price, delivered to yard Los Angeles, \$/gross ton	10 Jan 2022	265	0.00%	Dec 2021	265
MB-STE-0425	Steel scrap HMS 1&2 (80:20), export index, fob Los Angeles, \$/tonne	12 Jan 2022	430	-9.47%	Dec 2021	475
MB-STE-0374	Steel scrap No1 busheling, export yard buying price, delivered to yard Los Angeles, \$/gross ton	10 Jan 2022	275	0.00%	Dec 2021	275
MB-STE-0373	Steel scrap No2 bundles, export yard buying price, delivered to yard Los Angeles, \$/gross ton	10 Jan 2022	165	0.00%	Dec 2021	165
MB-STE-0375	Steel scrap machine shop turnings, export yard buying price, delivered to yard Los Angeles, \$/gross ton	10 Jan 2022	60	0.00%	Dec 2021	60



Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0378	Steel scrap cut structural/plate 5ft max, export yard buying price, delivered to yard Los Angeles, \$/gross ton	10 Jan 2022	275	0.00%	Dec 2021	275

Midwest

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0424	Steel scrap No1 heavy melt, index, delivered Midwest mill, \$/gross ton	10 Jan 2022	423.92	-11.70%	Dec 2021	480.08
MB-STE-0882	Steel scrap No1 busheling, indicator, delivered Midwest mill, \$/gross ton	14 Jan 2022	542	0.00%	Dec 2021	595.38
MB-STE-0422	Steel scrap No1 busheling, index, delivered Midwest mill, \$/gross ton	10 Jan 2022	542.33	-10.18%	Dec 2021	603.81
MB-STE-0423	Steel scrap shredded, index, delivered Midwest mill, \$/gross ton	10 Jan 2022	481.39	-10.88%	Dec 2021	540.16
MB-STE-0787	Steel scrap shredder feed, fob Midwest, \$/gross ton	10 Jan 2022	199.84	-6.72%	Dec 2021	220.07

Monterrey

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0533	Steel scrap No1 heavy melt, consumer buying price, delivered mill Monterrey, \$/tonne	11 Jan 2022	349	4.80%	Dec 2021	324.5
MB-STE-0534	Steel scrap No1 heavy melt, consumer buying price, delivered mill Monterrey, peso/tonne	11 Jan 2022	7150	4.38%	Dec 2021	6850
MB-STE-0539	Steel scrap No1 busheling, consumer buying price, delivered mill Monterrey, \$/tonne	11 Jan 2022	535	0.56%	Dec 2021	519
MB-STE-0540	Steel scrap No1 busheling, consumer buying price, delivered mill Monterrey, peso/tonne	11 Jan 2022	10950	0.00%	Dec 2021	10950
MB-STE-0541	Steel scrap machine shop turnings, consumer buying price, delivered mill Monterrey, \$/tonne	11 Jan 2022	322	0.31%	Dec 2021	312.75
MB-STE-0542	Steel scrap machine shop turnings, consumer buying price, delivered mill Monterrey, peso/tonne	11 Jan 2022	6600	0.00%	Dec 2021	6600
MB-STE-0535	Steel scrap shredded auto scrap, consumer buying price, delivered mill Monterrey, \$/tonne	11 Jan 2022	527	0.38%	Dec 2021	512
MB-STE-0536	Steel scrap shredded auto scrap, consumer buying price, delivered mill Monterrey, peso/tonne	11 Jan 2022	10800	0.00%	Dec 2021	10800
MB-STE-0537	Steel scrap cut structural/plate 3ft max, consumer buying price, delivered mill Monterrey, \$/tonne	11 Jan 2022	503	3.50%	Dec 2021	465.75
MB-STE-0538	Steel scrap cut structural/plate 3ft max, consumer buying price, delivered mill Monterrey, peso/tonne	11 Jan 2022	10300	3.00%	Dec 2021	9825

Montreal

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0789	Steel scrap No1 heavy melting, consumer buying price, fob Montreal, Canadian \$/net ton	13 Jan 2022	365	-16.09%	Dec 2021	435
MB-STE-0790	Steel scrap No1 busheling, consumer buying price, fob Montreal, Canadian \$/net ton	13 Jan 2022	487	-12.57%	Dec 2021	557
MB-STE-0848	Steel scrap No2 bundles, consumer buying price, fob Montreal, Canadian \$/net ton	13 Jan 2022	300	-13.04%	Dec 2021	345
MB-STE-0792	Steel scrap machine shop turnings, consumer buying price, fob Montreal, Canadian \$/net ton	13 Jan 2022	295	-19.18%	Dec 2021	365



Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0793	Steel scrap cut structural/plate 5ft max, consumer buying price, fob Montreal, Canadian \$/net ton	13 Jan 2022	405	-14.74%	Dec 2021	475

New York

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0379	Steel scrap No1 heavy melt, export yard buying price, delivered to yard New York, \$/gross ton	10 Jan 2022	365	-1.35%	Dec 2021	372.5
MB-STE-0418	Steel scrap HMS 1&2 (80:20), export index, fob New York, \$/tonne	12 Jan 2022	427	2.28%	Dec 2021	432.5
MB-STE-0380	Steel scrap No2 bundles, export yard buying price, delivered to yard New York, \$/gross ton	10 Jan 2022	315	-1.56%	Dec 2021	322.5
MB-STE-0381	Steel scrap machine shop turnings, export yard buying price, delivered to yard New York, \$/gross ton	10 Jan 2022	260	-1.89%	Dec 2021	267.5
MB-STE-0419	Steel scrap shredded scrap, export index, fob New York, \$/tonne	12 Jan 2022	432.5	0.00%	Dec 2021	449.5
MB-STE-0384	Steel scrap auto bodies, export yard buying price, delivered to yard New York, \$/gross ton	10 Jan 2022	345	-1.43%	Dec 2021	352.5
MB-STE-0383	Steel scrap unstripped motor blocks, export yard buying price, delivered to yard New York, \$/gross ton	10 Jan 2022	380	-1.30%	Dec 2021	387.5
MB-STE-0382	Steel scrap mixed cast, export yard buying price, delivered to yard New York, \$/gross ton	10 Jan 2022	360	-1.37%	Dec 2021	367.5
MB-STE-0385	Steel scrap cut structural/plate 5ft max, export yard buying price, delivered to yard New York, \$/gross ton	10 Jan 2022	375	-1.32%	Dec 2021	382.5

North Carolina/Virginia

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0280	Steel scrap No1 heavy melt, consumer buying price, delivered mill North Carolina/Virginia, \$/gross ton	10 Jan 2022	410	-10.87%	Dec 2021	460
MB-STE-0281	Steel scrap No1 busheling, consumer buying price, delivered mill North Carolina/Virginia, \$/gross ton	10 Jan 2022	500	-9.09%	Dec 2021	550
MB-STE-0283	Steel scrap machine shop turnings, consumer buying price, delivered mill North Carolina/Virginia, \$/gross ton	10 Jan 2022	325	-13.33%	Dec 2021	375
MB-STE-0282	Steel scrap, shredded auto scrap, consumer buying price, delivered mill North Carolina/Virginia, \$/gross ton	10 Jan 2022	440	-10.20%	Dec 2021	490
MB-STE-0284	Steel scrap cut structural/plate 5ft max, consumer buying price, delivered mill North Carolina/Virginia, \$/gross ton	10 Jan 2022	420	-10.64%	Dec 2021	470

Philadelphia

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0285	Steel scrap No1 heavy melt, consumer buying price, delivered mill Philadelphia, \$/gross ton	10 Jan 2022	395	-10.23%	Dec 2021	440
MB-STE-0386	Steel scrap No1 heavy melt, export yard buying price, delivered to yard Philadelphia, \$/gross ton	10 Jan 2022	365	-1.35%	Dec 2021	372.5
MB-STE-0288	Steel scrap No1 busheling, consumer buying price, delivered mill Philadelphia, \$/gross ton	10 Jan 2022	505	-8.18%	Dec 2021	550
MB-STE-0286	Steel scrap No1 bundles, consumer buying price, delivered mill Philadelphia, \$/gross ton	10 Jan 2022	505	-8.18%	Dec 2021	550



Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0287	Steel scrap No2 bundles, consumer buying price, delivered mill Philadelphia, \$/gross ton	10 Jan 2022	355	-11.25%	Dec 2021	400
MB-STE-0387	Steel scrap No2 bundles, export yard buying price, delivered to yard Philadelphia, \$/gross ton	10 Jan 2022	290	-1.69%	Dec 2021	297.5
MB-STE-0290	Steel scrap machine shop turnings, consumer buying price, delivered mill Philadelphia, \$/gross ton	10 Jan 2022	275	-17.91%	Dec 2021	335
MB-STE-0289	Steel scrap shredded auto scrap, consumer buying price, delivered mill Philadelphia, \$/gross ton	10 Jan 2022	470	-8.74%	Dec 2021	515
MB-STE-0390	Steel scrap auto bodies, export yard buying price, delivered to yard Philadelphia, \$/gross ton	10 Jan 2022	330	-1.49%	Dec 2021	337.5
MB-STE-0297	Steel scrap unstripped motor blocks, consumer buying price, delivered mill Philadelphia, \$/gross ton	10 Jan 2022	415	-9.78%	Dec 2021	460
MB-STE-0389	Steel scrap unstripped motor blocks, export yard buying price, delivered to yard Philadelphia, \$/gross ton	10 Jan 2022	360	-1.37%	Dec 2021	367.5
MB-STE-0295	Steel scrap cupola cast, consumer buying price, delivered mill Philadelphia, \$/gross ton	10 Jan 2022	410	-9.89%	Dec 2021	455
MB-STE-0296	Steel scrap clean auto cast, consumer buying price, delivered mill Philadelphia, \$/gross ton	10 Jan 2022	405	-10.00%	Dec 2021	450
MB-STE-0298	Steel scrap heavy breakable cast, consumer buying price, delivered mill Philadelphia, \$/gross ton	10 Jan 2022	361	-11.08%	Dec 2021	406
MB-STE-0299	Steel scrap drop broken machinery, consumer buying price, delivered mill Philadelphia, \$/gross ton	10 Jan 2022	466	-8.81%	Dec 2021	511
MB-STE-0300	Steel scrap rail crops 2ft max, consumer buying price, delivered mill Philadelphia, \$/gross ton	10 Jan 2022	530	-7.83%	Dec 2021	575
MB-STE-0301	Steel scrap random rails, consumer buying price, delivered mill Philadelphia, \$/gross ton	10 Jan 2022	505	-8.18%	Dec 2021	550
MB-STE-0291	Steel scrap cut structural/plate 2ft max, consumer buying price, delivered mill Philadelphia, \$/gross ton	10 Jan 2022	520	-7.96%	Dec 2021	565
MB-STE-0292	Steel scrap cut structural/plate 3ft max, consumer buying price, delivered mill Philadelphia, \$/gross ton	10 Jan 2022	415	-9.78%	Dec 2021	460
MB-STE-0293	Steel scrap cut structural/plate 5ft max, consumer buying price, delivered mill Philadelphia, \$/gross ton	10 Jan 2022	405	-10.00%	Dec 2021	450
MB-STE-0391	Steel scrap cut structural/plate 5ft max, export yard buying price, delivered to yard Philadelphia, \$/gross ton	10 Jan 2022	375	-1.32%	Dec 2021	382.5

Pittsburgh

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0303	Steel scrap No1 heavy melt, consumer buying price, delivered mill Pittsburgh, \$/gross ton	10 Jan 2022	415	-12.63%	Dec 2021	475
MB-STE-0306	Steel scrap No1 busheling, consumer buying price, delivered mill Pittsburgh, \$/gross ton	10 Jan 2022	550	-9.84%	Dec 2021	610
MB-STE-0304	Steel scrap No1 bundles, consumer buying price, delivered mill Pittsburgh, \$/gross ton	10 Jan 2022	531	-10.15%	Dec 2021	591
MB-STE-0305	Steel scrap No2 bundles, consumer buying price, delivered mill Pittsburgh, \$/gross ton	10 Jan 2022	329	-15.42%	Dec 2021	389
MB-STE-0307	Steel scrap No1 industrial bundles, consumer buying price, delivered mill Pittsburgh, \$/gross ton	10 Jan 2022	557	-9.72%	Dec 2021	617
MB-STE-0321	Steel scrap steel (tin) can bundles, consumer buying price, delivered mill Pittsburgh, \$/gross ton	10 Jan 2022	320	-15.79%	Dec 2021	380



Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0309	Steel scrap machine shop turnings, consumer buying price, delivered mill Pittsburgh, \$/gross ton	10 Jan 2022	315	-16.00%	Dec 2021	375
MB-STE-0308	Steel scrap shredded auto scrap, consumer buying price, delivered mill Pittsburgh, \$/gross ton	10 Jan 2022	470	-11.32%	Dec 2021	530
MB-STE-0310	Steel scrap cast iron borings, consumer buying price, delivered mill Pittsburgh, \$/gross ton	10 Jan 2022	270	-18.18%	Dec 2021	330
MB-STE-0388	Steel scrap mixed cast, export yard buying price, delivered to yard Philadelphia, \$/gross ton	10 Jan 2022	365	-1.35%	Dec 2021	372.5
MB-STE-0311	Steel scrap cut structural/plate 3ft max, consumer buying price, delivered mill Pittsburgh, \$/gross ton	10 Jan 2022	465	-11.43%	Dec 2021	525
MB-STE-0312	Steel scrap cut structural/plate 5ft max, consumer buying price, delivered mill Pittsburgh, \$/gross ton	10 Jan 2022	445	-11.88%	Dec 2021	505
MB-STE-0598	Steel scrap punchings and plate, consumer buying price, delivered mill Pittsburgh, \$/gross ton	10 Jan 2022	777	-6.61%	Dec 2021	832

Seattle/Portland

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0409	Steel scrap No1 heavy melt, consumer buying price trend, delivered mill Seattle/Portland, \$/gross ton	10 Jan 2022	(28)		Dec 2021	0
MB-STE-0411	Steel scrap machine shop turnings, consumer buying price trend, delivered mill Seattle/Portland, \$/gross ton	10 Jan 2022	(28)		Dec 2021	0
MB-STE-0410	Steel scrap shredded auto scrap, consumer buying price trend, delivered mill Seattle/Portland, \$/gross ton	10 Jan 2022	(28)		Dec 2021	0
MB-STE-0412	Steel scrap cut structural/plate 5ft max, consumer buying price trend, delivered mill Seattle/Portland, \$/gross ton	10 Jan 2022	(28)		Dec 2021	0

South Carolina

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0322	Steel scrap No1 heavy melt, consumer buying price, delivered mill South Carolina, \$/gross ton	10 Jan 2022	410	-10.87%	Dec 2021	460
MB-STE-0323	Steel scrap No1 busheling, consumer buying price, delivered mill South Carolina, \$/gross ton	10 Jan 2022	500	-9.09%	Dec 2021	550
MB-STE-0324	Steel scrap shredded auto scrap, consumer buying price, delivered mill South Carolina, \$/gross ton	10 Jan 2022	440	-10.20%	Dec 2021	490
MB-STE-0326	Steel scrap cut structural/plate 5ft max, consumer buying price, delivered mill South Carolina, \$/gross ton	10 Jan 2022	420	-10.64%	Dec 2021	470
MB-STE-0325	Steel scrap machine shop turnings, consumer buying price, delivered mill South Carolina, \$/gross ton	10 Jan 2022	325	-13.33%	Dec 2021	375

St Louis

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0355	Steel scrap No1 heavy melt, dealer selling price, fob dealer yard St Louis, \$/gross ton	11 Jan 2022	338	-15.08%	Dec 2021	398
MB-STE-0357	Steel scrap No1 busheling, dealer selling price, fob dealer yard St Louis, \$/gross ton	11 Jan 2022	488	-10.95%	Dec 2021	548
MB-STE-0356	Steel scrap No1 bundles, dealer selling price, fob dealer yard St Louis, \$/gross ton	11 Jan 2022	488	-10.95%	Dec 2021	548



Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0359	Steel scrap machine shop turnings, dealer selling price, fob dealer yard St Louis, \$/gross ton	11 Jan 2022	210	-20.75%	Dec 2021	265
MB-STE-0358	Steel scrap shredded auto scrap, dealer selling price, fob dealer yard St Louis, \$/gross ton	11 Jan 2022	401	-13.02%	Dec 2021	461
MB-STE-0360	Steel scrap cut structural/plate 5ft max, dealer selling price, fob dealer yard St Louis, \$/gross ton	11 Jan 2022	353	-14.53%	Dec 2021	413

Composite

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0528	Steel scrap No1 heavy melt, consumer buying price, delivered mill Chicago, \$/gross ton, weekly composite	14 Jan 2022	410	-14.58%	Dec 2021	
MB-STE-0529	Steel scrap No1 heavy melt, consumer buying price, delivered mill Philadelphia, \$/gross ton, weekly composite	14 Jan 2022	395	-10.23%	Dec 2021	
MB-STE-0530	Steel scrap No1 heavy melt, consumer buying price, delivered mill Pittsburgh, \$/gross ton, weekly composite	14 Jan 2022	415	-12.63%	Dec 2021	
MB-STE-0531	Steel scrap No1 heavy melt, consumer buying price, delivered mill, \$/gross ton, weekly composite	14 Jan 2022	406.67	-12.54%	Dec 2021	
MB-STE-0524	Steel scrap No1 busheling, consumer buying price, delivered mill Chicago, \$/gross ton, weekly composite	14 Jan 2022	520	-10.34%	Dec 2021	
MB-STE-0525	Steel scrap No1 busheling, consumer buying price, delivered mill Cleveland, \$/gross ton, weekly composite	14 Jan 2022	580	-9.38%	Dec 2021	
MB-STE-0526	Steel scrap No1 busheling, consumer buying price, delivered mill Pittsburgh, \$/gross ton, weekly composite	14 Jan 2022	550	-9.84%	Dec 2021	
MB-STE-0527	Steel scrap No1 busheling, consumer buying price, delivered mill, \$/gross ton, weekly composite	14 Jan 2022	550	-9.84%	Dec 2021	
MB-STE-0427	Steel scrap Shredded auto, daily composite, delivered mill US, \$/gross ton	14 Jan 2022	472	0.00%	Dec 2021	525.44
MB-STE-0519	Steel scrap shredded auto scrap, consumer buying price, delivered mill Alabama, \$/gross ton, weekly composite	14 Jan 2022	468	-9.65%	Dec 2021	
MB-STE-0520	Steel scrap shredded auto scrap, consumer buying price, delivered mill Chicago, \$/gross ton, weekly composite	14 Jan 2022	480	-11.11%	Dec 2021	
MB-STE-0521	Steel scrap shredded auto scrap, consumer buying price, delivered mill Philadelphia, \$/gross ton, weekly composite	14 Jan 2022	470	-8.74%	Dec 2021	
MB-STE-0522	Steel scrap shredded auto scrap, consumer buying price, delivered mill Pittsburgh, \$/gross ton, weekly composite	14 Jan 2022	470	-11.32%	Dec 2021	
MB-STE-0523	Steel scrap shredded auto scrap, consumer buying price, delivered mill, \$/gross ton, weekly composite	14 Jan 2022	472	-10.22%	Dec 2021	
MB-STE-0426	Steel scrap No1 heavy melt, daily composite, delivered mill US, \$/gross ton	14 Jan 2022	406.67	0.00%	Dec 2021	465
MB-STE-0428	Steel scrap No1 busheling, daily composite, delivered mill US, \$/gross ton	14 Jan 2022	550	0.00%	Dec 2021	610

US steel scrap shredder feed prices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0786	Steel scrap shredder feed, fob Ohio Valley, \$/gross ton	10 Jan 2022	214.98	-5.69%	Dec 2021	234.7
MB-STE-0787	Steel scrap shredder feed, fob Midwest, \$/gross ton	10 Jan 2022	199.84	-6.72%	Dec 2021	220.07
MB-STE-0788	Steel scrap shredder feed, fob Southeast, \$/gross ton	10 Jan 2022	171.56	-5.34%	Dec 2021	186.71

**Boston stainless steel scrap**

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STS-0178	Stainless steel scrap 430 bundles, solids, export yard buying price, delivered to yard Boston, US cents/lb	11 Jan 2022	32 - 33	0.00%	Dec 2021	32 - 33
MB-STS-0056	Stainless steel scrap 430 bundles, export yard buying price, delivered to yard Boston, \$/gross ton	11 Jan 2022	717 - 739	0.00%	Dec 2021	717 - 739

Chicago stainless steel scrap

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STS-0185	Stainless steel scrap 304 turnings, dealer buying price, delivered to yard Chicago, \$/gross ton	04 Jan 2022	1478 - 1702	6.75%	Dec 2021	1366 - 1613
MB-STS-0063	Stainless steel scrap 304 turnings, dealer buying price, delivered to yard Chicago, US cents/lb	04 Jan 2022	66 - 76	6.77%	Dec 2021	61 - 72
MB-STS-0190	Stainless steel scrap 304 turnings, broker buying price, delivered to processor Chicago, US cents/lb	11 Jan 2022	94 - 96	2.15%	Dec 2021	90.25 - 93.25
MB-STS-0068	Stainless steel scrap 304 turnings, broker buying price, delivered to processor Chicago, \$/gross ton	11 Jan 2022	2106 - 2150	2.16%	Dec 2021	2021.75 - 2088.75
MB-STS-0186	Stainless steel scrap 304 new clips, dealer buying price, delivered to yard Chicago, \$/gross ton	04 Jan 2022	1568 - 1859	6.99%	Dec 2021	1478 - 1725
MB-STS-0064	Stainless steel scrap 304 new clips, dealer buying price, delivered to yard Chicago, US cents/lb	04 Jan 2022	70 - 83	6.99%	Dec 2021	66 - 77
MB-STS-0189	Stainless steel scrap 304 solids, clips, broker buying price, delivered to processor Chicago, US cents/lb	11 Jan 2022	99 - 102	1.52%	Dec 2021	95.5 - 98.25
MB-STS-0067	Stainless steel scrap 304 solids, clips, broker buying price, delivered to processor Chicago, \$/gross ton	11 Jan 2022	2218 - 2285	1.53%	Dec 2021	2139.25 - 2200.75
MB-STS-0184	Stainless steel scrap 304 solids, clips, dealer buying price, delivered to yard Chicago, \$/gross ton	04 Jan 2022	1568 - 1859	6.99%	Dec 2021	1478 - 1725
MB-STS-0062	Stainless steel scrap 304 solids, clips, dealer buying price, delivered to yard Chicago, US cents/lb	04 Jan 2022	70 - 83	6.99%	Dec 2021	66 - 77
MB-STS-0191	Stainless steel scrap 430 bundles, solids, broker buying price, delivered to processor Chicago, US cents/lb	11 Jan 2022	36 - 39	2.74%	Dec 2021	35 - 38
MB-STS-0069	Stainless steel scrap 430 bundles, solids, broker buying price, delivered to processor Chicago, \$/gross ton	11 Jan 2022	806 - 874	2.75%	Dec 2021	784.25 - 851.5
MB-STS-0187	Stainless steel scrap 430 new clips, dealer buying price, delivered to yard Chicago, \$/gross ton	04 Jan 2022	515 - 582	-5.84%	Dec 2021	538 - 627
MB-STS-0065	Stainless steel scrap 430 new clips, dealer buying price, delivered to yard Chicago, US cents/lb	04 Jan 2022	23 - 26	-5.77%	Dec 2021	24 - 28
MB-STS-0192	Stainless steel scrap 430 turnings, broker buying price, delivered to processor Chicago, US cents/lb	11 Jan 2022	32 - 34	3.13%	Dec 2021	30.25 - 33.5
MB-STS-0070	Stainless steel scrap 430 turnings, broker buying price, delivered to processor Chicago, \$/gross ton	11 Jan 2022	717 - 762	3.21%	Dec 2021	677.5 - 750.5
MB-STS-0194	Stainless steel scrap 409 turnings, broker buying price, delivered to processor Chicago, US cents/lb	11 Jan 2022	27 - 31	7.41%	Dec 2021	26.25 - 29
MB-STS-0072	Stainless steel scrap 409 turnings, broker buying price, delivered to processor Chicago, \$/gross ton	11 Jan 2022	605 - 694	7.44%	Dec 2021	588 - 649.5
MB-STS-0193	Stainless steel scrap 409 bundles, solids, broker buying price, delivered to processor Chicago, US cents/lb	11 Jan 2022	31 - 34	1.56%	Dec 2021	31.5 - 34
MB-STS-0071	Stainless steel scrap 409 bundles, broker buying price, delivered to processor Chicago, \$/gross ton	11 Jan 2022	694 - 762	1.61%	Dec 2021	705.25 - 761.5



Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STS-0183	Stainless steel scrap 316 solids, clips, dealer buying price, delivered to yard Chicago, \$/gross ton	04 Jan 2022	2374 - 2464	9.63%	Dec 2021	1971 - 2442
MB-STS-0061	Stainless steel scrap 316 solids, dealer buying price, delivered to yard Chicago, US cents/lb	04 Jan 2022	106 - 110	9.64%	Dec 2021	88 - 109
MB-STS-0066	Stainless steel scrap 316 solids, broker buying price, delivered to processor Chicago, \$/gross ton	11 Jan 2022	2912 - 3091	2.69%	Dec 2021	2856 - 3001.5
MB-STS-0188	Stainless steel scrap 316 solids, clips, broker buying price, delivered to processor Chicago, US cents/lb	11 Jan 2022	130 - 138	2.68%	Dec 2021	127.5 - 134

Cleveland stainless steel scrap

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STS-0197	Stainless steel scrap 304 turnings, dealer buying price, delivered to yard Cleveland, \$/gross	04 Jan 2022	1456 - 1568	6.29%	Dec 2021	1389 - 1456
MB-STS-0202	Stainless steel scrap 304 turnings, broker buying price, delivered to processor Cleveland, US cents/lb	11 Jan 2022	95 - 96	3.24%	Dec 2021	90 - 93.25
MB-STS-0201	Stainless steel scrap 304 solids, clips, broker buying price, delivered to processor Cleveland, US cents/lb	11 Jan 2022	100 - 102	3.59%	Dec 2021	95.25 - 98.5
MB-STS-0079	Stainless steel scrap 304 solids, clips, broker buying price, delivered to processor Cleveland, \$/gross ton	11 Jan 2022	2240 - 2285	3.59%	Dec 2021	2133.75 - 2206.5
MB-STS-0196	Stainless steel scrap 304 solids, clips, dealer buying price, delivered to yard Cleveland, \$/gross	04 Jan 2022	1568 - 1680	6.63%	Dec 2021	1478 - 1568
MB-STS-0074	Stainless steel scrap 304 solids, clips, dealer buying price, delivered to yard Cleveland, US cents/lb	04 Jan 2022	70 - 75	6.62%	Dec 2021	66 - 70
MB-STS-0075	Stainless steel scrap 304 turnings, dealer buying price, delivered to yard Cleveland, US cents/lb	04 Jan 2022	65 - 70	6.30%	Dec 2021	62 - 65
MB-STS-0080	Stainless steel scrap 304 turnings, broker buying price, delivered to processor Cleveland, \$/gross ton	11 Jan 2022	2128 - 2150	3.23%	Dec 2021	2016 - 2088.75
MB-STS-0198	Stainless steel scrap 304 new clips, dealer buying price, delivered to yard Cleveland, \$/gross	04 Jan 2022	1568 - 1680	6.63%	Dec 2021	1478 - 1568
MB-STS-0076	Stainless steel scrap 304 new clips, dealer buying price, delivered to yard Cleveland, US cents/lb	04 Jan 2022	70 - 75	6.62%	Dec 2021	66 - 70
MB-STS-0199	Stainless steel scrap 430 new clips, dealer buying price, delivered to yard Cleveland, \$/gross	04 Jan 2022	448 - 560	-2.14%	Dec 2021	448 - 582
MB-STS-0077	Stainless steel scrap 430 new clips, dealer buying price, delivered to yard Cleveland, US cents/lb	04 Jan 2022	20 - 25	-2.17%	Dec 2021	20 - 26
MB-STS-0195	Stainless steel scrap 316 solids, clips, dealer buying price, delivered to yard Cleveland, \$/gross	04 Jan 2022	2016 - 2464	12.37%	Dec 2021	1904 - 2083
MB-STS-0200	Stainless steel scrap 316 solids, clips, broker buying price, delivered to processor Cleveland, US cents/lb	11 Jan 2022	132 - 138	2.27%	Dec 2021	127.5 - 134.25
MB-STS-0078	Stainless steel scrap 316 solids, clips, broker buying price, delivered to processor Cleveland, \$/gross ton	11 Jan 2022	2957 - 3091	2.28%	Dec 2021	2856 - 3007.25
MB-STS-0073	Stainless steel scrap 316 solids, clips, dealer buying price, delivered to yard Cleveland, US cents/lb	04 Jan 2022	90 - 110	12.36%	Dec 2021	85 - 93

Detroit stainless steel scrap

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STS-0205	Stainless steel scrap 304 turnings, dealer buying price, delivered to yard Detroit, \$/gross ton	04 Jan 2022	1478 - 1568	10.56%	Dec 2021	1366 - 1389



Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STS-0083	Stainless steel scrap 304 turnings, dealer buying price, delivered to yard Detroit, US cents/lb	04 Jan 2022	66 - 70	10.57%	Dec 2021	61 - 62
MB-STS-0210	Stainless steel scrap 304 turnings, broker buying price, delivered to processor Detroit, US cents/lb	11 Jan 2022	93 - 96	1.07%	Dec 2021	90.25 - 93.25
MB-STS-0088	Stainless steel scrap 304 turnings, broker buying price, delivered to processor Detroit, \$/gross ton	11 Jan 2022	2083 - 2150	1.05%	Dec 2021	2021.75 - 2088.75
MB-STS-0206	Stainless steel scrap 304 new clips, dealer buying price, delivered to yard Detroit, \$/gross ton	04 Jan 2022	1568 - 1792	11.96%	Dec 2021	1478 - 1523
MB-STS-0084	Stainless steel scrap 304 new clips, dealer buying price, delivered to yard Detroit, US cents/lb	04 Jan 2022	70 - 80	11.94%	Dec 2021	66 - 68
MB-STS-0209	Stainless steel scrap 304 solids, clips, broker buying price, delivered to processor Detroit, US cents/lb	11 Jan 2022	100 - 102	2.02%	Dec 2021	95.5 - 98.5
MB-STS-0087	Stainless steel scrap 304 solids, clips, broker buying price, delivered to processor Detroit, \$/gross ton	11 Jan 2022	2240 - 2285	2.03%	Dec 2021	2139.25 - 2206.5
MB-STS-0204	Stainless steel scrap 304 solids, clips, dealer buying price, delivered to yard Detroit, \$/gross ton	04 Jan 2022	1568 - 1792	11.96%	Dec 2021	1478 - 1523
MB-STS-0082	Stainless steel scrap 304 solids, clips, dealer buying price, delivered to yard Detroit, US cents/lb	04 Jan 2022	70 - 80	11.94%	Dec 2021	66 - 68
MB-STS-0207	Stainless steel scrap 430 new clips, dealer buying price, delivered to yard Detroit, \$/gross ton	04 Jan 2022	538 - 560	-1.96%	Dec 2021	538 - 582
MB-STS-0085	Stainless steel scrap 430 new clips, dealer buying price, delivered to yard Detroit, US cents/lb	04 Jan 2022	24 - 25	-2.00%	Dec 2021	24 - 26
MB-STS-0211	Stainless steel scrap 430 bundles, solids, broker buying price, delivered to processor Detroit, US cents/lb	11 Jan 2022	34 - 39	0.00%	Dec 2021	36 - 37.75
MB-STS-0089	Stainless steel scrap 430 bundles, solids, broker buying price, delivered to processor Detroit, \$/gross ton	11 Jan 2022	762 - 874	0.06%	Dec 2021	806.25 - 845.75
MB-STS-0212	Stainless steel scrap 409 bundles, solids, broker buying price, delivered to processor Detroit, US cents/lb	11 Jan 2022	30 - 34	0.00%	Dec 2021	31.5 - 33.25
MB-STS-0213	Stainless steel scrap 409 turnings, broker buying price, delivered to processor Detroit, US cents/lb	11 Jan 2022	28 - 31	9.26%	Dec 2021	26.75 - 28.5
MB-STS-0091	Stainless steel scrap 409 turnings, broker buying price, delivered to processor Detroit, \$/gross ton	11 Jan 2022	627 - 694	9.26%	Dec 2021	599 - 638.25
MB-STS-0090	Stainless steel scrap 409 bundles, solids, broker buying price, delivered to processor Detroit, \$/gross ton	11 Jan 2022	672 - 762	0.07%	Dec 2021	705.5 - 744.75
MB-STS-0208	Stainless steel scrap 316 solids, clips, broker buying price, delivered to processor Detroit, US cents/lb	11 Jan 2022	135 - 138	3.80%	Dec 2021	127 - 134
MB-STS-0086	Stainless steel scrap 316 solids, clips, broker buying price, delivered to processor Detroit, \$/gross ton	11 Jan 2022	3024 - 3091	3.80%	Dec 2021	2844.75 - 3001.5
MB-STS-0203	Stainless steel scrap 316 solids, clips, dealer buying price, delivered to yard Detroit, \$/gross ton	04 Jan 2022	2374 - 2576	22.10%	Dec 2021	1971 - 2083
MB-STS-0081	Stainless steel scrap 316 solids, dealer buying price, delivered to yard Detroit, US cents/lb	04 Jan 2022	106 - 115	22.10%	Dec 2021	88 - 93

East Coast stainless steel scrap

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STS-0297	Stainless steel scrap 304 new clips, dealer buying price, delivered to yard East Coast, \$/gross ton	04 Jan 2022	1680 - 1747	6.26%	Dec 2021	1478 - 1747
MB-STS-0287	Stainless steel scrap 304 new clips, dealer buying price, delivered to yard East Coast, US cents/lb	04 Jan 2022	75 - 78	6.25%	Dec 2021	66 - 78



Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STS-0295	Stainless steel scrap 304 solids, clips, dealer buying price, delivered to yard East Coast, \$/gross ton	04 Jan 2022	1680 - 1747	1.33%	Dec 2021	1635 - 1747
MB-STS-0285	Stainless steel scrap 304 solids, clips, dealer buying price, delivered to yard East Coast, US cents/lb	04 Jan 2022	75 - 78	1.32%	Dec 2021	73 - 78
MB-STS-0286	Stainless steel scrap 304 turnings, dealer buying price, delivered to yard East Coast, US cents/lb	04 Jan 2022	66 - 68	0.00%	Dec 2021	66 - 68
MB-STS-0296	Stainless steel scrap 304 turnings, dealer buying price, delivered to yard East Coast, \$/gross ton	04 Jan 2022	1478 - 1523	0.00%	Dec 2021	1478 - 1523
MB-STS-0298	Stainless steel scrap 430 new clips, dealer buying price, delivered to yard East Coast, \$/gross ton	04 Jan 2022	493 - 560	-7.87%	Dec 2021	538 - 605
MB-STS-0288	Stainless steel scrap 430 new clips, dealer buying price, delivered to yard East Coast, US cents/lb	04 Jan 2022	22 - 25	-7.84%	Dec 2021	24 - 27
MB-STS-0294	Stainless steel scrap 316 solids, clips, dealer buying price, delivered to yard East Coast, \$/gross ton	04 Jan 2022	2262 - 2464	11.65%	Dec 2021	1971 - 2262
MB-STS-0284	Stainless steel scrap 316 solids, clips, dealer buying price, delivered to yard East Coast, US cents/lb	04 Jan 2022	101 - 110	11.64%	Dec 2021	88 - 101

Houston stainless steel scrap

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STS-0218	Stainless steel scrap 304 solids, clips, broker buying price, delivered to processor Houston, US cents/lb	11 Jan 2022	98 - 100	0.00%	Dec 2021	94.75 - 96.75
MB-STS-0096	Stainless steel scrap 304 solids, clips, broker buying price, delivered to processor Houston, \$/gross ton	11 Jan 2022	2195 - 2240	0.00%	Dec 2021	2122.5 - 2167.25
MB-STS-0215	Stainless steel scrap 304 solids, clips, dealer buying price, delivered to yard Houston, \$/gross ton	04 Jan 2022	1568 - 1680	3.57%	Dec 2021	1344 - 1792
MB-STS-0093	Stainless steel scrap 304 solids, clips, dealer buying price, delivered to yard Houston, US cents/lb	04 Jan 2022	70 - 75	3.57%	Dec 2021	60 - 80
MB-STS-0219	Stainless steel scrap 304 turnings, broker buying price, delivered to processor Houston, US cents/lb	11 Jan 2022	92 - 93	0.00%	Dec 2021	88.5 - 90.75
MB-STS-0097	Stainless steel scrap 304 turnings, broker buying price, delivered to processor Houston, \$/gross ton	11 Jan 2022	2061 - 2083	0.00%	Dec 2021	1982.5 - 2033
MB-STS-0216	Stainless steel scrap 304 turnings, dealer buying price, delivered to yard Houston, \$/gross ton	04 Jan 2022	1232 - 1456	-12.41%	Dec 2021	1389 - 1680
MB-STS-0094	Stainless steel scrap 304 turnings, dealer buying price, delivered to yard Houston, US cents/lb	04 Jan 2022	55 - 65	-12.41%	Dec 2021	62 - 75
MB-STS-0220	Stainless steel scrap 430 bundles, solids, broker buying price, delivered to processor Houston, US cents/lb	11 Jan 2022	36 - 37	-2.67%	Dec 2021	32.5 - 35
MB-STS-0098	Stainless steel scrap 430 bundles, solids, broker buying price, delivered to processor Houston, \$/gross ton	11 Jan 2022	806 - 829	-2.68%	Dec 2021	727.75 - 784.25
MB-STS-0221	Stainless steel scrap 409 bundles, solids, broker buying price, delivered to processor Houston, US cents/lb	11 Jan 2022	28 - 29	16.33%	Dec 2021	24.75 - 26.25
MB-STS-0099	Stainless steel scrap 409 bundles, solids, broker buying price, delivered to processor Houston, \$/gross ton	11 Jan 2022	627 - 650	16.30%	Dec 2021	554.25 - 588.25
MB-STS-0214	Stainless steel scrap 316 solids, clips, dealer buying price, delivered to yard Houston, \$/gross ton	04 Jan 2022	2397 - 2419	10.26%	Dec 2021	2016 - 2352
MB-STS-0092	Stainless steel scrap 316 solids, clips, dealer buying price, delivered to yard Houston, US cents/lb	04 Jan 2022	107 - 108	10.26%	Dec 2021	90 - 105
MB-STS-0217	Stainless steel scrap 316 solids, clips, broker buying price, delivered to processor Houston, US cents/lb	11 Jan 2022	134 - 137	0.74%	Dec 2021	132.25 - 136



Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STS-0095	Stainless steel scrap 316 solids, clips, broker buying price, delivered to processor Houston, \$/gross ton	11 Jan 2022	3002 - 3069	0.76%	Dec 2021	2962.5 - 3046.25

Los Angeles stainless steel scrap

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STS-0227	Stainless steel scrap 304 turnings, export yard buying price, delivered to yard Los Angeles, US cents/lb	11 Jan 2022	51.43 - 53.57	0.00%	Dec 2021	49.39 - 51.62
MB-STS-0105	Stainless steel scrap 304 turnings, export yard buying price, delivered to yard Los Angeles, \$/gross ton	11 Jan 2022	1152 - 1200	0.00%	Dec 2021	1106.25 - 1156.25
MB-STS-0226	Stainless steel scrap 304 solids, clips, export yard buying price, delivered to yard Los Angeles, US cents/lb	11 Jan 2022	71.43 - 72.55	0.00%	Dec 2021	69.48 - 70.59
MB-STS-0104	Stainless steel scrap 304 solids, clips, export yard buying price, delivered to yard Los Angeles, \$/gross ton	11 Jan 2022	1600 - 1625	0.00%	Dec 2021	1556.25 - 1581.25
MB-STS-0228	Stainless steel scrap 430 bundles, solids, export yard buying price, delivered to yard Los Angeles, US cents/lb	11 Jan 2022	16.52 - 17.41	0.00%	Dec 2021	15.41 - 16.3
MB-STS-0106	Stainless steel scrap 430 bundles, solids, export yard buying price, delivered to yard Los Angeles, \$/gross ton	11 Jan 2022	370 - 390	0.00%	Dec 2021	345 - 365

Montreal stainless steel scrap

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STS-0252	Stainless steel scrap 304 turnings, dealer buying price, delivered to yard Montreal, Canadian \$/gross ton	04 Jan 2022	2016 - 2038	7.08%	Dec 2021	1725 - 2061
MB-STS-0253	Stainless steel scrap 304 new clips, dealer buying price, delivered to yard Montreal, Canadian \$/gross ton	04 Jan 2022	2195 - 2218	-2.48%	Dec 2021	2173 - 2352
MB-STS-0131	Stainless steel scrap 304 new clips, dealer buying price, delivered to yard Montreal, Canadian cents/lb	04 Jan 2022	98 - 99	-2.48%	Dec 2021	97 - 105
MB-STS-0130	Stainless steel scrap 304 turnings, dealer buying price, delivered to yard Montreal, Canadian cents/lb	04 Jan 2022	90 - 91	7.10%	Dec 2021	77 - 92
MB-STS-0129	Stainless steel scrap 304 solids, clips, dealer buying price, delivered to yard Montreal, Canadian cents/lb	04 Jan 2022	98 - 99	-2.48%	Dec 2021	97 - 105
MB-STS-0251	Stainless steel scrap 304 solids, clips, dealer buying price, delivered to yard Montreal, Canadian \$/gross ton	04 Jan 2022	2195 - 2218	-2.48%	Dec 2021	2173 - 2352
MB-STS-0128	Stainless steel scrap 316 solids, clips, dealer buying price, delivered to yard Montreal, Canadian cents/lb	04 Jan 2022	133 - 134	-4.98%	Dec 2021	135 - 146
MB-STS-0250	Stainless steel scrap 316 solids, clips, dealer buying price, delivered to yard Montreal, Canadian \$/gross ton	04 Jan 2022	2979 - 3002	-4.97%	Dec 2021	3024 - 3270

New York stainless steel scrap

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STS-0236	Stainless steel scrap 304 turnings, broker buying price, delivered to processor New York, US cents/lb	11 Jan 2022	91 - 95	-0.53%	Dec 2021	88 - 92.25
MB-STS-0114	Stainless steel scrap 304 turnings, broker buying price, delivered to processor New York, \$/gross ton	11 Jan 2022	2038 - 2128	-0.55%	Dec 2021	1971 - 2066.25
MB-STS-0116	Stainless steel scrap 304 turnings, export yard buying price, delivered to yard New York, \$/gross ton	11 Jan 2022	1904 - 1938	0.00%	Dec 2021	1904 - 1938



Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STS-0238	Stainless steel scrap 304 turnings, export yard buying price, delivered to yard New York, US cents/lb	11 Jan 2022	85 - 86.5	0.00%	Dec 2021	85 - 86.5
MB-STS-0235	Stainless steel scrap 304 solids, clips, broker buying price, delivered to processor New York, US cents/lb	11 Jan 2022	100 - 102	2.02%	Dec 2021	95.5 - 98.5
MB-STS-0113	Stainless steel scrap 304 solids, clips, broker buying price, delivered to processor New York, \$/gross ton	11 Jan 2022	2240 - 2285	2.03%	Dec 2021	2139.25 - 2206.5
MB-STS-0237	Stainless steel scrap 304 solids, clips, export yard buying price, delivered to yard New York, US cents/lb	11 Jan 2022	94 - 95	-0.26%	Dec 2021	93.5 - 95.13
MB-STS-0115	Stainless steel scrap 304 solids, clips, export yard buying price, delivered to yard New York, \$/gross ton	11 Jan 2022	2106 - 2128	-0.26%	Dec 2021	2094.5 - 2131
MB-STS-0239	Stainless steel scrap 430 bundles, solids, export yard buying price, delivered to yard New York, US cents/lb	11 Jan 2022	32 - 33	0.00%	Dec 2021	32 - 33
MB-STS-0117	Stainless steel scrap 430 bundles, solids, export yard buying price, delivered to yard New York, \$/gross ton	11 Jan 2022	717 - 739	0.00%	Dec 2021	717 - 739
MB-STS-0234	Stainless steel scrap 316 solids, clips, broker buying price, delivered to processor New York, US cents/lb	11 Jan 2022	138 - 140	6.51%	Dec 2021	125.5 - 133.5
MB-STS-0112	Stainless steel scrap 316 solids, clips, broker buying price, delivered to processor New York, \$/gross ton	11 Jan 2022	3091 - 3136	6.52%	Dec 2021	2811.25 - 2990.25

Philadelphia stainless steel scrap

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STS-0241	Stainless steel scrap 304 turnings, export yard buying price, delivered to yard Philadelphia, US cents/lb	11 Jan 2022	85 - 86.5	0.00%	Dec 2021	85 - 86.5
MB-STS-0119	Stainless steel scrap 304 turnings, export yard buying price, delivered to yard Philadelphia, \$/gross ton	11 Jan 2022	1904 - 1938	0.00%	Dec 2021	1904 - 1938
MB-STS-0240	Stainless steel scrap 304 solids, clips, export yard buying price, delivered to yard Philadelphia, US cents/lb	11 Jan 2022	94 - 95	-0.26%	Dec 2021	93.5 - 95.13
MB-STS-0118	Stainless steel scrap 304 solids, clips, export yard buying price, delivered to yard Philadelphia, \$/gross ton	11 Jan 2022	2106 - 2128	-0.26%	Dec 2021	2094.5 - 2131
MB-STS-0242	Stainless steel scrap 430 bundles, solids, export yard buying price, delivered to yard Philadelphia, US cents/lb	11 Jan 2022	32 - 33	0.00%	Dec 2021	32 - 33
MB-STS-0120	Stainless steel scrap 430 bundles, solids, export yard buying price, delivered to yard Philadelphia, \$/gross ton	11 Jan 2022	717 - 739	0.00%	Dec 2021	717 - 739

Pittsburgh stainless steel scrap

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STS-0042	Stainless steel scrap 304 turnings, dealer buying price, delivered to yard Pittsburgh, US cents/lb	04 Jan 2022	55 - 67	8.93%	Dec 2021	50 - 62
MB-STS-0164	Stainless steel scrap 304 turnings, dealer buying price, delivered to yard Pittsburgh, \$/gross ton	04 Jan 2022	1232 - 1501	8.93%	Dec 2021	1120 - 1389
MB-STS-0169	Stainless steel scrap 304 turnings, broker buying price, delivered to processor Pittsburgh, US cents/lb	11 Jan 2022	93 - 96	2.16%	Dec 2021	89 - 93.25
MB-STS-0047	Stainless steel scrap 304 turnings, broker buying price, delivered to processor Pittsburgh, \$/gross ton	11 Jan 2022	2083 - 2150	2.15%	Dec 2021	1993.5 - 2088.75
MB-STS-0256	Stainless steel scrap 304 turnings, consumer buying price, delivered mill Pittsburgh, US cents/lb	10 Jan 2022	86.4 - 87.3	-0.61%	Dec 2021	87 - 87.75
MB-STS-0134	Stainless steel scrap 304 turnings, consumer buying price, delivered mill Pittsburgh, \$/gross ton	10 Jan 2022	1935 - 1956	-0.61%	Dec 2021	1949 - 1966



Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STS-0168	Stainless steel scrap 304 solids, clips, broker buying price, delivered to processor Pittsburgh, US cents/lb	11 Jan 2022	98 - 102	1.01%	Dec 2021	94.75 - 98.5
MB-STS-0255	Stainless steel scrap 304 solids, clips, consumer buying price, delivered mill Pittsburgh, US cents/lb	10 Jan 2022	95 - 97	-0.78%	Dec 2021	96 - 97.5
MB-STS-0163	Stainless steel scrap 304 solids, clips, dealer buying price, delivered to yard Pittsburgh, \$/gross ton	04 Jan 2022	1344 - 1680	17.39%	Dec 2021	1008 - 1568
MB-STS-0041	Stainless steel scrap 304 solids, clips, dealer buying price, delivered to yard Pittsburgh, US cents/lb	04 Jan 2022	60 - 75	17.39%	Dec 2021	45 - 70
MB-STS-0046	Stainless steel scrap 304 solids, clips, broker buying price, delivered to processor Pittsburgh, \$/gross ton	11 Jan 2022	2195 - 2285	1.01%	Dec 2021	2122.75 - 2206.5
MB-STS-0133	Stainless steel scrap 304 solids, clips, consumer buying price, delivered mill Pittsburgh, \$/gross ton	10 Jan 2022	2128 - 2173	-0.76%	Dec 2021	2150 - 2184
MB-STS-0165	Stainless steel scrap 304 new clips, dealer buying price, delivered to yard Pittsburgh, \$/gross ton	04 Jan 2022	1344 - 1680	17.39%	Dec 2021	1008 - 1568
MB-STS-0043	Stainless steel scrap 304 new clips, dealer buying price, delivered to yard Pittsburgh, US cents/lb	04 Jan 2022	60 - 75	17.39%	Dec 2021	45 - 70
MB-STS-0171	Stainless steel scrap 430 turnings, broker buying price, delivered to processor Pittsburgh, US cents/lb	11 Jan 2022	26 - 34	-6.25%	Dec 2021	29.5 - 33
MB-STS-0049	Stainless steel scrap 430 turnings, broker buying price, delivered to processor Pittsburgh, \$/gross ton	11 Jan 2022	582 - 762	-6.21%	Dec 2021	660.75 - 739.5
MB-STS-0257	Stainless steel scrap 430 bundles, solids, consumer buying price, delivered mill Pittsburgh, US cents/lb	10 Jan 2022	31.71 - 33.26	-4.89%	Dec 2021	33.71 - 34.6
MB-STS-0170	Stainless steel scrap 430 bundles, solids, broker buying price, delivered to processor Pittsburgh, US cents/lb	11 Jan 2022	34 - 39	0.00%	Dec 2021	35 - 37.75
MB-STS-0048	Stainless steel scrap 430 bundles, solids, broker buying price, delivered to processor Pittsburgh, \$/gross ton	11 Jan 2022	762 - 874	0.06%	Dec 2021	784 - 845.75
MB-STS-0135	Stainless steel scrap 430 bundles, solids, consumer buying price, delivered mill Pittsburgh, \$/gross ton	10 Jan 2022	710 - 745	-4.90%	Dec 2021	755 - 775
MB-STS-0166	Stainless steel scrap 430 new clips, dealer buying price, delivered to yard Pittsburgh, \$/gross ton	04 Jan 2022	336 - 560	-2.40%	Dec 2021	336 - 582
MB-STS-0044	Stainless steel scrap 430 new clips, dealer buying price, delivered to yard Pittsburgh, US cents/lb	04 Jan 2022	15 - 25	-2.44%	Dec 2021	15 - 26
MB-STS-0172	Stainless steel scrap 409 bundles, solids, broker buying price, delivered to processor Pittsburgh, US cents/lb	11 Jan 2022	29 - 34	-1.56%	Dec 2021	30.75 - 33.25
MB-STS-0258	Stainless steel scrap 409 bundles, solids, consumer buying price, delivered mill Pittsburgh, US cents/lb	10 Jan 2022	27.24 - 28.13	-5.66%	Dec 2021	29.24 - 29.46
MB-STS-0136	Stainless steel scrap 409 bundles, solids, consumer buying price, delivered mill Pittsburgh, \$/gross ton	10 Jan 2022	610 - 630	-5.70%	Dec 2021	655 - 660
MB-STS-0173	Stainless steel scrap 409 turnings, broker buying price, delivered to processor Pittsburgh, US cents/lb	11 Jan 2022	26 - 31	5.56%	Dec 2021	25.25 - 28.25
MB-STS-0050	Stainless steel scrap 409 bundles, broker buying price, delivered to processor Pittsburgh, \$/gross ton	11 Jan 2022	650 - 762	-1.47%	Dec 2021	688.75 - 744.75
MB-STS-0051	Stainless steel scrap 409 turnings, broker buying price, delivered to processor Pittsburgh, \$/gross ton	11 Jan 2022	582 - 694	5.54%	Dec 2021	565.5 - 632.75
MB-STS-0167	Stainless steel scrap 316 solids, clips, broker buying price, delivered to processor Pittsburgh, US cents/lb	11 Jan 2022	135 - 138	3.41%	Dec 2021	127.5 - 134
MB-STS-0254	Stainless steel scrap 316 solids, clips, consumer buying price, delivered mill Pittsburgh, US cents/lb	10 Jan 2022	137.5 - 138	-0.36%	Dec 2021	138 - 138.5
MB-STS-0162	Stainless steel scrap 316 solids, clips, dealer buying price, delivered to yard Pittsburgh, \$/gross ton	04 Jan 2022	1792 - 2464	13.10%	Dec 2021	1680 - 2083



Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STS-0040	Stainless steel scrap 316 solids, clips, dealer buying price, delivered to yard Pittsburgh, US cents/lb	04 Jan 2022	80 - 110	13.10%	Dec 2021	75 - 93
MB-STS-0132	Stainless steel scrap 316 solids, clips, consumer buying price, delivered mill Pittsburgh, \$/gross ton	10 Jan 2022	3080 - 3091	-0.36%	Dec 2021	3091 - 3102
MB-STS-0045	Stainless steel scrap 316 solids, broker buying price, delivered to processor Pittsburgh, \$/gross ton	11 Jan 2022	3024 - 3091	3.42%	Dec 2021	2856 - 3001.5

San Francisco stainless steel scrap

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STS-0248	Stainless steel scrap 304 turnings, export yard buying price, delivered to yard San Francisco, US cents/lb	11 Jan 2022	51.34 - 53.57	0.00%	Dec 2021	49.39 - 51.62
MB-STS-0126	Stainless steel scrap 304 turnings, export yard buying price, delivered to yard San Francisco, \$/gross ton	11 Jan 2022	1150 - 1200	0.00%	Dec 2021	1106.25 - 1156.25
MB-STS-0247	Stainless steel scrap 304 solids, clips, export yard buying price, delivered to yard San Francisco, US cents/lb	11 Jan 2022	71.43 - 72.55	0.00%	Dec 2021	69.48 - 70.59
MB-STS-0125	Stainless steel scrap 304 solids, clips, export yard buying price, delivered to yard San Francisco, \$/gross ton	11 Jan 2022	1600 - 1625	0.00%	Dec 2021	1556.25 - 1581.25
MB-STS-0249	Stainless steel scrap 430 bundles, solids, export yard buying price, delivered to yard San Francisco, US cents/lb	11 Jan 2022	16.52 - 17.41	0.00%	Dec 2021	15.41 - 16.3
MB-STS-0127	Stainless steel scrap 430 bundles, solids, export yard buying price, delivered to yard San Francisco, \$/gross ton	11 Jan 2022	370 - 390	0.00%	Dec 2021	345 - 365

Southeast US stainless steel scrap

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STS-0151	Stainless steel scrap 304 turnings, broker buying price, delivered to processor Southeast US, US cents/lb	11 Jan 2022	93 - 96	2.16%	Dec 2021	90.25 - 93.25
MB-STS-0139	Stainless steel scrap 304 turnings, broker buying price, delivered to processor Southeast US, \$/gross ton	11 Jan 2022	2083 - 2150	2.15%	Dec 2021	2021.5 - 2088.75
MB-STS-0147	Stainless steel scrap 304 turnings, dealer buying price, delivered to yard Southeast US, US cents/lb	04 Jan 2022	38 - 75	13.00%	Dec 2021	38 - 62
MB-STS-0159	Stainless steel scrap 304 turnings, dealer buying price, delivered to yard Southeast US, \$/gross ton	04 Jan 2022	851 - 1680	12.99%	Dec 2021	851 - 1389
MB-STS-0138	Stainless steel scrap 304 solids, clips, broker buying price, delivered to processor Southeast US, \$/gross ton	11 Jan 2022	2240 - 2285	2.03%	Dec 2021	2139.25 - 2206.5
MB-STS-0150	Stainless steel scrap 304 solids, clips, broker buying price, delivered to processor Southeast US, US cents/lb	11 Jan 2022	100 - 102	2.02%	Dec 2021	95.5 - 98.5
MB-STS-0158	Stainless steel scrap 304 solids, clips, dealer buying price, delivered to yard Southeast US, \$/gross ton	04 Jan 2022	1120 - 1904	13.43%	Dec 2021	1120 - 1546
MB-STS-0146	Stainless steel scrap 304 solids, clips, dealer buying price, delivered to yard Southeast US, US cents/lb	04 Jan 2022	50 - 85	13.45%	Dec 2021	50 - 69
MB-STS-0145	Stainless steel scrap 304 new clips, dealer buying price, delivered to yard Southeast US, US cents/lb	04 Jan 2022	50 - 85	13.45%	Dec 2021	50 - 69
MB-STS-0157	Stainless steel scrap 304 new clips, dealer buying price, delivered to yard Southeast US, \$/gross ton	04 Jan 2022	1120 - 1904	13.43%	Dec 2021	1120 - 1546
MB-STS-0161	Stainless steel scrap 430 new clips, dealer buying price, delivered to yard Southeast US, \$/gross ton	04 Jan 2022	403 - 560	-2.23%	Dec 2021	403 - 582
MB-STS-0155	Stainless steel scrap 430 bundles, solids, broker buying price, delivered to processor Southeast US, US cents/lb	11 Jan 2022	33 - 39	0.00%	Dec 2021	35.75 - 37.75



Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STS-0143	Stainless steel scrap 430 bundles, solids, broker buying price, delivered to processor Southeast US, \$/gross ton	11 Jan 2022	739 - 874	0.00%	Dec 2021	800.5 - 845.75
MB-STS-0144	Stainless steel scrap 430 turnings, broker buying price, delivered to processor Southeast US, \$/gross ton	11 Jan 2022	694 - 762	12.09%	Dec 2021	694 - 739.5
MB-STS-0156	Stainless steel scrap 430 turnings, broker buying price, delivered to processor Southeast US, US cents/lb	11 Jan 2022	31 - 34	12.07%	Dec 2021	31 - 33
MB-STS-0149	Stainless steel scrap 430 new clips, dealer buying price, delivered to yard Southeast US, US cents/lb	04 Jan 2022	18 - 25	-2.27%	Dec 2021	18 - 26
MB-STS-0154	Stainless steel scrap 409 turnings, broker buying price, delivered to processor Southeast US, US cents/lb	11 Jan 2022	27 - 31	7.41%	Dec 2021	26.25 - 28.25
MB-STS-0142	Stainless steel scrap 409 turnings, broker buying price, delivered to processor Southeast US, \$/gross ton	11 Jan 2022	605 - 694	7.44%	Dec 2021	587.75 - 632.75
MB-STS-0141	Stainless steel scrap 409 bundles, solids, broker buying price, delivered to processor Southeast US, \$/gross ton	11 Jan 2022	717 - 762	4.82%	Dec 2021	705.5 - 744.75
MB-STS-0153	Stainless steel scrap 409 bundles, solids, broker buying price, delivered to processor Southeast US, US cents/lb	11 Jan 2022	32 - 34	4.76%	Dec 2021	31.5 - 33.25
MB-STS-0160	Stainless steel scrap 316 solids, clips, dealer buying price, delivered to yard Southeast US, \$/gross ton	04 Jan 2022	1837 - 2464	8.47%	Dec 2021	1837 - 2128
MB-STS-0148	Stainless steel scrap 316 solids, clips, dealer buying price, delivered to yard Southeast US, US cents/lb	04 Jan 2022	82 - 110	8.47%	Dec 2021	82 - 95
MB-STS-0152	Stainless steel scrap 316 solids, clips, broker buying price, delivered to processor Southeast US, US cents/lb	11 Jan 2022	135 - 138	2.63%	Dec 2021	127.5 - 134
MB-STS-0140	Stainless steel scrap 316 solids, clips, broker buying price, delivered to processor Southeast US, \$/gross ton	11 Jan 2022	3024 - 3091	2.64%	Dec 2021	2856 - 3001.5

West Coast stainless steel scrap

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STS-0301	Stainless steel scrap 304 turnings, dealer buying price, delivered to yard West Coast, \$/gross ton	04 Jan 2022	762 - 806	2.95%	Dec 2021	739 - 784
MB-STS-0291	Stainless steel scrap 304 turnings, dealer buying price, delivered to yard West Coast, US cents/lb	04 Jan 2022	34 - 36	2.94%	Dec 2021	33 - 35
MB-STS-0302	Stainless steel scrap 304 new clips, dealer buying price, delivered to yard West Coast, \$/gross ton	04 Jan 2022	1142 - 1187	2.92%	Dec 2021	1098 - 1165
MB-STS-0292	Stainless steel scrap 304 new clips, dealer buying price, delivered to yard West Coast, US cents/lb	04 Jan 2022	51 - 53	2.97%	Dec 2021	49 - 52
MB-STS-0300	Stainless steel scrap 304 solids, clips, dealer buying price, delivered to yard West Coast, \$/gross ton	04 Jan 2022	1142 - 1187	2.92%	Dec 2021	1098 - 1165
MB-STS-0290	Stainless steel scrap 304 solids, clips, dealer buying price, delivered to yard West Coast, US cents/lb	04 Jan 2022	51 - 53	2.97%	Dec 2021	49 - 52
MB-STS-0299	Stainless steel scrap 316 solids, clips, dealer buying price, delivered to yard West Coast, \$/gross ton	04 Jan 2022	1434 - 1478	0.00%	Dec 2021	1434 - 1478
MB-STS-0289	Stainless steel scrap 316 solids, clips, dealer buying price, delivered to yard West Coast, US cents/lb	04 Jan 2022	64 - 66	0.00%	Dec 2021	64 - 66

Europe domestic

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0431	Steel scrap 12 D new production clean shovellable steel domestic, delivered consumer UK, £/tonne	13 Jan 2022	290 - 305	-1.65%	Dec 2021	295 - 310



Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0432	Steel scrap 12 A/C new production heavy steel domestic, delivered consumer UK, £/tonne	13 Jan 2022	285 - 300	-1.68%	Dec 2021	290 - 305
MB-STE-0430	Steel scrap 7B heavy steel turnings inter-merchant, delivered to export dock UK, £/tonne	13 Jan 2022	205 - 220	-2.30%	Dec 2021	210 - 225
MB-STE-0081	Steel scrap 4C new steel bales domestic, delivered consumer UK, £/tonne	13 Jan 2022	280 - 295	-1.71%	Dec 2021	285 - 300
MB-STE-0087	Steel scrap OA plate and structural domestic, delivered consumer UK, £/tonne	13 Jan 2022	245 - 260	-1.94%	Dec 2021	250 - 265
MB-STE-0080	Steel scrap 4A new steel bales domestic, delivered consumer UK, £/tonne	13 Jan 2022	290 - 305	-1.65%	Dec 2021	295 - 310
MB-STE-0084	Steel scrap 8B new loose light cuttings domestic, delivered consumer UK, £/tonne	13 Jan 2022	265 - 280	-1.80%	Dec 2021	270 - 285
MB-STE-0085	Steel scrap 9A/10 heavy and light cast iron domestic, delivered consumer UK, £/tonne	13 Jan 2022	235 - 250	-2.02%	Dec 2021	240 - 255
MB-STE-0078	Steel scrap 11A cast iron borings (low P) domestic, delivered consumer UK, £/tonne	13 Jan 2022	195 - 205	-2.44%	Dec 2021	200 - 210
MB-STE-0086	Steel scrap 9B/C cylinder block scrap domestic, delivered consumer UK, £/tonne	13 Jan 2022	255 - 270	-1.87%	Dec 2021	260 - 275
MB-STE-0083	Steel scrap 8A new loose light cuttings domestic, delivered consumer UK, £/tonne	13 Jan 2022	280 - 295	-1.71%	Dec 2021	285 - 300
MB-STE-0077	Steel scrap 1&2 old steel domestic, delivered consumer UK, £/tonne	13 Jan 2022	225 - 240	-2.11%	Dec 2021	230 - 245
MB-STS-0012	Steel scrap 5C loose old light domestic, delivered inter-merchant UK, £/tonne	14 Jan 2022	180 - 195	0.00%	Dec 2021	185 - 200
MB-STE-0167	Steel scrap No E3 (old thick scrap) domestic, delivered mill Italy, €/tonne	14 Dec 2021	420 - 430	6.25%	Dec 2021	420 - 430
MB-STE-0169	Steel scrap No E3 (old thick steel scrap) domestic, delivered mill Germany, €/tonne	17 Dec 2021	420 - 430	1.19%	Dec 2021	420 - 430
MB-STE-0093	Steel scrap auto bundle scrap domestic, delivered Turkey, lira/tonne	10 Jan 2022	6050 - 6875	7.57%	Dec 2021	5722.5 - 6716.25
MB-STE-0415	Steel scrap E8 thin new production steel domestic, delivered consumer Germany, €/tonne	17 Dec 2021	490 - 500	1.54%	Dec 2021	490 - 500
MB-STE-0168	Steel scrap No E8 (thin new production steel scrap) domestic, delivered mill Italy, €/tonne	14 Dec 2021	490 - 510	6.38%	Dec 2021	490 - 510
MB-STE-0414	Steel scrap E40 shredded domestic, delivered consumer Germany, €/tonne	17 Dec 2021	430 - 440	0.58%	Dec 2021	430 - 440
MB-STE-0849	Steel scrap E40 shredded, delivered to mill Italy, €/tonne	14 Dec 2021	475 - 490	6.04%	Dec 2021	475 - 490

Europe export

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0095	Steel scrap shredded import, cfr delivered Turkish port, \$/tonne	14 Jan 2022	473 - 485	-0.52%	Dec 2021	479.4 - 488.8
MB-STE-0096	Steel scrap HMS 1&2 (75:25 mix) import, cfr delivered Turkish port, \$/tonne	14 Jan 2022	448 - 450	-0.88%	Dec 2021	454.2 - 456.8
MB-STE-0097	Steel scrap HMS 1&2 (75:25 mix) export, fob Rotterdam, \$/tonne	14 Jan 2022	418 - 420	0.96%	Dec 2021	416.2 - 418.8
MB-STE-0098	Steel scrap shredded export, fob Rotterdam, \$/tonne	14 Jan 2022	443 - 445	0.57%	Dec 2021	440.4 - 442.4
MB-STE-0099	Steel scrap shredded export, fob main port UK, \$/tonne	14 Jan 2022	450 - 452	2.04%	Dec 2021	449.2 - 451.6
MB-STE-0100	Steel scrap HMS 1&2 (80:20 mix) export, fob main port UK, \$/tonne	14 Jan 2022	430 - 432	2.13%	Dec 2021	429.2 - 431.6
MB-STE-0416	Steel scrap HMS 1&2 (80:20 mix) North Europe origin, cfr Turkey, \$/tonne	14 Jan 2022	457.87	0.00%	Dec 2021	464.6
MB-STE-0894	Steel scrap, HMS 1&2 (80:20 mix), month-to-date deal-weighted average, North Europe origin, cfr Turkey, \$/tonne	14 Jan 2022	459.58	0.00%	Dec 2021	469.67
MB-STE-0417	Steel scrap HMS 1&2 (80:20 mix) US origin, cfr Turkey, \$/tonne	14 Jan 2022	466.16	0.00%	Dec 2021	472.57
MB-STE-0420	Steel scrap HMS 1&2 (80:20 mix), fob Rotterdam, \$/tonne	14 Jan 2022	430.61	3.59%	Dec 2021	427.45

**European stainless steel scrap**

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STS-0008	Stainless steel scrap 18/8 solids import, cif main European port, €/tonne	14 Jan 2022	1940 - 1990	4.80%	Dec 2021	1846 - 1870
MB-STS-0011	Stainless steel scrap 18/8 turnings domestic, delivered merchants UK, £/tonne	14 Jan 2022	1350 - 1425	2.97%	Dec 2021	1294 - 1356
MB-STS-0010	Stainless steel scrap 18/8 solids domestic, delivered merchants UK, £/tonne	14 Jan 2022	1550 - 1640	2.90%	Dec 2021	1488 - 1560
MB-STS-0009	Stainless steel scrap 18/8 turnings import, cif main European port, €/tonne	14 Jan 2022	1745 - 1790	4.74%	Dec 2021	1681 - 1694
MB-STS-0013	Stainless steel scrap 12-13% Cr solids domestic, delivered merchants UK, £/tonne	14 Jan 2022	350 - 370	0.00%	Dec 2021	350 - 370
MB-STS-0014	Stainless steel scrap 16-17% Cr solids domestic, delivered merchants UK, £/tonne	14 Jan 2022	390 - 410	0.00%	Dec 2021	390 - 410
MB-STS-0261	Stainless steel scrap 316 solids import, cif main port Europe, €/tonne	14 Jan 2022	2720 - 2740	1.87%	Dec 2021	2634 - 2646
MB-STS-0262	Stainless steel scrap 316 turnings import, cif main port Europe, €/tonne	14 Jan 2022	2450 - 2465	1.87%	Dec 2021	2371 - 2382
MB-STS-0260	Stainless steel scrap 316 turnings domestic, delivered merchants UK, £/tonne	14 Jan 2022	1960 - 2020	2.05%	Dec 2021	1812 - 1897
MB-STS-0259	Stainless steel scrap 316 solids domestic, delivered merchants UK, £/tonne	14 Jan 2022	2250 - 2320	2.01%	Dec 2021	2084 - 2180

Asia domestic and export

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0149	Steel scrap heavy scrap domestic, delivered mill China, yuan/tonne	14 Jan 2022	3570 - 3720	0.00%	Dec 2021	3370 - 3476
MB-STE-0889	Steel scrap, index, heavy recycled steel materials, cfr east China, \$/tonne	14 Jan 2022	517.86	1.23%	Dec 2021	475.18
MB-STE-0895	Steel scrap, index, heavy recycled steel materials, cfr north China, \$/tonne	14 Jan 2022	527.86	1.21%	Dec 2021	485.18
MB-STE-0464	Steel scrap HMS 1&2 (80:20 mix) US material import, cfr main port Taiwan, \$/tonne	14 Jan 2022	438 - 440	0.00%	Dec 2021	446.83 - 449.43
MB-STE-0874	Steel scrap H2 export, fob main port Japan, ¥/tonne	12 Jan 2022	49000 - 51500	4.69%	Dec 2021	47700 - 49100
MB-STE-0875	Steel scrap shredded export, fob main port Japan, ¥/tonne	12 Jan 2022	53000 - 53500	1.91%	Dec 2021	52400 - 54000
MB-STE-0876	Steel scrap Shindachi bara export, fob main port Japan, ¥/tonne	12 Jan 2022	55000 - 58000	0.89%	Dec 2021	58000 - 59300
MB-STE-0877	Steel scrap heavy scrap (HS) export, fob main port Japan, ¥/tonne	12 Jan 2022	55500 - 56000	1.36%	Dec 2021	56100 - 58100
MB-STE-0878	Steel scrap H2 Japan-origin import, cfr Vietnam, \$/tonne	14 Jan 2022	495 - 505	2.56%	Dec 2021	488 - 490
MB-STE-0783	Steel scrap HMS 1&2 (80:20), cfr Vietnam, \$/tonne	14 Jan 2022	530	6.00%	Dec 2021	515 - 518
MB-STE-0879	Steel scrap H2 Japan origin import, cfr main port South Korea, ¥/tonne	14 Jan 2022	52500 - 55000	0.00%	Dec 2021	50600 - 51900
MB-STE-0880	Steel scrap HMS 1&2 (80:20) deep-sea origin import, cfr South Korea, \$/tonne	14 Jan 2022	525	6.06%	Dec 2021	500 - 506
MB-STE-0421	Steel scrap shredded, index, import, cfr Nhava Sheva, India \$/tonne	14 Jan 2022	534.17	0.47%	Dec 2021	529.46
MB-STE-0413	Steel scrap HMS 1&2 (80:20 mix) import, cfr Nhava Sheva, India, \$/tonne	14 Jan 2022	465 - 480	4.42%	Dec 2021	444 - 458
MB-STE-0881	Steel scrap HMS 1&2 (80:20) deep-sea origin import, cfr Bangladesh, \$/tonne	13 Jan 2022	520 - 530	0.48%	Dec 2021	526 - 541
MB-STE-0884	Steel scrap HMS 1&2 (80:20) containerized import, cfr Bangladesh, \$/tonne	13 Jan 2022	515 - 522	-0.29%	Dec 2021	518 - 532.8
MB-STE-0885	Steel scrap shredded containerized import, cfr Bangladesh, \$/tonne	13 Jan 2022	565 - 570	2.25%	Dec 2021	555 - 560
MB-STE-0886	Steel scrap shredded deep-sea origin import, cfr Bangladesh, \$/tonne	13 Jan 2022	530 - 550	0.93%	Dec 2021	541 - 555



Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0887	Steel scrap shredded, index, import, cfr Port Qasim, Pakistan \$/tonne	14 Jan 2022	545.26	0.14%	Dec 2021	543.98



Steel raw materials prices

Source: dashboard.fastmarkets.com/m/2741a719-e91d-4e5e-b9b9-29225e060f7c

Iron ore prices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-IRO-0008	Iron ore 62% Fe fines, cfr Qingdao, \$/tonne	14 Jan 2022	128.01	-1.43%	Dec 2021	115.25
MB-IRO-0009	Iron ore 65% Fe Brazil-origin fines, cfr Qingdao, \$/tonne	14 Jan 2022	156.6	-0.76%	Dec 2021	132.02
MB-IRO-0010	Iron ore 63% Fe Australia-origin lump ore premium, cfr Qingdao, US cents/dmtu	14 Jan 2022	29	-3.33%	Dec 2021	15.17
MB-IRO-0011	Iron ore 62% Fe fines, fot Qingdao, yuan/wet tonne	14 Jan 2022	847	-1.74%	Dec 2021	758.57
MB-IRO-0012	Iron ore 65% Fe blast furnace pellet, cfr Qingdao, \$/tonne	14 Jan 2022	210.44	3.36%	Dec 2021	185.02
MB-IRO-0013	Iron ore 66% Fe concentrate, cfr Qingdao, \$/tonne	14 Jan 2022	163.12	4.72%	Dec 2021	138.88
MB-IRO-0015	Iron ore 58% Fe fines, cfr Qingdao, \$/tonne	14 Jan 2022	76.33	-1.24%	Dec 2021	69.6
MB-IRO-0016	Iron ore 58% Fe fines high-grade premium, cfr Qingdao, \$/tonne	14 Jan 2022	24.5	-3.92%	Dec 2021	18.54
MB-IRO-0017	Iron ore 58% Fe fines high-grade premium index, cfr Qingdao, \$/tonne	14 Jan 2022	100.83	-1.91%	Dec 2021	88.14
MB-IRO-0018	Iron ore 62% Fe fines, % Fe VIU, cfr Qingdao, \$/tonne	14 Jan 2022	2.14	0.00%	Dec 2021	2.11
MB-IRO-0019	Iron ore 65% Fe fines, % Fe VIU, cfr Qingdao \$/tonne	14 Jan 2022	2.81	0.00%	Dec 2021	2.29
MB-IRO-0020	Iron ore 62% Fe fines, % Si VIU, cfr Qingdao, \$/tonne	14 Jan 2022	(5.69)		Dec 2021	(4.94)
MB-IRO-0021	Iron ore 62% Fe fines, % Al2O3 VIU, cfr Qingdao, \$/tonne	14 Jan 2022	(6.21)		Dec 2021	(6.33)
MB-IRO-0022	Iron ore 62% Fe fines, fot Qingdao, \$/tonne conversion	14 Jan 2022	123	-1.85%	Dec 2021	109.62
MB-IRO-0024	Iron ore 62% Fe fines, 0.01% P VIU, cfr Qingdao, \$/tonne	14 Jan 2022	(0.83)		Dec 2021	(0.82)
MB-IRO-0076	Iron ore product differential - 62% Fe Pilbara Blend Fines, cfr Qingdao, \$/tonne	31 Dec 2021	(0.75)		Dec 2021	(1.2)
MB-IRO-0077	Iron ore DR-grade pellet premium to 65% Fe fines index, Middle East reference, \$/tonne	31 Dec 2021	50	0.00%	Dec 2021	50
MB-IRO-0114	Iron ore 62% Fe Pilbara blend fines, cfr Qingdao, \$/tonne	31 Dec 2021	120	0.77%	Dec 2021	94.12
MB-IRO-0144	Iron ore 62% Fe low-alumina fines, cfr Qingdao, \$/tonne	14 Jan 2022	130.51	-2.09%	Dec 2021	115.83
MB-IRO-0177	Iron ore pellet premium over 65% Fe fines, cfr China, \$/tonne	14 Jan 2022	54.8	0.00%	Dec 2021	52.2

Coking coal, coke & PCI prices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-COA-0001	Hard coking coal domestic China spot market, Shanxi-origin, delivered Tangshan, yuan/tonne	10 Jan 2022	2475 - 2920	8.44%	Dec 2021	2175 - 2692
MB-COA-0002	Hard coking coal, cfr Jingtang, \$/dmt	14 Jan 2022	353.6	1.82%	Dec 2021	325.14
MB-COA-0003	Premium hard coking coal, fob DBCT, \$/dmt	14 Jan 2022	413.68	2.82%	Dec 2021	340.4
MB-COA-0004	Hard coking coal, fob DBCT, \$/dmt	14 Jan 2022	350.16	0.03%	Dec 2021	287.44
MB-COA-0005	Premium hard coking coal, cfr Jingtang, \$/dmt	14 Jan 2022	391.02	2.87%	Dec 2021	355.52
MB-COA-0006	Coke 65% CSR, fob China, \$/tonne	11 Jan 2022	565 - 590	6.45%	Dec 2021	497.5 - 526.25
MB-COA-0007	PCI low-vol, cfr Jingtang, \$/dmt	14 Jan 2022	282.56	20.48%	Dec 2021	218.74
MB-COA-0008	PCI low-vol, fob DBCT, \$/dmt	14 Jan 2022	250.09	2.04%	Dec 2021	235.28

**Pig iron, DRI & HBI prices**

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-FE-0002	Hot-briquetted iron export, fob main port Venezuela, \$/tonne	14 Jan 2022	350 - 360	-6.58%	Dec 2021	370 - 390
MB-FE-0003	Hot-briquetted iron, fob New Orleans, \$/tonne	10 Jan 2022	490 - 520	0.00%	Dec 2021	490 - 520
MB-FE-0004	Hot-briquetted iron, cfr Italian ports, \$/tonne	13 Jan 2022	490 - 495	0.00%	Dec 2021	490 - 495
MB-FEN-0001	Nickel pig iron, high-grade NPI content 10-15%, contract, ddp China, yuan/nickel unit price	14 Jan 2022	1360 - 1380	5.79%	Dec 2021	1344 - 1376
MB-FEN-0002	Nickel pig iron, high-grade NPI content 10-15%, spot, ddp China, yuan/nickel unit price	14 Jan 2022	1360 - 1390	4.96%	Dec 2021	1328 - 1360
MB-FEN-0004	Pig iron foundry grade, Brazil, fob New Orleans, \$/tonne	10 Jan 2022	710 - 740	0.00%	Dec 2021	710 - 740
MB-IRO-0001	Pig iron export, fob main port Baltic Sea, CIS, \$/tonne	13 Jan 2022	550	0.00%	Dec 2021	550 - 554
MB-IRO-0002	Pig iron export, fob main port Black Sea, CIS, \$/tonne	13 Jan 2022	490 - 500	0.00%	Dec 2021	501 - 514
MB-IRO-0004	Pig iron import, cfr Gulf of Mexico, US, \$/tonne	14 Jan 2022	530 - 540	0.00%	Dec 2021	551 - 558
MB-IRO-0005	Pig iron export, fob port of Vitoria/Rio, Brazil, \$/tonne	14 Jan 2022	500	3.09%	Dec 2021	496 - 497
MB-IRO-0006	Pig iron export, fob Ponta da Madeira, Brazil, \$/tonne	14 Jan 2022	520	0.97%	Dec 2021	534 - 539
MB-IRO-0014	Pig iron import, cfr Italy, \$/tonne	13 Jan 2022	530 - 540	-0.47%	Dec 2021	548 - 556
MB-IRO-0023	Direct reduced iron domestic, exw India, rupees/tonne	14 Jan 2022	34200 - 34400	3.63%	Dec 2021	30740 - 30940
MB-IRO-0078	Pig iron basic grade, Brazil, fob New Orleans, \$/tonne	10 Jan 2022	550 - 580	0.00%	Dec 2021	580 - 610
MB-IRO-0079	Pig iron basic grade, Ukraine/Russia, fob New Orleans, \$/tonne	10 Jan 2022	550 - 580	0.00%	Dec 2021	580 - 610
MB-IRO-0178	Pig iron, import, cfr China, \$/tonne	06 Jan 2022	530 - 540	1.90%	Dec 2021	517.5 - 525



Steel prices

Source: dashboard.fastmarkets.com/m/2089d493-5d4f-446e-9c96-317d1b54c262

Hot-rolled steel prices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0028	Steel hot-rolled coil index domestic, exw Northern Europe, €/tonne	14 Jan 2022	920	-0.18%	Dec 2021	916.4
MB-STE-0046	Steel hot-rolled coil import, cfr main port Northern Europe, €/tonne	12 Jan 2022	790 - 830	-0.61%	Dec 2021	832 - 856
MB-STE-0047	Steel hot-rolled coil import, cfr main port Southern Europe, €/tonne	12 Jan 2022	770 - 795	-0.95%	Dec 2021	796 - 814
MB-STE-0532	Steel hot-rolled coil domestic, exw Central Europe, €/tonne	12 Jan 2022	840 - 860	4.94%	Dec 2021	804 - 830
MB-STE-0892	Steel hot-rolled coil index domestic, exw Italy, €/tonne	14 Jan 2022	823.75	0.00%	Dec 2021	840.09
MB-STE-0893	Steel hot-rolled coil domestic, exw Spain, €/tonne	12 Jan 2022	920 - 930	2.21%	Dec 2021	894 - 924
MB-STE-0107	Steel hot-rolled coil export, fob main port Turkey, \$/tonne	14 Jan 2022	815 - 830	-2.08%	Dec 2021	838 - 852
MB-STE-0105	Steel hot-rolled coil import, cfr main port Turkey, \$/tonne	14 Jan 2022	785 - 790	0.32%	Dec 2021	801 - 820
MB-STE-0108	Steel hot-rolled coil domestic, exw Turkey, \$/tonne	14 Jan 2022	815 - 830	-2.08%	Dec 2021	828 - 844
MB-STE-0014	Steel hot-rolled coil export, fob Black Sea, CIS, \$/tonne	10 Jan 2022	760 - 770	0.00%	Dec 2021	773.75 - 795
MB-STE-0065	Steel hot-rolled sheet domestic, cpt Moscow, Russia, rubles/tonne incl. VAT	10 Jan 2022	76000	0.00%	Dec 2021	75000 - 76250
MB-STE-0468	Steel hot-rolled coil index, fob mill US, \$/short ton	14 Jan 2022	1496.8	-1.58%	Dec 2021	
MB-STE-0184	Steel hot-rolled coil index, fob mill US, \$/cwt	14 Jan 2022	74.84	-1.58%	Dec 2021	82.16
MB-STE-0180	Steel hot-rolled coil, import, ddp Houston, \$/short ton	05 Jan 2022	1220 - 1300	0.00%	Dec 2021	1260 - 1340
MB-STE-0007	Steel hot-rolled coil domestic monthly, exw Brazil, reais/tonne	14 Jan 2022	5950 - 6040	0.00%	Dec 2021	5950 - 6040
MB-STE-0133	Steel hot-rolled coil (dry) export, fob main port Latin America, \$/tonne	14 Jan 2022	710 - 790	-2.91%	Dec 2021	774 - 824
MB-STE-0102	Steel hot-rolled coil import, cfr main ports South America, \$/tonne	14 Jan 2022	830 - 880	-1.16%	Dec 2021	864 - 910
MB-STE-0444	Steel hot-rolled coil import, cfr main port India, \$/tonne	14 Jan 2022	780 - 790	2.28%	Dec 2021	798 - 803
MB-STE-0445	Steel hot-rolled coil (CR grade) import, cfr main port India, \$/tonne	14 Jan 2022	785 - 790	1.61%	Dec 2021	803 - 810
MB-STE-0442	Steel hot-rolled coil (commodity) export, fob main port India, \$/tonne	14 Jan 2022	720 - 735	0.69%	Dec 2021	750 - 779
MB-STE-0436	Steel hot-rolled coil domestic, ex-whse India, rupees/tonne	14 Jan 2022	64000 - 65000	0.00%	Dec 2021	65800 - 66550
MB-STE-0158	Steel hot-rolled coil domestic, exw Northern China, yuan/tonne	14 Jan 2022	4720 - 4750	0.85%	Dec 2021	4716 - 4742
MB-STE-0144	Steel hot-rolled coil index export, fob main port China, \$/tonne	14 Jan 2022	758.68	0.39%	Dec 2021	772.92
MB-STE-0154	Steel hot-rolled coil domestic, ex-whs Eastern China, yuan/tonne	14 Jan 2022	4900 - 4920	-0.41%	Dec 2021	4853.48 - 4889.57
MB-STE-0139	Steel hot-rolled coil import, cfr Vietnam, \$/tonne	14 Jan 2022	750 - 760	0.00%	Dec 2021	780 - 785
MB-STE-0888	Steel hot-rolled coil (Japan, Korea, Taiwan-origin), import, cfr Vietnam, \$/tonne	14 Jan 2022	765 - 770	-2.23%	Dec 2021	822 - 826
MB-STE-0125	Steel hot-rolled coil import, cfr Jebel Ali, UAE, \$/tonne	11 Jan 2022	740 - 770	-4.73%	Dec 2021	800 - 828.75
MB-STE-0113	Steel hot-rolled coil import, cfr Saudi Arabia, \$/tonne	11 Jan 2022	815 - 835	1.85%	Dec 2021	822.5 - 860

Cold-rolled steel prices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0005	Steel cold-rolled coil domestic monthly, exw Brazil, reais/tonne	14 Jan 2022	6500 - 6590	-0.68%	Dec 2021	6500 - 6680

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0012	Steel cold-rolled coil export, fob Black Sea, CIS, \$/tonne	10 Jan 2022	895 - 905	0.00%	Dec 2021	902.5 - 927.5
MB-STE-0026	Steel cold-rolled coil domestic, exw Northern Europe, €/tonne	12 Jan 2022	1040 - 1080	5.47%	Dec 2021	1018 - 1066
MB-STE-0027	Steel cold-rolled coil domestic, exw Southern Europe, €/tonne	12 Jan 2022	1040 - 1100	9.18%	Dec 2021	1014 - 1044
MB-STE-0044	Steel cold-rolled coil import, cfr main port Northern Europe, €/tonne	12 Jan 2022	870 - 900	-2.75%	Dec 2021	934 - 954
MB-STE-0045	Steel cold-rolled coil import, cfr main port Southern Europe, €/tonne	12 Jan 2022	870 - 900	-1.67%	Dec 2021	914 - 954
MB-STE-0064	Steel cold-rolled sheet domestic, cpt Moscow, Russia, rubles/tonne incl. VAT	10 Jan 2022	83000 - 85000	0.00%	Dec 2021	82500 - 84750
MB-STE-0103	Steel cold-rolled coil import, cfr main ports South America, \$/tonne	14 Jan 2022	940 - 960	-1.04%	Dec 2021	943 - 998
MB-STE-0106	Steel cold-rolled coil import, cfr main port Turkey, \$/tonne	14 Jan 2022	930 - 935	0.00%	Dec 2021	937 - 946
MB-STE-0109	Steel cold-rolled coil domestic, exw Turkey, \$/tonne	14 Jan 2022	970 - 990	1.03%	Dec 2021	990 - 1012
MB-STE-0124	Steel cold-rolled coil import, cfr Jebel Ali, UAE, \$/tonne	11 Jan 2022	870 - 910	0.00%	Dec 2021	875 - 926.25
MB-STE-0132	Steel cold-rolled coil export, fob main port Latin America, \$/tonne	14 Jan 2022	890 - 920	-9.05%	Dec 2021	990 - 1000
MB-STE-0145	Steel cold-rolled coil export, fob China main port, \$/tonne	11 Jan 2022	850 - 860	0.00%	Dec 2021	846.25 - 860
MB-STE-0153	Steel cold-rolled coil domestic, delivered Eastern China domestic, yuan/tonne	14 Jan 2022	5410 - 5450	-0.09%	Dec 2021	5444 - 5500
MB-STE-0181	Steel cold-rolled coil, import, ddp Houston, \$/short ton	05 Jan 2022	1420 - 1490	0.00%	Dec 2021	1475 - 1525
MB-STE-0185	Steel cold-rolled coil, fob mill US, \$/cwt	13 Jan 2022	97.5	-1.02%	Dec 2021	101.6
MB-STE-0435	Steel cold-rolled coil domestic, ex-whse India, rupees/tonne	14 Jan 2022	68500 - 69500	0.00%	Dec 2021	71800 - 72800
MB-STE-0443	Steel cold-rolled coil import, cfr main port India, \$/tonne	14 Jan 2022	820 - 825	2.17%	Dec 2021	835 - 847
MB-STE-0469	Steel cold-rolled coil, fob mill US, \$/short ton	13 Jan 2022		1950	-1.02%	Dec 2021

Galvanized steel prices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0883	Steel hot-dipped galvanized coil (hot-rolled base), fob mill US, \$/cwt	13 Jan 2022	88	0.00%	Dec 2021	99.4
MB-STE-0780	Steel hot-dipped galvanized export, fob Turkey, \$/tonne	14 Jan 2022	1060 - 1100	-0.23%	Dec 2021	1119 - 1132
MB-STE-0434	Steel hot-dipped galvanized coil domestic, ex-whse India, rupees/tonne	14 Jan 2022	74000 - 76000	0.00%	Dec 2021	78200 - 80000
MB-STE-0470	Steel hot-dipped galvanized (base) steel coil, fob mill US, \$/short ton	13 Jan 2022		1920	-1.54%	Dec 2021
MB-STE-0031	Steel hot-dipped galvanized coil domestic, exw Southern Europe, €/tonne	12 Jan 2022	1040 - 1100	7.00%	Dec 2021	1022 - 1056
MB-STE-0104	Steel hot-dipped galvanized coil import, cfr main ports South America, \$/tonne	14 Jan 2022	1000 - 1040	0.00%	Dec 2021	1000 - 1046
MB-STE-0091	Steel hot-dipped galvanized coil import, cfr main port Northern Europe, €/tonne	12 Jan 2022	970 - 980	0.00%	Dec 2021	1026 - 1042
MB-STE-0021	Steel hot-dipped galvanized coil domestic, ex-whs Eastern China, yuan/tonne	14 Jan 2022	5650 - 5700	0.18%	Dec 2021	5646 - 5698
MB-STE-0110	Steel hot-dipped galvanized coil domestic, exw Turkey, \$/tonne	14 Jan 2022	1050 - 1100	-0.69%	Dec 2021	1113 - 1126
MB-STE-0048	Steel hot-dipped galvanized coil import, cfr main port Southern Europe, €/tonne	12 Jan 2022	920 - 950	0.00%	Dec 2021	984 - 1018
MB-STE-0030	Steel hot-dipped galvanized coil domestic, exw Northern Europe, €/tonne	12 Jan 2022	1080 - 1100	6.34%	Dec 2021	1038 - 1088
MB-STE-0123	Steel hot-dipped-galvanized coil import, cfr Jebel Ali, UAE, \$/tonne	11 Jan 2022	1075 - 1140	0.00%	Dec 2021	1077.5 - 1130
MB-STE-0186	Steel hot-dipped galvanized coil (cold-rolled base), fob mill US, \$/cwt	13 Jan 2022		96	-1.54%	Dec 2021



Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0006	Steel hot-dipped galvanized coil domestic monthly, exw Brazil, reais/tonne	14 Jan 2022	8055 - 8250	-1.03%	Dec 2021	8055 - 8420
MB-STE-0441	Steel hot-dipped galvanized coil export, fob main port India, \$/tonne	14 Jan 2022	990 - 1000	5.29%	Dec 2021	1024 - 1048
MB-STE-0182	Steel hot-dipped galvanized 0.012 inch G30, ddp Houston, \$/short ton	05 Jan 2022	1640 - 1700	0.00%	Dec 2021	1640 - 1700
MB-STE-0212	Steel hot-dipped galvanized coil 0.03-0.13 inch G90 (cold-rolled base), fob mill US, \$/cwt	13 Jan 2022	100.5	-1.47%	Dec 2021	105.1
MB-STE-0009	Steel galvanized coil 1mm export, fob main port China, \$/tonne	11 Jan 2022	900 - 920	0.00%	Dec 2021	898.75 - 920
MB-STE-0111	Steel prepainted galvanized domestic, exw Turkey, \$/tonne	14 Jan 2022	1150 - 1200	-1.05%	Dec 2021	1217 - 1234
MB-STE-0187	Steel coil Galvalume, fob mill US, \$/cwt	21 Dec 2021	92.5	-8.42%	Dec 2021	92.5
MB-STE-0850	Steel coil Galvalume import, cfr main ports South America, \$/tonne	14 Jan 2022	1150 - 1180	-0.85%	Dec 2021	1150 - 1200

Steel plate prices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0013	Steel heavy plate 8-50mm export, fob Black Sea, CIS, \$/tonne	10 Jan 2022	830 - 835	0.00%	Dec 2021	890 - 940
MB-STE-0034	Steel domestic plate 8-40mm, exw Northern Europe, €/tonne	12 Jan 2022	950 - 990	-0.51%	Dec 2021	966 - 994
MB-STE-0035	Steel domestic plate 8-40mm, exw Southern Europe, €/tonne	12 Jan 2022	830 - 850	-1.18%	Dec 2021	842 - 870
MB-STE-0049	Steel plate (8-40mm) import, cfr main port Northern Europe, €/tonne	12 Jan 2022	820 - 850	1.21%	Dec 2021	848 - 858
MB-STE-0050	Steel plate (8-40mm) import, cfr main port Southern Europe, €/tonne	12 Jan 2022	820 - 830	-1.20%	Dec 2021	848 - 858
MB-STE-0101	Steel plate import, cfr main ports South America, \$/tonne	14 Jan 2022	880 - 900	-1.39%	Dec 2021	913 - 934
MB-STE-0134	Steel heavy plate (thicker than 10mm) export, fob main port Latin America, \$/tonne	14 Jan 2022	810 - 830	-4.37%	Dec 2021	853 - 867
MB-STE-0146	Steel heavy plate export, fob China main port, \$/tonne	11 Jan 2022	775 - 785	-0.32%	Dec 2021	797.5 - 807.5
MB-STE-0155	Steel plate domestic, delivered whs Eastern China, yuan/tonne	14 Jan 2022	4920 - 4950	-1.50%	Dec 2021	5080 - 5100
MB-STE-0172	Steel cut-to-length plate carbon grade, fob mill US, \$/cwt	14 Jan 2022	90.75	0.00%	Dec 2021	90.75
MB-STE-0179	Steel medium plate, import, ddp Houston, \$/short ton	05 Jan 2022	1450 - 1500	0.00%	Dec 2021	1475 - 1530
MB-STE-0437	Steel heavy plate domestic, ex-whse India, rupees/tonne	14 Jan 2022	62500 - 64500	0.00%	Dec 2021	65800 - 67600
MB-STE-0439	Steel heavy plate 12-40mm export, fob main port India, \$/tonne	14 Jan 2022	760 - 770	0.00%	Dec 2021	791 - 806
MB-STE-0446	Steel heavy plate 10-40mm import, cfr main port India, \$/tonne	14 Jan 2022	775 - 785	1.96%	Dec 2021	816 - 827
MB-STE-0467	Steel cut-to-length plate carbon grade, fob mill US, \$/short ton	14 Jan 2022	1815	0.00%	Dec 2021	
MB-STE-0514	Steel plate domestic, cpt Moscow, Russia, rubles/tonne incl. VAT	10 Jan 2022	81000 - 83000	0.00%	Dec 2021	80500 - 82000

Reinforcing bar (rebar) prices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0008	Steel reinforcing bar (rebar) domestic monthly, delivered Brazil, reais/tonne	14 Jan 2022	4440 - 4780	3.83%	Dec 2021	4280 - 4600
MB-STE-0015	Steel reinforcing bar (rebar) export, fob Black Sea, CIS, \$/tonne	10 Jan 2022	690 - 735	1.06%	Dec 2021	717.5 - 730
MB-STE-0036	Steel reinforcing bar (rebar) domestic, delivered Northern Europe, €/tonne	12 Jan 2022	830 - 860	1.81%	Dec 2021	812 - 844
MB-STE-0037	Steel reinforcing bar (rebar) domestic, delivered Southern Europe, €/tonne	12 Jan 2022	800 - 835	3.48%	Dec 2021	774 - 800
MB-STE-0051	Steel reinforcing bar (rebar) import, cfr main EU port Northern Europe, €/tonne	12 Jan 2022	720 - 780	2.04%	Dec 2021	714 - 760

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0052	Steel reinforcing bar (rebar) import, cfr main EU port Southern Europe, €/tonne	12 Jan 2022	700 - 720	3.65%	Dec 2021	674 - 700
MB-STE-0066	Steel reinforcing bar (rebar) domestic, cpt Moscow, Russia, rubles/tonne incl. VAT	10 Jan 2022	63000 - 65000	0.00%	Dec 2021	62000 - 64000
MB-STE-0073	Steel reinforcing bar (rebar) export, fob main port Southern Europe, €/tonne	12 Jan 2022	770 - 800	4.67%	Dec 2021	732 - 752
MB-STE-0092	Steel reinforcing bar (rebar) domestic, exw Poland, zloty/tonne	14 Jan 2022	3900 - 3950	6.08%	Dec 2021	3600 - 3720
MB-STE-0112	Steel reinforcing bar (rebar) domestic, exw Egypt, £/tonne	13 Jan 2022	14900 - 15000	0.00%	Dec 2021	14900 - 15350
MB-STE-0119	Steel reinforcing bar (rebar) export, fob main port Turkey, \$/tonne	13 Jan 2022	690 - 700	0.00%	Dec 2021	693 - 705
MB-STE-0126	Steel reinforcing bar (rebar) domestic, exw UAE, dirhams/tonne	11 Jan 2022	2400 - 2450	-1.28%	Dec 2021	2439.75 - 2475
MB-STE-0127	Steel reinforcing bar (rebar) import, cfr Jebel Ali, UAE, \$/tonne	11 Jan 2022	651 - 660	-0.38%	Dec 2021	649 - 667
MB-STE-0142	Steel reinforcing bar (rebar) import, cfr Singapore, \$/tonne	10 Jan 2022	705	-0.35%	Dec 2021	711.25 - 713.75
MB-STE-0147	Steel reinforcing bar (rebar) index export, fob China main port, \$/tonne	11 Jan 2022	743.33	0.45%	Dec 2021	781.72
MB-STE-0152	Steel reinforcing bar (rebar) domestic, ex-whs Eastern China, yuan/tonne	14 Jan 2022	4680 - 4720	0.00%	Dec 2021	4778.26 - 4809.57
MB-STE-0162	Steel reinforcing bar (rebar) domestic, ex-whs Northern China, yuan/tonne	14 Jan 2022	4580 - 4640	1.88%	Dec 2021	4642 - 4692
MB-STE-0170	Steel reinforcing bar (rebar), fob mill US, \$/cwt	12 Jan 2022	51.5	0.00%	Dec 2021	51.5
MB-STE-0171	Steel reinforcing bar (rebar), import, loaded truck Port of Houston for immediate delivery, \$/short ton	12 Jan 2022	960 - 990	0.00%	Dec 2021	966 - 992
MB-STE-0438	Steel rebar domestic, exw India, rupees/tonne	14 Jan 2022	48000 - 48200	2.56%	Dec 2021	45280 - 45480
MB-STE-0465	Steel reinforcing bar (rebar), fob mill US, \$/short ton	12 Jan 2022	1030	0.00%	Dec 2021	
MB-STE-0784	Steel reinforcing bar (rebar) domestic, exw Turkey, lira/tonne	13 Jan 2022	11200 - 11600	4.35%	Dec 2021	10903 - 11265

Wire rod prices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0017	Steel wire rod (mesh quality) export, fob Black Sea, CIS, \$/tonne	10 Jan 2022	740 - 800	0.65%	Dec 2021	728.75 - 800
MB-STE-0042	Steel wire rod (mesh quality) domestic, delivered Northern Europe, €/tonne	12 Jan 2022	850 - 855	2.10%	Dec 2021	818 - 844
MB-STE-0043	Steel wire rod (mesh quality) domestic, delivered Southern Europe, €/tonne	12 Jan 2022	800 - 830	1.88%	Dec 2021	780 - 808
MB-STE-0053	Steel wire rod (mesh quality) import, main port Northern Europe, €/tonne	12 Jan 2022	780 - 800	2.60%	Dec 2021	762 - 780
MB-STE-0054	Steel wire rod (mesh quality) import, main port Southern Europe, €/tonne	12 Jan 2022	760 - 780	1.32%	Dec 2021	750 - 770
MB-STE-0074	Steel wire rod export, fob main port Southern Europe, €/tonne	12 Jan 2022	800 - 820	3.18%	Dec 2021	774 - 790
MB-STE-0120	Steel wire rod (mesh quality) export, fob main port Turkey, \$/tonne	13 Jan 2022	790 - 800	0.00%	Dec 2021	790 - 800
MB-STE-0130	Steel wire rod (mesh quality) export, fob main port Latin America, \$/tonne	14 Jan 2022	750 - 800	0.00%	Dec 2021	770 - 808
MB-STE-0143	Steel wire rod (low carbon) import, cfr Southeast Asia, \$/tonne	10 Jan 2022	720 - 725	1.76%	Dec 2021	710
MB-STE-0148	Steel wire rod (mesh quality) export, fob China main port, \$/tonne	11 Jan 2022	735 - 740	-1.34%	Dec 2021	743.75 - 757.5
MB-STE-0164	Steel wire rod (mesh quality) domestic, ex-whs Eastern China, yuan/tonne	14 Jan 2022	4700 - 4730	0.00%	Dec 2021	4788 - 4838
MB-STE-0192	Steel wire rod (low carbon) industrial quality, fob mill US, \$/cwt	21 Dec 2021	64 - 69	2.31%	Dec 2021	64 - 69
MB-STE-0193	Steel wire rod (high carbon), fob mill US, \$/cwt	21 Dec 2021	73	4.29%	Dec 2021	73



Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0194	Steel wire rod cold-heading quality, ddp, \$/cwt	21 Dec 2021	75	6.38%	Dec 2021	75
MB-STE-0195	Steel wire rod (low carbon) import, loaded truck Port of Houston for immediate delivery, \$/short ton	21 Dec 2021	1180 - 1280	-0.81%	Dec 2021	1180 - 1280
MB-STE-0785	Steel wire rod (mesh quality) domestic, exw Turkey, lira/tonne	13 Jan 2022	13500 - 14000	7.84%	Dec 2021	12440 - 12900
MB-STE-0891	Steel wire rod (drawing quality), domestic, delivered Poland, zloty/tonne	14 Jan 2022	3950 - 4000	0.63%	Dec 2021	3900 - 3950

Steel beams, sections & bar prices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-FE-0001	Steel merchant bar export, fob main port Turkey, \$/tonne	13 Jan 2022	765 - 770	0.00%	Dec 2021	773 - 776
MB-STE-0020	Steel hollow sections ASTM A500 Grade B domestic, fob mill US, \$/short ton	13 Jan 2022	2150 - 2180	-3.78%	Dec 2021	2260 - 2310
MB-STE-0024	Steel beams domestic, delivered Northern Europe, €/tonne	12 Jan 2022	1060 - 1070	3.40%	Dec 2021	1020 - 1040
MB-STE-0025	Steel beams domestic, delivered Southern Europe, €/tonne	12 Jan 2022	1060 - 1070	3.90%	Dec 2021	1020 - 1030
MB-STE-0038	Steel sections (medium) domestic, delivered Northern Europe, €/tonne	12 Jan 2022	1080 - 1150	0.00%	Dec 2021	1080 - 1150
MB-STE-0039	Steel sections (medium) domestic, delivered Southern Europe, €/tonne	12 Jan 2022	1080 - 1150	0.00%	Dec 2021	1080 - 1150
MB-STE-0161	Steel sections domestic, ex-whs Eastern China, yuan/tonne	14 Jan 2022	4750 - 4800	1.06%	Dec 2021	4676 - 4718
MB-STE-0199	Steel bar 2 x 2 x 1/4-inch angle merchant products, fob mill US, \$/cwt	03 Jan 2022	60.8	0.00%	Dec 2021	60.8
MB-STE-0200	Steel bar 3 x 3 x 1/4-inch angle merchant products, fob mill US, \$/cwt	03 Jan 2022	61.25	0.00%	Dec 2021	61.25
MB-STE-0201	Steel bar 8 x 11.5-inch channels merchant products, fob mill US, \$/cwt	03 Jan 2022	60.5	0.00%	Dec 2021	60.5
MB-STE-0202	Steel bar 1/2 x 4-inch flat merchant products, fob mill US, \$/cwt	03 Jan 2022	61	0.00%	Dec 2021	61
MB-STE-0203	Steel merchant bar, loaded truck Port of Houston for immediate delivery, \$/short ton	03 Jan 2022	1180 - 1220	0.00%	Dec 2021	1180 - 1220
MB-STE-0204	Steel bar cold-finished 1-inch round 4140 (alloy), fob mill US, \$/cwt	17 Dec 2021	112	0.45%	Dec 2021	112
MB-STE-0205	Steel bar cold-finished 1-inch round 1018 (carbon), fob mill US, \$/cwt	17 Dec 2021	91	0.55%	Dec 2021	91
MB-STE-0206	Steel bar cold-finished 1-inch round 12L14 (carbon), fob mill US, \$/cwt	17 Dec 2021	106	-0.47%	Dec 2021	106
MB-STE-0207	Steel bar hot-rolled special bar quality (SBQ) 1-inch round 4100 series (alloy), fob mill US, \$/cwt	17 Dec 2021	81.5	-0.61%	Dec 2021	81.5
MB-STE-0208	Steel bar hot-rolled special bar quality (SBQ) 1-inch round 1000 series (carbon), fob mill US, \$/cwt	17 Dec 2021	70	-0.71%	Dec 2021	70
MB-STE-0209	Steel beams 8 x 8-inch, fob mill US, \$/cwt	03 Jan 2022	70.5	0.00%	Dec 2021	70.5
MB-STE-0210	Steel beams medium sections, loaded truck Port of Houston for immediate delivery, \$/short ton	03 Jan 2022	1345 - 1385	-3.19%	Dec 2021	1390 - 1430
MB-STE-0851	Steel hollow sections ASTM 500 Grade B import, ddp US port of entry, \$/short ton	28 Dec 2021	1850 - 1900	0.00%	Dec 2021	1850 - 1900

Steel billet prices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0782	Steel billet export, fob ports Iran, \$/tonne	12 Jan 2022	545 - 550	0.18%	Dec 2021	548.6 - 554.4
MB-STE-0558	Steel billet index export, fob Black Sea, CIS, \$/tonne	14 Jan 2022	615	0.00%	Dec 2021	600.9
MB-STE-0516	Steel billet import, cfr main port Egypt, \$/tonne	13 Jan 2022	660 - 665	2.71%	Dec 2021	649 - 662
MB-STE-0433	Steel billet domestic, exw India, rupees/tonne	14 Jan 2022	45100 - 45300	2.84%	Dec 2021	41780 - 41980
MB-STE-0440	Steel billet export, fob main port India, \$/tonne	14 Jan 2022	595 - 600	2.14%	Dec 2021	593 - 598



Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0141	Steel billet import, cfr Manila, \$/tonne	14 Jan 2022	630 - 640	0.79%	Dec 2021	634.13 - 639.35
MB-STE-0157	Steel billet domestic, exw Tangshan, Northern China, yuan/tonne	14 Jan 2022	4430	0.00%	Dec 2021	4339.57
MB-STE-0890	Steel billet, import, cfr China, \$/tonne	14 Jan 2022	630 - 635	3.69%	Dec 2021	607 - 615
MB-STE-0116	Steel billet import, cfr main port Turkey, \$/tonne	13 Jan 2022	630 - 650	1.59%	Dec 2021	628 - 637
MB-STE-0117	Steel billet export, fob main port Turkey, \$/tonne	13 Jan 2022	655 - 660	0.00%	Dec 2021	652 - 661
MB-STE-0115	Steel billet domestic, exw Turkey, \$/tonne	13 Jan 2022	655 - 665	0.38%	Dec 2021	654 - 667
MB-STE-0128	Steel billet export, fob main port Latin America, \$/tonne	14 Jan 2022	600 - 610	0.00%	Dec 2021	602 - 618
MB-STE-0122	Steel billet import, cfr Jebel Ali, UAE, \$/tonne	11 Jan 2022	580 - 620	0.00%	Dec 2021	590 - 625

Steel slab prices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0781	Steel slab export, fob ports Iran, \$/tonne	12 Jan 2022	560	-1.41%	Dec 2021	575.2
MB-STE-0566	Steel slab export, fob main port Brazil, \$/tonne	14 Jan 2022	610 - 630	5.08%	Dec 2021	601 - 628
MB-STE-0140	Steel slab import, cfr Southeast Asia/East Asia, \$/tonne	10 Jan 2022	625	-0.79%	Dec 2021	647.5 - 663.75
MB-STE-0016	Steel slab export, fob Black Sea, CIS, \$/tonne	10 Jan 2022	585 - 600	0.42%	Dec 2021	596.25 - 613.75

Steel tube & pipe prices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0022	Steel ERW standard pipe A53 Grade A, fob mill US, \$/short ton	28 Dec 2021	2100 - 2150	-4.49%	Dec 2021	2100 - 2150
MB-STE-0023	Steel ERW standard pipe A53 Grade B, fob mill US, \$/short ton	28 Dec 2021	2200 - 2250	-4.30%	Dec 2021	2200 - 2250
MB-STE-0056	Steel ERW standard pipe A53 Grade A import, cif Houston, \$/short ton	28 Dec 2021	1900 - 1950	0.00%	Dec 2021	1900 - 1950
MB-STE-0057	Steel ERW standard pipe A53 Grade B import, cif Houston, \$/short ton	28 Dec 2021	1950 - 2000	0.00%	Dec 2021	1950 - 2000
MB-STE-0059	Steel seamless line pipe - API 5LB import, cif Houston, \$/short ton	11 Jan 2022	2525 - 2705	0.00%	Dec 2021	2525 - 2705
MB-STE-0062	Steel seamless OCTG API 5CT - Casing P110, import, cif Houston, \$/short ton	11 Jan 2022	1825 - 1925	0.00%	Dec 2021	1825 - 1925
MB-STE-0063	Steel OCTG API 5CT - Casing J55, fob mill US, \$/short ton	11 Jan 2022	2250 - 2350	0.00%	Dec 2021	2250 - 2350
MB-STE-0071	Steel seamless OCTG API 5CT - Casing P110, fob mill US, \$/short ton	11 Jan 2022	2250 - 2350	0.00%	Dec 2021	2250 - 2350
MB-STE-0090	Steel welded mechanical tubing ASTM A513, fob mill US, \$/short ton	28 Dec 2021	2275 - 2350	-3.65%	Dec 2021	2275 - 2350
MB-STE-0166	Steel structural pipe export S235JR grade EN10219 2mm wall thickness, fob main port Turkey, \$/tonne	12 Jan 2022	910 - 920	-2.92%	Dec 2021	940 - 945
MB-STE-0545	Steel ERW line pipe (X52), fob mill US, \$/short ton	11 Jan 2022	2425 - 2475	0.00%	Dec 2021	2425 - 2475
MB-STE-0561	Steel ERW line pipe (X65), fob mill US, \$/short ton	11 Jan 2022	2550 - 2600	0.00%	Dec 2021	2550 - 2600
MB-STE-0564	Steel welded OCTG API 5CT - Casing P110, fob mill US, \$/short ton	11 Jan 2022	2200 - 2300	0.00%	Dec 2021	2200 - 2300
MB-STE-0565	Steel welded OCTG API 5CT - Casing P110, import, cif Houston, \$/short ton	11 Jan 2022	1900 - 1950	0.00%	Dec 2021	1900 - 1950
MB-STE-0869	Steel OCTG API 5CT - Casing J55 import South Korean-made, cif Houston, \$/short ton	11 Jan 2022	1750 - 1800	0.00%	Dec 2021	1750 - 1800
MB-STE-0870	Steel OCTG API 5CT - Casing J55 import non-South Korean-made, cif Houston, \$/short ton	11 Jan 2022	1800 - 1850	0.00%	Dec 2021	1800 - 1850
MB-STE-0871	Steel ERW line pipe (X52) import South Korean-made, cif Houston, \$/short ton	11 Jan 2022	1700 - 1800	0.00%	Dec 2021	1700 - 1800



Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0872	Steel ERW line pipe (X52) import non-South Korean-made, cif Houston, \$/short ton	11 Jan 2022	2135 - 2235	0.00%	Dec 2021	2135 - 2235
MB-STE-0873	Steel ERW line pipe (X70), fob mill US, \$/short ton	11 Jan 2022	2600 - 2650	0.00%	Dec 2021	2600 - 2650

Stainless & special steel prices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STS-0281	Stainless steel cold-rolled sheet 2mm grade 304 transaction domestic, delivered North Europe, €/tonne	14 Jan 2022	4400 - 4500	0.00%	Dec 2021	4300 - 4430
MB-STS-0035	Stainless steel 304 cold-rolled sheet, fob mill US, \$/cwt	10 Jan 2022	205	2.50%	Dec 2021	200
MB-STS-0034	Stainless steel 304L cold-rolled sheet, fob mill US, \$/cwt	10 Jan 2022	209	2.45%	Dec 2021	204
MB-STS-0037	Stainless steel 316L cold-rolled sheet, fob mill US, \$/cwt	10 Jan 2022	282	1.44%	Dec 2021	278
MB-STS-0005	Stainless steel bright bar grade 304 base price domestic, delivered Europe, €/tonne	14 Jan 2022	1050 - 1100	0.00%	Dec 2021	1050 - 1100
MB-STS-0004	Stainless steel bright bar grade 304 alloy surcharge domestic, Europe, €/tonne	14 Jan 2022	3364 - 3570	9.66%	Dec 2021	2993 - 3330
MB-STS-0282	Stainless steel cold-rolled coil 2mm grade 304 export, fob China, \$/tonne	12 Jan 2022	2900 - 2970	1.91%	Dec 2021	2742 - 2890
MB-STS-0018	Stainless steel cold-rolled coil, Asia grade 304 (2mm 2B), cif East Asian port, \$/tonne	12 Jan 2022	2940 - 3000	1.02%	Dec 2021	2790 - 2868
MB-STS-0015	Stainless steel cold-rolled coil 2mm grade 304 domestic, ex-whs China, yuan/tonne	12 Jan 2022	17500 - 17700	0.86%	Dec 2021	16720 - 17000
MB-STS-0016	Stainless steel cold-rolled coil 2mm grade 430 domestic, ex-whs China, yuan/tonne	12 Jan 2022	9300 - 9350	0.00%	Dec 2021	9480 - 9530
MB-STS-0283	Stainless steel hot-rolled coil grade 304 export, fob China, \$/tonne	12 Jan 2022	2950 - 2970	2.96%	Dec 2021	2756 - 2830
MB-STS-0280	Stainless steel hot-rolled coil Asia grade 304, cif port East Asia, \$/tonne	12 Jan 2022	2650 - 2700	1.13%	Dec 2021	2698 - 2758
MB-STS-0001	Stainless steel cold-rolled sheet 316 2mm alloy surcharge domestic, Europe, €/tonne	14 Jan 2022	3643 - 3669	2.48%	Dec 2021	3546 - 3589
MB-STS-0002	Stainless steel cold-rolled sheet base price 316 2mm domestic, delivered Europe, €/tonne	14 Jan 2022	2180 - 2280	0.00%	Dec 2021	2180 - 2280
MB-STS-0006	Stainless steel cold-rolled sheet 2mm grade 304 alloy surcharge domestic, Europe, €/tonne	14 Jan 2022	2421 - 2427	3.79%	Dec 2021	2308 - 2363
MB-STS-0007	Stainless steel cold-rolled sheet 2mm grade 304 base price domestic, delivered Northern Europe, €/tonne	14 Jan 2022	1900 - 2000	0.00%	Dec 2021	1900 - 2000



Ores and alloys prices

Source: dashboard.fastmarkets.com/m/6c3ef6d0-3976-4705-9af1-f3423ca64ee1

Chrome ore and ferro-chrome prices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-CHO-0002	Chrome ore Turkish lumpy 40-42%, cfr main Chinese ports, \$/tonne	11 Jan 2022	300 - 310	0.00%	Dec 2021	290 - 308.75
MB-CHO-0003	Chrome ore South Africa UG2/MG concentrates index, cif China, \$/tonne	11 Jan 2022	171	0.00%	Dec 2021	170.75
MB-FEC-0001	Ferro-chrome low phosphorous, min 65% Cr, max 0.015% P, delivered Europe, \$/lb	04 Jan 2022	1.77 - 1.99	0.00%	Dec 2021	1.77 - 1.99
MB-FEC-0002	Ferro-chrome low carbon, 65% Cr, max 0.06% C, delivered Europe, \$/lb Cr	04 Jan 2022	3.69 - 4.32	0.00%	Dec 2021	3.67 - 4.31
MB-FEC-0003	Ferro-chrome 0.10% C, average 65-70% Cr, delivered Europe, \$/lb Cr	04 Jan 2022	3.65 - 4.28	0.00%	Dec 2021	3.63 - 4.27
MB-FEC-0004	Ferro-chrome high carbon 6-8.5% C, basis 60-70% Cr, max 1.5% Si, delivered Europe, \$/lb Cr	28 Dec 2021	1.72 - 1.92	0.00%	Dec 2021	1.72 - 1.92
MB-FEC-0005	Ferro-chrome contract 6-8% C, basis 50% Cr, ddp China, yuan/tonne	11 Jan 2022	8195 - 9600	0.00%	Dec 2021	9098.75 - 9600
MB-FEC-0006	Ferro-chrome spot 6-8% C, basis 50% Cr, ddp China, yuan/tonne	11 Jan 2022	8200 - 8500	1.21%	Dec 2021	8725 - 9000
MB-FEC-0007	Ferro-chrome high carbon 6-8% C, basis 60-65% Cr, max 2% Si, in-whs Pittsburgh, US cents/lb	13 Jan 2022	210 - 225	0.00%	Dec 2021	202 - 222
MB-FEC-0008	Ferro-chrome low carbon 0.05%C, 65% Cr min, in-whs Pittsburgh, US cents/lb	13 Jan 2022	380 - 385	0.00%	Dec 2021	380 - 385
MB-FEC-0009	Ferro-chrome low carbon 0.10%C, 62% Cr min, in-whs Pittsburgh, US cents/lb	13 Jan 2022	365 - 375	0.00%	Dec 2021	365 - 375
MB-FEC-0010	Ferro-chrome low carbon 0.15%C, 60% Cr min, in-whs Pittsburgh, US cents/lb	13 Jan 2022	355 - 360	0.00%	Dec 2021	355 - 360
MB-FEC-0011	Ferro-chrome 50% Cr import, cif main Chinese ports, \$/lb contained Cr	11 Jan 2022	1.07	0.00%	Dec 2021	1.16
MB-FEC-0012	Ferro-chrome high carbon 6-8% C, basis 60-65% Cr, max 2% Si, in-whs Pittsburgh, \$/lb	13 Jan 2022	2.1 - 2.25	0.00%	Dec 2021	
MB-FEC-0013	Ferro-chrome low carbon 0.05%C, 65% Cr min, in-whs Pittsburgh, \$/lb	13 Jan 2022	3.8 - 3.85	0.00%	Dec 2021	
MB-FEC-0014	Ferro-chrome low carbon 0.10%C, 62% Cr min, in-whs Pittsburgh, \$/lb	13 Jan 2022	3.65 - 3.75	0.00%	Dec 2021	
MB-FEC-0015	Ferro-chrome low carbon 0.15%C, 60% Cr min, in-whs Pittsburgh, \$/lb	13 Jan 2022	3.55 - 3.6	0.00%	Dec 2021	
MB-FEC-0016	Ferro-chrome lumpy Cr charge quarterly, basis 52% Cr (and high carbon), delivered Europe, \$/lb Cr (rounded to the closest 2 decimal places)	01 Jan 2022	1.8	0.00%	Dec 2021	1.8
MB-FEC-0017	Ferro-chrome high carbon 57-65% Cr, cif dup Japan, \$/lb	13 Jan 2022	1.06 - 1.08	0.00%	Dec 2021	1.17 - 1.19
MB-FEC-0018	Ferro-chrome high carbon 57-65% Cr, cif dup South Korea, \$/lb	13 Jan 2022	1.05 - 1.07	0.00%	Dec 2021	1.15 - 1.17
MB-FEC-0019	Ferro-chrome lumpy Cr benchmark indicator, charge basis 52% (and high carbon), Europe, \$/lb	11 Jan 2022	1.72	0.58%	Dec 2021	1.81
MB-FEC-0020	Ferro-chrome high carbon 6-8.5% C, basis 60-64.9% Cr, max 3% Si, cif Europe, \$/lb Cr	11 Jan 2022	1.28 - 1.5	-4.79%	Dec 2021	1.42 - 1.5
MB-FEC-0021	Ferro-chrome high carbon 6-8.5% C, basis 65-70% Cr, max 1.5% Si, delivered Europe, \$/lb Cr	11 Jan 2022	1.73 - 1.95	1.10%	Dec 2021	1.72 - 1.92

Manganese ore and alloy prices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
--------	-------------	------	-------	-----	-------	-----------------



Symbol	Description	Date	Price	+/-	Month	Monthly Average	
MB-FEM-0001	Ferro-manganese high carbon 78% Mn, standard 7.5% C, in-whs Pittsburgh, \$/long ton	13 Jan 2022	2600 - 2650	0.00%	Dec 2021	2600 - 2650	
MB-FEM-0002	Ferro-manganese low carbon 80% Mn, max 0.80% C, in-whs Pittsburgh, US cents/lb	13 Jan 2022	315 - 320	0.00%	Dec 2021	315 - 320	
MB-FEM-0003	Ferro-manganese medium carbon 80% Mn, max 1.50% C, in-whs Pittsburgh, US cents/lb	13 Jan 2022	255 - 260	0.00%	Dec 2021	249 - 254	
MB-FEM-0004	Ferro-manganese medium carbon 80% Mn, max 1.50% C, in-whs Pittsburgh, \$/lb	13 Jan 2022	2.55 - 2.6	0.00%	Dec 2021		
MB-FEM-0006	Ferro-manganese basis 78% Mn max, standard 7.5% C, delivered Europe, €/tonne	14 Jan 2022	1500 - 1550	0.00%	Dec 2021	1670 - 1770	
MB-FEM-0007	Ferro-manganese 65% Mn min, max 7% C, in-whs China, yuan/tonne	14 Jan 2022	7400 - 7600	2.04%	Dec 2021	6920 - 7060	
MB-MNO-0001	Manganese ore 44% Mn, cif Tianjin, \$/dmtu	14 Jan 2022		5.44	-0.37%	Dec 2021	5.52
MB-MNO-0002	Manganese ore 37% Mn, fob Port Elizabeth, \$/dmtu	14 Jan 2022		3.38	4.64%	Dec 2021	3.21
MB-MNO-0003	Manganese ore index 37% Mn, cif Tianjin, \$/dmtu	14 Jan 2022		4.51	0.00%	Dec 2021	4.54
MB-MNO-0004	Manganese ore port index, base 37% Mn, range 35-39%, fot Tianjin China, yuan/dmtu	14 Jan 2022		34.3	1.18%	Dec 2021	33.94
MB-MNO-0005	Manganese ore port index, base 44% Mn, range 42-48%, fot Tianjin China, yuan/dmtu	14 Jan 2022		43.2	2.61%	Dec 2021	42.24
MB-SIM-0001	Silico-manganese 65% Mn min, max 17% Si, in-whs China, yuan/tonne	14 Jan 2022	7900 - 8200	1.90%	Dec 2021	7680 - 7900	
MB-SIM-0002	Silico-manganese lumpy 65-75% Mn, basis 15-19% Si (scale pro rata), major European destinations €/tonne	14 Jan 2022	1550 - 1600	0.00%	Dec 2021	1620 - 1720	
MB-SIM-0003	Silico-manganese 65% Mn min, min 16% Si, in-whs Pittsburgh, US cents/lb	13 Jan 2022	120 - 125	0.00%	Dec 2021	120 - 125	
MB-SIM-0005	Silico-manganese 65% Mn min, min 16% Si, in-whs Pittsburgh, \$/lb	13 Jan 2022	1.2 - 1.25	0.00%	Dec 2021		
MB-SIM-0004	Silico-manganese 65% Mn min, min 16% Si, fob India, \$/tonne	14 Jan 2022	1450 - 1520	0.68%	Dec 2021	1445 - 1495	

Ferro-silicon prices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-FES-0001	Ferro-silicon 75% Si min, in-whs China, yuan/tonne	12 Jan 2022	9300 - 9500	0.00%	Dec 2021	9360 - 9600
MB-FES-0002	Ferro-silicon 75% Si, in-whs Pittsburgh, US cents/lb	13 Jan 2022	330 - 340	0.00%	Dec 2021	330 - 340
MB-FES-0003	Ferro-silicon 75% Si, in-whs Pittsburgh, \$/lb	13 Jan 2022	3.3 - 3.4	0.00%	Dec 2021	
MB-FES-0004	Ferro-silicon 75% Si min export, fob China, \$/tonne	12 Jan 2022	2000 - 2050	0.00%	Dec 2021	2070 - 2170
MB-FES-0005	Ferro-silicon lumpy basis 75% Si (scale pro rata), delivered Europe, €/tonne	14 Jan 2022	2800 - 3300	0.00%	Dec 2021	3060 - 3460
MB-FES-0006	Ferro-silicon 75% Si min, cif Japan, \$/tonne	12 Jan 2022	2050 - 2100	0.97%	Dec 2021	2104 - 2208

Tungsten prices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-FEU-0001	Ferro-tungsten basis 75% W, in-whs dup Rotterdam, \$/kg W	14 Jan 2022	39.9 - 40.8	2.15%	Dec 2021	36.75 - 38.5
MB-FEU-0003	Ferro-tungsten export, min 75% fob China, \$/kg W	12 Jan 2022	38.8 - 40.5	0.38%	Dec 2021	38.1 - 40.1
MB-W-0001	Tungsten APT 88.5% WO ₃ min cif Rotterdam and Baltimore duty-free, \$/mtu WO ₃	14 Jan 2022	326 - 330	0.77%	Dec 2021	320 - 325
MB-W-0002	Tungsten concentrate 65% WO ₃ , in-whs China, yuan/tonne	12 Jan 2022	115000 - 115500	1.54%	Dec 2021	108500 - 109800
MB-W-0003	Tungsten APT 88.5% WO ₃ min, fob main ports China, \$/mtu WO ₃	12 Jan 2022	320 - 325	1.57%	Dec 2021	313.8 - 319.4



Vanadium & niobium prices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-FEV-0003	Ferro-vanadium 78% V min, fob China, \$/kg V	13 Jan 2022	37.74 - 38.76	-0.13%	Dec 2021	37.78 - 38.52
MB-FEV-0001	Ferro-vanadium basis 78% V min, 1st grade, ddp Western Europe, \$/kg V	14 Jan 2022	34 - 37	4.41%	Dec 2021	32.28 - 33
MB-FEV-0002	Ferro-vanadium 70-80% V, in-whs Pittsburgh, \$/lb	13 Jan 2022	16 - 16.5	7.40%	Dec 2021	14.9 - 15.25
MB-V-0001	Vanadium pentoxide 98% V2O5 min, in-whs Rotterdam, \$/lb V2O5	14 Jan 2022	8.5 - 9	0.00%	Dec 2021	8.5 - 9
MB-V-0002	Vanadium pentoxide 98% V2O5 min, fob China, \$/lb V2O5	13 Jan 2022	8.55 - 8.83	-1.81%	Dec 2021	8.76 - 8.91
MB-V-0004	Vanadium pentoxide 98% V2O5 min, exw China, yuan/tonne	13 Jan 2022	120000 - 124000	-1.61%	Dec 2021	122900 - 125000
MB-V-0003	Vanadium nitrogen, basis 77%V, 16% N, exw China, yuan/tonne	13 Jan 2022	185000 - 190000	0.00%	Dec 2021	185200 - 188800
MB-FN-0001	Ferro-niobium 63-67% delivered consumer works, dp, Europe \$ per kg Nb	12 Jan 2022	44.8 - 45.5	0.67%	Dec 2021	44.32 - 45.7

Ferro-nickel & ferro-titanium prices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-FEN-0003	Ferro-nickel premium/discount, 26-32% Ni contained, cif China, \$/tonne	29 Dec 2021	(700) - (300)		Dec 2021	(700) - (300)
MB-FET-0001	Ferro-titanium 70% Ti, max 4.5% Al, ddp Europe, \$/kg Ti	12 Jan 2022	7.7 - 8	0.00%	Dec 2021	7.7 - 8.04
MB-FET-0002	Ferro-titanium 68-72% Ti, ex-whs US, \$/lb	13 Jan 2022	3.6 - 3.85	0.00%	Dec 2021	3.6 - 3.85

Molybdenum prices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-FEO-0001	Ferro-molybdenum 65% Mo min, in-whs Rotterdam, \$/kg Mo	14 Jan 2022	44.8 - 45.5	0.33%	Dec 2021	43.31 - 44.46
MB-FEO-0002	Ferro-molybdenum 65-70% Mo, in-whs Pittsburgh, \$/lb	13 Jan 2022	20.5 - 21	0.58%	Dec 2021	20.4 - 21.1
MB-FEO-0003	Molybdenum drummed molybdic oxide 57% Mo min, in-whs Rotterdam, \$/lb Mo	14 Jan 2022	19.1 - 19.25	0.16%	Dec 2021	18.84 - 19.05
MB-FEO-0004	Molybdenum MB drummed molybdic oxide Mo, in-whs Busan, \$/lb	14 Jan 2022	18.85 - 19.1	0.00%	Dec 2021	18.3 - 18.6
MB-MO-0001	Molybdenum canned molybdic oxide, in-whs Pittsburgh, \$/lb	13 Jan 2022	19 - 19.5	0.26%	Dec 2021	18.81 - 19.5



Non-ferrous scrap prices

Source: dashboard.fastmarkets.com/m/3ca714c4-9cae-418e-9e78-581721ebe93d

US aluminium scrap prices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-AL-0364	Aluminum scrap 63S aluminum solids, dealer buying price, delivered to yard US, US cents/lb	03 Jan 2022	81	0.00%	Dec 2021	70.5
MB-AL-0370	Aluminum scrap old aluminum sheet & cast, dealer buying price, delivered to yard US, US cents/lb	03 Jan 2022	53	0.00%	Dec 2021	50.5
MB-AL-0371	Aluminum scrap painted aluminum siding, dealer buying price, delivered to yard US, US cents/lb	03 Jan 2022	57	0.00%	Dec 2021	58.5
MB-AL-0367	Aluminum scrap litho sheets, dealer buying price, delivered to yard US, US cents/lb	03 Jan 2022	95	0.00%	Dec 2021	91
MB-AL-0372	Aluminum scrap segregated low copper clips, dealer buying price, delivered to yard US, US cents/lb	03 Jan 2022	66	0.00%	Dec 2021	63
MB-AL-0037	Aluminum scrap segregated low copper alloy clips 3105, mills specialty consumers' buying price, delivered consumer US, US cents/lb	13 Jan 2022	101 - 104	0.00%	Dec 2021	92 - 94.6
MB-AL-0369	Aluminum scrap mixed low copper clips, dealer buying price, delivered to yard US, US cents/lb	03 Jan 2022	65	0.00%	Dec 2021	64
MB-AL-0366	Aluminum scrap industrial castings, dealer buying price, delivered to yard US, US cents/lb	03 Jan 2022	55	0.00%	Dec 2021	51.5
MB-AL-0365	Aluminum scrap aluminum borings, turnings, clean & dry, dealer buying price, delivered to yard US, US cents/lb	03 Jan 2022	27	0.00%	Dec 2021	27
MB-AL-0031	Aluminum scrap turnings clean dry high grade buying price, delivered to Midwest secondary smelters, US cents/lb	13 Jan 2022	69 - 73	0.00%	Dec 2021	68.4 - 72.4
MB-AL-0032	Aluminum scrap turnings clean dry mixed grade (max 5% Zn) buying price, delivered to Midwest secondary smelters, US cents/lb	13 Jan 2022	58 - 62	0.00%	Dec 2021	58 - 62
MB-AL-0033	Aluminum scrap aluminium-copper radiators buying price, delivered to Midwest secondary smelters, US cents/lb	13 Jan 2022	200 - 210	0.00%	Dec 2021	199 - 209
MB-AL-0030	Aluminum scrap old cast buying price, delivered to Midwest secondary smelters, US cents/lb	13 Jan 2022	70 - 73	2.14%	Dec 2021	68 - 72
MB-AL-0029	Aluminum scrap old sheet buying price, delivered to Midwest secondary smelters, US cents/lb	13 Jan 2022	70 - 73	1.42%	Dec 2021	69 - 72
MB-AL-0027	Aluminum scrap siding buying price, delivered Midwest secondary smelters, US cents/lb	13 Jan 2022	72 - 75	1.38%	Dec 2021	71 - 74
MB-AL-0368	Aluminum scrap mixed clips, dealer buying price, delivered to yard US, US cents/lb	03 Jan 2022	63	0.00%	Dec 2021	61.5
MB-AL-0028	Aluminum scrap mixed clips buying price, delivered to Midwest secondary smelters, US cents/lb	13 Jan 2022	68 - 71	2.21%	Dec 2021	64.8 - 68.4
MB-AL-0024	Aluminum scrap mixed high copper clips, buying price, delivered Midwest secondary smelters, US cents/lb	13 Jan 2022	74 - 77	3.42%	Dec 2021	70 - 74
MB-AL-0038	Aluminum scrap mixed low copper clips, specialty consumers' buying price, delivered consumer US, US cents/lb	13 Jan 2022	100 - 103	0.50%	Dec 2021	90.4 - 94.2
MB-AL-0023	Aluminum scrap mixed low copper clips, buying price, delivered Midwest secondary smelters, US cents/lb	13 Jan 2022	75 - 79	2.67%	Dec 2021	72.6 - 76.6
MB-AL-0025	Aluminum scrap mixed high zinc clips buying price, delivered Midwest secondary smelters, US cents/lb	13 Jan 2022	65 - 69	1.52%	Dec 2021	64 - 68
MB-AL-0026	Aluminum scrap 1-1-3 sows buying price, delivered Midwest secondary smelters, US cents/lb	13 Jan 2022	75 - 77	2.70%	Dec 2021	73 - 75



Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-AL-0036	Aluminum scrap segregated low copper alloy clips 5052, mills specialty consumers' buying price, fob shipping point US, US cents/lb	13 Jan 2022	142 - 145	1.77%	Dec 2021	129.4 - 133.6
MB-AL-0039	Aluminum scrap painted siding, specialty consumers' buying price, delivered consumer US, US cents/lb	13 Jan 2022	99 - 102	2.03%	Dec 2021	88 - 91.4
MB-AL-0373	Aluminum scrap used beverage cans, clean & dry, dealer buying price, delivered to yard US, US cents/lb	03 Jan 2022	57	0.00%	Dec 2021	53.5
MB-AL-0035	Aluminum scrap used beverage cans, domestic aluminum producer buying price, fob shipping point US, US cents/lb	13 Jan 2022	95 - 98	2.66%	Dec 2021	84.2 - 87.2
MB-AL-0034	Aluminum scrap non-ferrous auto shred (90% Al) buying price, delivered to Midwest secondary smelters, US cents/lb	13 Jan 2022	80 - 84	2.50%	Dec 2021	75.6 - 78.8
MB-AL-0375	Zorba 95/3 min, basis delivered US facility, US cents/lb	13 Jan 2022	63 - 65	0.79%	Dec 2021	63.2 - 64.4
MB-AL-0161	Aluminum scrap 63S aluminum solids, dealer buying price, delivered to yard Toronto, Canadian cents/lb	03 Jan 2022	177	10.63%	Dec 2021	160
MB-AL-0117	Aluminum scrap old aluminum sheet & cast, dealer buying price, delivered to yard Montreal, Canadian cents/lb	03 Jan 2022	43	0.00%	Dec 2021	43
MB-AL-0101	Aluminum scrap borings, turnings, clean & dry, dealer buying price, delivered to yard Montreal, Canadian cents/lb	03 Jan 2022	20	0.00%	Dec 2021	20
MB-AL-0118	Aluminum scrap old aluminum sheet & cast, dealer buying price, delivered to yard Toronto, Canadian cents/lb	03 Jan 2022	75	2.74%	Dec 2021	73
MB-AL-0102	Aluminum scrap borings, turnings, clean & dry, dealer buying price, delivered to yard Toronto, Canadian cents/lb	03 Jan 2022	50	0.00%	Dec 2021	50
MB-AL-0160	Aluminum scrap 63S aluminum solids, dealer buying price, delivered to yard Montreal, Canadian cents/lb	03 Jan 2022	75	0.00%	Dec 2021	75
MB-AL-0085	Aluminum scrap mixed clips, dealer buying price, delivered to yard Montreal, Canadian cents/lb	03 Jan 2022	50	0.00%	Dec 2021	50
MB-AL-0054	Aluminum scrap segregated low copper clips, dealer buying price, delivered to yard Toronto, Canadian cents/lb	03 Jan 2022	125	9.65%	Dec 2021	113.5
MB-AL-0149	Aluminum scrap industrial castings, dealer buying price, delivered to yard Montreal, Canadian cents/lb	03 Jan 2022	45	0.00%	Dec 2021	45
MB-AL-0150	Aluminum scrap industrial castings, dealer buying price, delivered to yard Toronto, Canadian cents/lb	03 Jan 2022	75	11.94%	Dec 2021	67
MB-AL-0133	Aluminum scrap used beverage cans, clean & dry, dealer buying price, delivered to yard Montreal, Canadian cents/lb	03 Jan 2022	15	0.00%	Dec 2021	15
MB-AL-0134	Aluminum scrap used beverage cans, clean & dry, dealer buying price, delivered to yard Toronto, Canadian cents/lb	03 Jan 2022	98	6.52%	Dec 2021	92
MB-AL-0203	Aluminum scrap painted aluminum siding, dealer buying price, delivered to yard Montreal, Canadian cents/lb	03 Jan 2022	47	0.00%	Dec 2021	47
MB-AL-0204	Aluminum scrap painted aluminum siding, dealer buying price, delivered to yard Toronto, Canadian cents/lb	03 Jan 2022	96	5.49%	Dec 2021	90
MB-AL-0070	Aluminum scrap mixed low copper clips, dealer buying price, delivered to yard Toronto, Canadian cents/lb	03 Jan 2022	103	14.44%	Dec 2021	91.5
MB-AL-0069	Aluminum scrap mixed low copper clips, dealer buying price, delivered to yard Montreal, Canadian cents/lb	03 Jan 2022	45	0.00%	Dec 2021	45
MB-AL-0053	Aluminum scrap segregated low copper clips, dealer buying price, delivered to yard Montreal, Canadian cents/lb	03 Jan 2022	60	0.00%	Dec 2021	60

Canadian aluminium scrap prices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
--------	-------------	------	-------	-----	-------	-----------------



Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-AL-0161	Aluminum scrap 63S aluminum solids, dealer buying price, delivered to yard Toronto, Canadian cents/lb	03 Jan 2022	177	10.63%	Dec 2021	160
MB-AL-0117	Aluminum scrap old aluminum sheet & cast, dealer buying price, delivered to yard Montreal, Canadian cents/lb	03 Jan 2022	43	0.00%	Dec 2021	43
MB-AL-0101	Aluminum scrap borings, turnings, clean & dry, dealer buying price, delivered to yard Montreal, Canadian cents/lb	03 Jan 2022	20	0.00%	Dec 2021	20
MB-AL-0118	Aluminum scrap old aluminum sheet & cast, dealer buying price, delivered to yard Toronto, Canadian cents/lb	03 Jan 2022	75	2.74%	Dec 2021	73
MB-AL-0102	Aluminum scrap borings, turnings, clean & dry, dealer buying price, delivered to yard Toronto, Canadian cents/lb	03 Jan 2022	50	0.00%	Dec 2021	50
MB-AL-0160	Aluminum scrap 63S aluminum solids, dealer buying price, delivered to yard Montreal, Canadian cents/lb	03 Jan 2022	75	0.00%	Dec 2021	75
MB-AL-0085	Aluminum scrap mixed clips, dealer buying price, delivered to yard Montreal, Canadian cents/lb	03 Jan 2022	50	0.00%	Dec 2021	50
MB-AL-0054	Aluminum scrap segregated low copper clips, dealer buying price, delivered to yard Toronto, Canadian cents/lb	03 Jan 2022	125	9.65%	Dec 2021	113.5
MB-AL-0149	Aluminum scrap industrial castings, dealer buying price, delivered to yard Montreal, Canadian cents/lb	03 Jan 2022	45	0.00%	Dec 2021	45
MB-AL-0150	Aluminum scrap industrial castings, dealer buying price, delivered to yard Toronto, Canadian cents/lb	03 Jan 2022	75	11.94%	Dec 2021	67
MB-AL-0133	Aluminum scrap used beverage cans, clean & dry, dealer buying price, delivered to yard Montreal, Canadian cents/lb	03 Jan 2022	15	0.00%	Dec 2021	15
MB-AL-0134	Aluminum scrap used beverage cans, clean & dry, dealer buying price, delivered to yard Toronto, Canadian cents/lb	03 Jan 2022	98	6.52%	Dec 2021	92
MB-AL-0203	Aluminum scrap painted aluminum siding, dealer buying price, delivered to yard Montreal, Canadian cents/lb	03 Jan 2022	47	0.00%	Dec 2021	47
MB-AL-0204	Aluminum scrap painted aluminum siding, dealer buying price, delivered to yard Toronto, Canadian cents/lb	03 Jan 2022	96	5.49%	Dec 2021	90
MB-AL-0070	Aluminum scrap mixed low copper clips, dealer buying price, delivered to yard Toronto, Canadian cents/lb	03 Jan 2022	103	14.44%	Dec 2021	91.5
MB-AL-0069	Aluminum scrap mixed low copper clips, dealer buying price, delivered to yard Montreal, Canadian cents/lb	03 Jan 2022	45	0.00%	Dec 2021	45
MB-AL-0053	Aluminum scrap segregated low copper clips, dealer buying price, delivered to yard Montreal, Canadian cents/lb	03 Jan 2022	60	0.00%	Dec 2021	60

European aluminium scrap prices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-AL-0286	Aluminium scrap group 7 turnings, LME discount, delivered consumer works, UK, £/tonne	12 Jan 2022	1016 - 1056	17.73%	Dec 2021	1043.6 - 1083.6
MB-AL-0015	Aluminium scrap group 7 turnings, delivered consumer UK, £/tonne	12 Jan 2022	730 - 770	0.00%	Dec 2021	720 - 760
MB-AL-0012	Aluminium scrap commercial turnings, delivered consumer UK, £/tonne	12 Jan 2022	860 - 920	0.00%	Dec 2021	854 - 914
MB-AL-0285	Aluminium scrap commercial turnings, LME discount, delivered consumer UK, £/tonne	12 Jan 2022	866 - 926	21.08%	Dec 2021	889.6 - 949.6
MB-AL-0010	Aluminium scrap commercial cast, delivered consumer UK, £/tonne	12 Jan 2022	1180 - 1230	0.00%	Dec 2021	1168 - 1228
MB-AL-0283	Aluminium scrap commercial cast, LME discount, delivered consumer UK, £/tonne	12 Jan 2022	556 - 606	36.71%	Dec 2021	575.6 - 635.6
MB-AL-0011	Aluminium scrap commercial pure cuttings, delivered consumer UK, £/tonne	12 Jan 2022	1230 - 1275	1.01%	Dec 2021	1190 - 1230

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-AL-0279	Aluminium scrap commercial pure cuttings, LME discount, delivered consumer UK, £/tonne	12 Jan 2022	892 - 937	6.96%	Dec 2021	792.2 - 832.2
MB-AL-0017	Aluminium scrap LM6/LM25 gravity diecasting ingot, delivered consumer UK, £/tonne	12 Jan 2022	2450 - 2500	0.61%	Dec 2021	2400 - 2480
MB-AL-0284	Aluminium scrap cast wheels, LME discount, delivered consumer UK, £/tonne	12 Jan 2022	86 - 136		Dec 2021	135.6 - 191.6
MB-AL-0007	Aluminium scrap cast wheels, delivered consumer UK, £/tonne	12 Jan 2022	1650 - 1700	1.21%	Dec 2021	1612 - 1668
MB-AL-0008	Aluminium scrap cast, delivered consumer Europe, €/tonne	14 Jan 2022	1550 - 1600	1.29%	Dec 2021	1530 - 1580
MB-AL-0278	Aluminium scrap group 1 pure 99% & litho, LME discount, delivered consumer UK, £/tonne	12 Jan 2022	197 - 247	16.84%	Dec 2021	124.2 - 174.2
MB-AL-0014	Aluminium scrap group 1 pure 99% & litho, delivered consumer UK, £/tonne	12 Jan 2022	1920 - 1970	2.10%	Dec 2021	1848 - 1898
MB-AL-0281	Aluminium scrap loose old rolled cuttings, LME discount, delivered consumer UK, £/tonne	12 Jan 2022	776 - 826	24.19%	Dec 2021	815.6 - 853.6
MB-AL-0018	Aluminium scrap loose old rolled cuttings, delivered consumer UK, £/tonne	12 Jan 2022	960 - 1010	0.00%	Dec 2021	950 - 988
MB-AL-0282	Aluminium scrap baled old rolled, LME discount, delivered consumer UK, £/tonne	12 Jan 2022	686 - 736	26.96%	Dec 2021	739.6 - 779.6
MB-AL-0006	Aluminium scrap baled old rolled, delivered consumer UK, £/tonne	12 Jan 2022	1050 - 1100	0.47%	Dec 2021	1024 - 1064
MB-AL-0280	Aluminium scrap clean HE9 extrusions, LME discount, delivered consumer UK, £/tonne	12 Jan 2022	197 - 247	16.84%	Dec 2021	122.2 - 172.2
MB-AL-0013	Aluminium scrap floated frag, delivered consumer Europe, €/tonne	14 Jan 2022	1620 - 1670	2.81%	Dec 2021	1550 - 1620
MB-AL-0019	Aluminium scrap mixed turnings, delivered consumer Europe, €/tonne	14 Jan 2022	1370 - 1420	2.95%	Dec 2021	1320 - 1380
MB-AL-0009	Aluminium scrap clean HE9 extrusions, delivered consumer UK, £/tonne	12 Jan 2022	1920 - 1970	2.10%	Dec 2021	1850 - 1900
MB-AL-0016	Aluminium scrap LM24 pressure diecasting ingot, delivered consumer UK, £/tonne	12 Jan 2022	1990 - 2040	0.00%	Dec 2021	1980 - 2038

Secondary aluminium alloy prices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-AL-0005	Aluminium pressure diecasting ingot DIN226/A380, delivered Europe, €/tonne	14 Jan 2022	2360 - 2420	2.36%	Dec 2021	2288 - 2350
MB-AL-0040	Aluminum alloy A380.1, delivered Midwest, US cents/lb	13 Jan 2022	143 - 147	0.35%	Dec 2021	140 - 144.2
MB-AL-0233	Aluminum alloy A380.1, delivered Midwest, \$/lb	13 Jan 2022	1.43 - 1.47	0.00%	Dec 2021	
MB-AL-0041	Aluminum alloy 319.1, delivered Midwest, cents/lb	13 Jan 2022	149 - 153	-0.66%	Dec 2021	146.2 - 150.2
MB-AL-0042	Aluminum alloy 356.1, delivered Midwest, cents/lb	13 Jan 2022	176 - 180	0.00%	Dec 2021	170 - 175
MB-AL-0043	Aluminum alloy A360.1, delivered Midwest, cents/lb	13 Jan 2022	177 - 181	0.00%	Dec 2021	174.2 - 178.8
MB-AL-0044	Aluminum alloy A413.1, delivered Midwest, cents/lb	13 Jan 2022	182 - 187	-0.27%	Dec 2021	178.6 - 181.2
MB-AL-0292	Aluminium ingot ADC 12 spot (MJP), cfr Japan, \$/tonne	12 Jan 2022	2500 - 2550	4.12%	Dec 2021	2460 - 2540
MB-AL-0350	Aluminium ingot ADC 12, exw dp China, yuan/tonne	12 Jan 2022	20600 - 21000	2.72%	Dec 2021	19780 - 20260

Copper scrap No1 & No2 prices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-CU-0417	Copper scrap No1 heavy copper & wire, dealer buying price, delivered to yard US, US cents/lb	03 Jan 2022	360	0.00%	Dec 2021	360



Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-CU-0295	Copper scrap No1 copper, discount, buying price, delivered to brass ingot makers, US cents/lb	12 Jan 2022	(25) - (21)		Dec 2021	(25.4) - (21.8)
MB-CU-0292	Copper scrap No1 copper, discount, buying price, delivered to refiners, US cents/lb	12 Jan 2022	(22) - (18)		Dec 2021	(20) - (16)
MB-CU-0291	Copper scrap No1 copper, discount, buying price, delivered to brass mill US, US cents/lb	12 Jan 2022	(14) - (11)		Dec 2021	(13.8) - (10.8)
MB-CU-0294	Copper scrap No1 bare bright, discount, buying price, delivered to brass ingot makers, US cents/lb	12 Jan 2022	(11) - (7)		Dec 2021	(13) - (10.2)
MB-CU-0305	Copper scrap No1 bare bright, buying price, delivered to brass ingot makers, US cents/lb	14 Jan 2022	431 - 435	-2.91%	Dec 2021	419.9 - 422.67
MB-CU-0306	Copper scrap No1 copper, buying price, delivered to brass ingot makers, US cents/lb	14 Jan 2022	417 - 421	-3.01%	Dec 2021	407.24 - 410.95
MB-CU-0302	Copper scrap No1 copper, buying price, delivered to brass mill US, US cents/lb	14 Jan 2022	429.5	-2.94%	Dec 2021	420.45
MB-CU-0298	Copper scrap No1 comp solids, buying price, delivered to brass ingot makers, US cents/lb	12 Jan 2022	335 - 339	0.15%	Dec 2021	331 - 334.4
MB-CU-0303	Copper scrap No1 copper, buying price, delivered to refiners, US cents/lb	14 Jan 2022	422	-2.99%	Dec 2021	415.1
MB-CU-0010	Copper scrap No1 heavy copper & wire, dealer buying price, delivered to yard Toronto, Canadian cents/lb	03 Jan 2022	483	3.21%	Dec 2021	470.5
MB-CU-0009	Copper scrap No1 heavy copper & wire, dealer buying price, delivered to yard Montreal, Canadian cents/lb	03 Jan 2022	330	0.00%	Dec 2021	330
MB-CU-0512	No1 copper material, RCu-2A,1B (candy/berry), cif China, LME/Comex discount, US cents per lb	27 Dec 2021	9 - 13	0.00%	Dec 2021	9 - 13
MB-CU-0360	No2 copper material, RCu-2B (birch/cliff), cif China, LME/Comex discount, US cents per lb	27 Dec 2021	24 - 28	0.00%	Dec 2021	24 - 28
MB-CU-0025	Copper scrap No2 heavy copper & wire, dealer buying price, delivered to yard Montreal, Canadian cents/lb	03 Jan 2022	293	0.00%	Dec 2021	293
MB-CU-0418	Copper scrap No2 heavy copper & wire, dealer buying price, delivered to yard US, US cents/lb	03 Jan 2022	335	0.00%	Dec 2021	335
MB-CU-0304	Copper scrap No2 copper, buying price, delivered to refiners, US cents/lb	14 Jan 2022	390.5	-3.22%	Dec 2021	380.45
MB-CU-0307	Copper scrap No2 copper, buying price, delivered to brass ingot makers, US cents/lb	14 Jan 2022	388 - 392	-3.23%	Dec 2021	377.67 - 380.24
MB-CU-0293	Copper scrap No2 copper, discount, buying price, delivered to refiners, US cents/lb	12 Jan 2022	(53) - (50)		Dec 2021	(53.8) - (50.8)
MB-CU-0296	Copper scrap No2 copper, discount, buying price, delivered to brass ingot makers, US cents/lb	12 Jan 2022	(54) - (50)		Dec 2021	(55.2) - (52.4)
MB-CU-0026	Copper scrap No2 heavy copper & wire, dealer buying price, delivered to yard Toronto, Canadian cents/lb	03 Jan 2022	455	2.02%	Dec 2021	446

US copper scrap solids, turnings, light, radiators & clips prices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-CU-0421	Copper scrap yellow brass solids, dealer buying price, delivered to yard US, US cents/lb	03 Jan 2022	218	0.00%	Dec 2021	211.5
MB-CU-0301	Copper scrap yellow brass solids, buying price, delivered to brass ingot makers, US cents/lb	12 Jan 2022	275 - 280	0.00%	Dec 2021	269 - 277
MB-CU-0416	Copper scrap mixed yellow brass turnings, borings, dealer buying price, delivered to yard US, US cents/lb	03 Jan 2022	203	0.00%	Dec 2021	193.5
MB-CU-0414	Copper scrap auto radiators (unsweated), dealer buying price, delivered to yard US, US cents/lb	03 Jan 2022	190	0.00%	Dec 2021	180



Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-CU-0300	Copper scrap radiators, buying price, delivered to brass ingot makers, US cents/lb	12 Jan 2022	257 - 262	1.17%	Dec 2021	254.4 - 257.4
MB-CU-0413	Copper scrap 70-30 brass clips, dealer buying price, delivered to yard US, US cents/lb	03 Jan 2022	250	0.00%	Dec 2021	251.5
MB-CU-0415	Copper scrap light copper, dealer buying price, delivered to yard US, US cents/lb	03 Jan 2022	300	0.00%	Dec 2021	300
MB-CU-0297	Copper scrap light copper, discount, buying price, delivered to brass ingot makers, US cents/lb	12 Jan 2022	(60) - (57)		Dec 2021	(60.4) - (56.8)
MB-CU-0308	Copper scrap light copper, buying price, delivered to brass ingot makers, US cents/lb	14 Jan 2022	382 - 385	-3.28%	Dec 2021	372.24 - 375.95
MB-CU-0299	Copper scrap comp borings, turnings, buying price, delivered to brass ingot makers, US cents/lb	12 Jan 2022	320 - 323	0.00%	Dec 2021	317 - 321.2
MB-CU-0419	Copper scrap red brass solids, dealer buying price, delivered to yard US, US cents/lb	03 Jan 2022	267	0.00%	Dec 2021	260
MB-CU-0420	Copper scrap red brass turnings, borings, dealer buying price, delivered to yard US, US cents/lb	03 Jan 2022	235	0.00%	Dec 2021	230

Canadian copper scrap solids, turnings, light, radiators & clips prices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-CU-0119	Copper scrap yellow brass solids, dealer buying price, delivered to yard Montreal, Canadian cents/lb	03 Jan 2022	175	0.00%	Dec 2021	175
MB-CU-0120	Copper scrap yellow brass solids, dealer buying price, delivered to yard Toronto, Canadian cents/lb	03 Jan 2022	322	0.63%	Dec 2021	320
MB-CU-0135	Copper scrap mixed yellow brass turnings, borings, dealer buying price, delivered to yard Montreal, Canadian cents/lb	03 Jan 2022	100	0.00%	Dec 2021	100
MB-CU-0136	Copper scrap mixed yellow brass turnings, borings, dealer buying price, delivered to yard Toronto, Canadian cents/lb	03 Jan 2022	284	0.00%	Dec 2021	284
MB-CU-0196	Copper scrap auto radiators (unsweated), dealer buying price, delivered to yard Montreal, Canadian cents/lb	03 Jan 2022	150	0.00%	Dec 2021	150
MB-CU-0197	Copper scrap auto radiators (unsweated), dealer buying price, delivered to yard Toronto, Canadian cents/lb	03 Jan 2022	291	0.34%	Dec 2021	290
MB-CU-0181	Copper scrap 70-30 brass clips, dealer buying price, delivered to yard Montreal, Canadian cents/lb	03 Jan 2022	180	0.00%	Dec 2021	180
MB-CU-0042	Copper scrap light copper, dealer buying price, delivered to yard Toronto, Canadian cents/lb	03 Jan 2022	482	2.55%	Dec 2021	470
MB-CU-0041	Copper scrap light copper, dealer buying price, delivered to yard Montreal, Canadian cents/lb	03 Jan 2022	265	0.00%	Dec 2021	265
MB-CU-0058	Copper scrap red brass solids, dealer buying price, delivered to yard Toronto, Canadian cents/lb	03 Jan 2022	397	0.76%	Dec 2021	394
MB-CU-0073	Copper scrap red brass turnings, borings, dealer buying price, delivered to yard Montreal, Canadian cents/lb	03 Jan 2022	110	0.00%	Dec 2021	110
MB-CU-0074	Copper scrap red brass turnings, borings, dealer buying price, delivered to yard Toronto, Canadian cents/lb	03 Jan 2022	392	1.29%	Dec 2021	387
MB-CU-0057	Copper scrap red brass solids, dealer buying price, delivered to yard Montreal, Canadian cents/lb	03 Jan 2022	200	0.00%	Dec 2021	200

Chicago nickel scrap prices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
--------	-------------	------	-------	-----	-------	-----------------



Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-NI-0202	Nickel alloy scrap Inconel 601 scrap solids, broker buying price, delivered to yard Chicago, US cents/lb	12 Jan 2022	490 - 529	1.39%	Dec 2021	483 - 523.33
MB-NI-0198	Nickel alloy scrap 309 stainless steel scrap solids, broker buying price, delivered to yard Chicago, US cents/lb	12 Jan 2022	120 - 136	-1.54%	Dec 2021	126.67 - 131.67
MB-NI-0152	Nickel alloy scrap 330 stainless steel scrap solids, dealer buying price, delivered to yard Chicago, US cents/lb	05 Jan 2022	205 - 210	1.22%	Dec 2021	200 - 210
MB-NI-0197	Nickel alloy scrap Inconel 600 scrap, solids, broker buying price, delivered to yard Chicago, US cents/lb	12 Jan 2022	615 - 650	4.98%	Dec 2021	581.67 - 633.33
MB-NI-0154	Nickel alloy scrap Inconel 601 scrap solids, dealer buying price, delivered to yard Chicago, US cents/lb	05 Jan 2022	330 - 365	2.21%	Dec 2021	320 - 360
MB-NI-0151	Nickel alloy scrap 310 stainless steel scrap solids, dealer buying price, delivered to yard Chicago, US cents/lb	05 Jan 2022	130 - 135	-0.38%	Dec 2021	131 - 135
MB-NI-0200	Nickel alloy scrap 330 stainless steel scrap solids, broker buying price, delivered to yard Chicago, US cents/lb	12 Jan 2022	300 - 313	3.03%	Dec 2021	292 - 305.67
MB-NI-0199	Nickel alloy scrap 310 stainless steel scrap solids, broker buying price, delivered to yard Chicago, US cents/lb	12 Jan 2022	190 - 202	1.82%	Dec 2021	188.33 - 196.67
MB-NI-0150	Nickel alloy scrap 309 stainless steel scrap solids, dealer buying price, delivered to yard Chicago, US cents/lb	05 Jan 2022	87 - 93	-0.55%	Dec 2021	90 - 91
MB-NI-0149	Nickel alloy scrap Inconel 600 scrap, solids, dealer buying price, delivered to yard Chicago, US cents/lb	05 Jan 2022	400 - 410	-2.41%	Dec 2021	390 - 440
MB-NI-0155	Nickel scrap 17-4PH stainless steel scrap solids, dealer buying price, delivered to yard Chicago, US cents/lb	05 Jan 2022	30 - 34	-5.88%	Dec 2021	29 - 39
MB-NI-0201	Nickel scrap Invar scrap solids, clips, broker buying price, delivered to yard Chicago, US cents/lb	12 Jan 2022	295 - 310	3.42%	Dec 2021	286.67 - 305.67
MB-NI-0153	Nickel scrap Invar scrap solids, clips, dealer buying price, delivered to yard Chicago, US cents/lb	05 Jan 2022	180 - 210	-4.88%	Dec 2021	200 - 210
MB-NI-0193	Nickel scrap nickel turnings, broker buying price, delivered to yard Chicago, US cents/lb	12 Jan 2022	780 - 855	5.83%	Dec 2021	745 - 818.33
MB-NI-0145	Nickel scrap nickel turnings, dealer buying price, delivered to yard Chicago, US cents/lb	05 Jan 2022	525 - 580	4.25%	Dec 2021	490 - 570
MB-NI-0192	Nickel scrap solids, broker buying price, delivered to yard Chicago, US cents/lb	12 Jan 2022	820 - 900	6.17%	Dec 2021	793.33 - 855
MB-NI-0144	Nickel scrap solids, dealer buying price, delivered to yard Chicago, US cents/lb	05 Jan 2022	560 - 600	1.75%	Dec 2021	545 - 595
MB-NI-0196	Nickel-copper scrap Monel K-500 (castings) solids, clips, broker buying price, delivered to yard Chicago, US cents/lb	12 Jan 2022	410 - 533	0.75%	Dec 2021	453.67 - 522.33
MB-NI-0148	Nickel-copper scrap Monel K-500 (castings) solids, clips, dealer buying price, delivered to yard Chicago, US cents/lb	05 Jan 2022	330 - 360	0.73%	Dec 2021	325 - 360
MB-NI-0194	Nickel-copper scrap Monel R-400 scrap solids, clips, broker buying price, delivered to yard Chicago, US cents/lb	12 Jan 2022	490 - 593	0.65%	Dec 2021	508.33 - 561
MB-NI-0146	Nickel-copper scrap Monel R-400 scrap solids, clips, dealer buying price, delivered to yard Chicago, US cents/lb	05 Jan 2022	360 - 370	2.10%	Dec 2021	345 - 370
MB-NI-0195	Nickel-copper scrap Monel scrap turnings, broker buying price, delivered to yard Chicago, US cents/lb	12 Jan 2022	350 - 483	2.08%	Dec 2021	336.67 - 446
MB-NI-0147	Nickel-copper scrap Monel scrap turnings, dealer buying price, delivered to yard Chicago, US cents/lb	05 Jan 2022	250 - 260	2.00%	Dec 2021	220 - 280
MB-NI-0203	Nickel scrap 17-4PH stainless steel scrap solids, broker buying price, delivered to yard Chicago, US cents/lb	12 Jan 2022	47 - 52	4.21%	Dec 2021	42 - 50.67

Detroit nickel scrap prices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
--------	-------------	------	-------	-----	-------	-----------------



Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-NI-0212	Nickel alloy scrap 330 stainless steel scrap solids, broker buying price, delivered to yard Detroit, US cents/lb	12 Jan 2022	300 - 305	1.68%	Dec 2021	293.67 - 305.67
MB-NI-0162	Nickel alloy scrap 309 stainless steel scrap solids, dealer buying price, delivered to yard Detroit, US cents/lb	05 Jan 2022	80 - 95	-3.31%	Dec 2021	90 - 91
MB-NI-0167	Nickel scrap 17-4PH stainless steel scrap solids, dealer buying price, delivered to yard Detroit, US cents/lb	05 Jan 2022	30 - 36	10.00%	Dec 2021	29 - 31
MB-NI-0214	Nickel alloy scrap Inconel 601 scrap solids, broker buying price, delivered to yard Detroit, US cents/lb	12 Jan 2022	490 - 525	1.00%	Dec 2021	491.33 - 523.33
MB-NI-0211	Nickel alloy scrap 310 stainless steel scrap solids, broker buying price, delivered to yard Detroit, US cents/lb	12 Jan 2022	190 - 202	1.82%	Dec 2021	193 - 196.67
MB-NI-0164	Nickel alloy scrap 330 stainless steel scrap solids, dealer buying price, delivered to yard Detroit, US cents/lb	05 Jan 2022	180 - 215	-3.66%	Dec 2021	200 - 210
MB-NI-0161	Nickel alloy scrap Inconel 600 scrap, solids, dealer buying price, delivered to yard Detroit, US cents/lb	05 Jan 2022	368 - 450	-1.45%	Dec 2021	390 - 440
MB-NI-0210	Nickel alloy scrap 309 stainless steel scrap solids, broker buying price, delivered to yard Detroit, US cents/lb	12 Jan 2022	120 - 136	-1.16%	Dec 2021	129.33 - 131.67
MB-NI-0209	Nickel alloy scrap Inconel 600 scrap, solids, broker buying price, delivered to yard Detroit, US cents/lb	12 Jan 2022	615 - 650	4.98%	Dec 2021	591.33 - 633.33
MB-NI-0166	Nickel alloy scrap Inconel 601 scrap solids, dealer buying price, delivered to yard Detroit, US cents/lb	05 Jan 2022	290 - 365	-4.38%	Dec 2021	325 - 360
MB-NI-0163	Nickel alloy scrap 310 stainless steel scrap solids, dealer buying price, delivered to yard Detroit, US cents/lb	05 Jan 2022	115 - 140	-4.85%	Dec 2021	133 - 135
MB-NI-0213	Nickel scrap Invar scrap solids, clips, broker buying price, delivered to yard Detroit, US cents/lb	12 Jan 2022	295 - 315	4.27%	Dec 2021	291.33 - 305
MB-NI-0165	Nickel scrap Invar scrap solids, clips, dealer buying price, delivered to yard Detroit, US cents/lb	05 Jan 2022	173 - 215	-5.37%	Dec 2021	200 - 210
MB-NI-0205	Nickel scrap nickel turnings, broker buying price, delivered to yard Detroit, US cents/lb	12 Jan 2022	780 - 850	5.50%	Dec 2021	761.33 - 818.33
MB-NI-0157	Nickel scrap nickel turnings, dealer buying price, delivered to yard Detroit, US cents/lb	05 Jan 2022	420 - 580	-7.83%	Dec 2021	515 - 570
MB-NI-0204	Nickel scrap solids, broker buying price, delivered to yard Detroit, US cents/lb	12 Jan 2022	820 - 880	5.92%	Dec 2021	793 - 836.67
MB-NI-0156	Nickel scrap solids, dealer buying price, delivered to yard Detroit, US cents/lb	05 Jan 2022	438 - 600	-7.73%	Dec 2021	545 - 580
MB-NI-0208	Nickel-copper scrap Monel K-500 (castings) solids, clips, broker buying price, delivered to yard Detroit, US cents/lb	12 Jan 2022	410 - 530	1.08%	Dec 2021	458 - 520
MB-NI-0160	Nickel-copper scrap Monel K-500 (castings) solids, clips, dealer buying price, delivered to yard Detroit, US cents/lb	05 Jan 2022	265 - 360	-8.76%	Dec 2021	325 - 360
MB-NI-0206	Nickel-copper scrap Monel R-400 scrap solids, clips, broker buying price, delivered to yard Detroit, US cents/lb	12 Jan 2022	490 - 550	0.00%	Dec 2021	508 - 533.33
MB-NI-0158	Nickel-copper scrap Monel R-400 scrap solids, clips, dealer buying price, delivered to yard Detroit, US cents/lb	05 Jan 2022	300 - 370	-6.29%	Dec 2021	345 - 370
MB-NI-0207	Nickel-copper scrap Monel scrap turnings, broker buying price, delivered to yard Detroit, US cents/lb	12 Jan 2022	350 - 375	3.72%	Dec 2021	336 - 351.67
MB-NI-0159	Nickel-copper scrap Monel scrap turnings, dealer buying price, delivered to yard Detroit, US cents/lb	05 Jan 2022	246 - 280	10.74%	Dec 2021	220 - 255
MB-NI-0215	Nickel scrap 17-4PH stainless steel scrap solids, broker buying price, delivered to yard Detroit, US cents/lb	12 Jan 2022	48 - 50	6.52%	Dec 2021	43 - 46

Houston nickel scrap prices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
--------	-------------	------	-------	-----	-------	-----------------

This material is provided by Euromoney Global Limited (a company registered in England and Wales under number 142215) doing business as Fastmarkets MB and Fastmarkets IM, and Metal Bulletin Holdings LLC doing business as Fastmarkets AMM, collectively referred to in the material as 'Fastmarkets'. It is provided to you subject to your compliance with the terms of your license agreement with Fastmarkets, in addition to the Fastmarkets Copyright Notice and Disclaimer.

If you need additional access please contact hello@fastmarkets.com

© Fastmarkets 2022



Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-NI-0222	Nickel alloy scrap 309 stainless steel scrap solids, broker buying price, delivered to yard Houston, US cents/lb	12 Jan 2022	113 - 125	1.28%	Dec 2021	112.67 - 123.33
MB-NI-0178	Nickel alloy scrap Inconel 601 scrap solids, dealer buying price, delivered to yard Houston, US cents/lb	05 Jan 2022	365 - 400	-1.80%	Dec 2021	389 - 390
MB-NI-0175	Nickel alloy scrap 310 stainless steel scrap solids, dealer buying price, delivered to yard Houston, US cents/lb	05 Jan 2022	135 - 152	12.55%	Dec 2021	100 - 155
MB-NI-0227	Nickel scrap 17-4PH stainless steel scrap solids, broker buying price, delivered to yard Houston, US cents/lb	12 Jan 2022	59 - 60	20.20%	Dec 2021	49.33 - 54.67
MB-NI-0174	Nickel alloy scrap 309 stainless steel scrap solids, dealer buying price, delivered to yard Houston, US cents/lb	05 Jan 2022	85 - 100	15.63%	Dec 2021	75 - 85
MB-NI-0224	Nickel alloy scrap 330 stainless steel scrap solids, broker buying price, delivered to yard Houston, US cents/lb	12 Jan 2022	281 - 295	-5.42%	Dec 2021	291.67 - 298.33
MB-NI-0221	Nickel alloy scrap Inconel 600 scrap, solids, broker buying price, delivered to yard Houston, US cents/lb	12 Jan 2022	560 - 561	-11.66%	Dec 2021	612.33 - 613.33
MB-NI-0179	Nickel scrap 17-4PH stainless steel scrap solids, dealer buying price, delivered to yard Houston, US cents/lb	05 Jan 2022	25 - 35	1.69%	Dec 2021	29 - 30
MB-NI-0226	Nickel alloy scrap Inconel 601 scrap solids, broker buying price, delivered to yard Houston, US cents/lb	12 Jan 2022	471 - 490	-8.39%	Dec 2021	488 - 503.33
MB-NI-0223	Nickel alloy scrap 310 stainless steel scrap solids, broker buying price, delivered to yard Houston, US cents/lb	12 Jan 2022	178 - 190	0.27%	Dec 2021	176 - 186.33
MB-NI-0176	Nickel alloy scrap 330 stainless steel scrap solids, dealer buying price, delivered to yard Houston, US cents/lb	05 Jan 2022	210 - 236	11.50%	Dec 2021	150 - 250
MB-NI-0173	Nickel alloy scrap Inconel 600 scrap, solids, dealer buying price, delivered to yard Houston, US cents/lb	05 Jan 2022	450 - 500	11.76%	Dec 2021	400 - 450
MB-NI-0225	Nickel scrap Invar scrap solids, clips, broker buying price, delivered to yard Houston, US cents/lb	12 Jan 2022	281 - 310	0.34%	Dec 2021	287.33 - 297.33
MB-NI-0177	Nickel scrap Invar scrap solids, clips, dealer buying price, delivered to yard Houston, US cents/lb	05 Jan 2022	210 - 248	-0.43%	Dec 2021	220 - 240
MB-NI-0217	Nickel scrap nickel turnings, broker buying price, delivered to yard Houston, US cents/lb	12 Jan 2022	639 - 660	-10.35%	Dec 2021	676.33 - 741.67
MB-NI-0169	Nickel scrap nickel turnings, dealer buying price, delivered to yard Houston, US cents/lb	05 Jan 2022	500 - 540	12.43%	Dec 2021	425 - 500
MB-NI-0216	Nickel scrap solids, broker buying price, delivered to yard Houston, US cents/lb	12 Jan 2022	743 - 775	-8.50%	Dec 2021	784.67 - 816.67
MB-NI-0168	Nickel scrap solids, dealer buying price, delivered to yard Houston, US cents/lb	05 Jan 2022	585 - 675	26.00%	Dec 2021	400 - 600
MB-NI-0220	Nickel-copper scrap Monel K-500 (castings) solids, clips, broker buying price, delivered to yard Houston, US cents/lb	12 Jan 2022	515 - 590	-3.83%	Dec 2021	528 - 573.33
MB-NI-0172	Nickel-copper scrap Monel K-500 (castings) solids, clips, dealer buying price, delivered to yard Houston, US cents/lb	05 Jan 2022	400 - 412	16.17%	Dec 2021	349 - 350
MB-NI-0218	Nickel-copper scrap Monel R-400 scrap solids, clips, broker buying price, delivered to yard Houston, US cents/lb	12 Jan 2022	560 - 605	-0.34%	Dec 2021	566.33 - 586.67
MB-NI-0170	Nickel-copper scrap Monel R-400 scrap solids, clips, dealer buying price, delivered to yard Houston, US cents/lb	05 Jan 2022	410 - 448	14.55%	Dec 2021	374 - 375
MB-NI-0219	Nickel-copper scrap Monel scrap turnings, broker buying price, delivered to yard Houston, US cents/lb	12 Jan 2022	340 - 445	4.81%	Dec 2021	353 - 416.67
MB-NI-0171	Nickel-copper scrap Monel scrap turnings, dealer buying price, delivered to yard Houston, US cents/lb	05 Jan 2022	260 - 356	7.13%	Dec 2021	250 - 325

**Pittsburgh nickel scrap prices**

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-NI-0238	Nickel alloy scrap Inconel 601 scrap solids, broker buying price, delivered to yard Pittsburgh, US cents/lb	12 Jan 2022	470 - 525	-0.50%	Dec 2021	458.33 - 538.33
MB-NI-0235	Nickel alloy scrap 310 stainless steel scrap solids, broker buying price, delivered to yard Pittsburgh, US cents/lb	12 Jan 2022	175 - 202	1.89%	Dec 2021	175 - 196.67
MB-NI-0188	Nickel alloy scrap 330 stainless steel scrap solids, dealer buying price, delivered to yard Pittsburgh, US cents/lb	05 Jan 2022	200 - 210	6.49%	Dec 2021	175 - 210
MB-NI-0185	Nickel alloy scrap Inconel 600 scrap, solids, dealer buying price, delivered to yard Pittsburgh, US cents/lb	05 Jan 2022	370 - 475	0.00%	Dec 2021	370 - 475
MB-NI-0191	Nickel scrap 17-4PH stainless steel scrap solids, dealer buying price, delivered to yard Pittsburgh, US cents/lb	05 Jan 2022	22 - 40	10.71%	Dec 2021	21 - 35
MB-NI-0187	Nickel alloy scrap 310 stainless steel scrap solids, dealer buying price, delivered to yard Pittsburgh, US cents/lb	05 Jan 2022	125 - 135	23.81%	Dec 2021	75 - 135
MB-NI-0234	Nickel alloy scrap 309 stainless steel scrap solids, broker buying price, delivered to yard Pittsburgh, US cents/lb	12 Jan 2022	120 - 140	-1.89%	Dec 2021	125.67 - 135.33
MB-NI-0239	Nickel scrap 17-4PH stainless steel scrap solids, broker buying price, delivered to yard Pittsburgh, US cents/lb	12 Jan 2022	45 - 55	5.26%	Dec 2021	40.67 - 54
MB-NI-0236	Nickel alloy scrap 330 stainless steel scrap solids, broker buying price, delivered to yard Pittsburgh, US cents/lb	12 Jan 2022	280 - 310	0.85%	Dec 2021	278.33 - 305.67
MB-NI-0233	Nickel alloy scrap Inconel 600 scrap, solids, broker buying price, delivered to yard Pittsburgh, US cents/lb	12 Jan 2022	600 - 650	3.73%	Dec 2021	570 - 639.33
MB-NI-0190	Nickel alloy scrap Inconel 601 scrap solids, dealer buying price, delivered to yard Pittsburgh, US cents/lb	05 Jan 2022	330 - 400	2.10%	Dec 2021	325 - 390
MB-NI-0186	Nickel alloy scrap 309 stainless steel scrap solids, dealer buying price, delivered to yard Pittsburgh, US cents/lb	05 Jan 2022	86 - 100	19.23%	Dec 2021	65 - 91
MB-NI-0237	Nickel scrap Invar scrap solids, clips, broker buying price, delivered to yard Pittsburgh, US cents/lb	12 Jan 2022	280 - 310	0.00%	Dec 2021	278.33 - 310
MB-NI-0189	Nickel scrap Invar scrap solids, clips, dealer buying price, delivered to yard Pittsburgh, US cents/lb	05 Jan 2022	171 - 210	-1.04%	Dec 2021	175 - 210
MB-NI-0229	Nickel scrap nickel turnings, broker buying price, delivered to yard Pittsburgh, US cents/lb	12 Jan 2022	775 - 850	4.84%	Dec 2021	740.33 - 820
MB-NI-0181	Nickel scrap nickel turnings, dealer buying price, delivered to yard Pittsburgh, US cents/lb	05 Jan 2022	525 - 625	5.50%	Dec 2021	515 - 575
MB-NI-0228	Nickel scrap solids, broker buying price, delivered to yard Pittsburgh, US cents/lb	12 Jan 2022	820 - 880	5.26%	Dec 2021	788.33 - 840
MB-NI-0180	Nickel scrap solids, dealer buying price, delivered to yard Pittsburgh, US cents/lb	05 Jan 2022	560 - 650	3.42%	Dec 2021	545 - 625
MB-NI-0232	Nickel-copper scrap Monel K-500 (castings) solids, clips, broker buying price, delivered to yard Pittsburgh, US cents/lb	12 Jan 2022	410 - 530	-1.05%	Dec 2021	435 - 520
MB-NI-0184	Nickel-copper scrap Monel K-500 (castings) solids, clips, dealer buying price, delivered to yard Pittsburgh, US cents/lb	05 Jan 2022	280 - 360	-0.78%	Dec 2021	270 - 375
MB-NI-0230	Nickel-copper scrap Monel R-400 scrap solids, clips, broker buying price, delivered to yard Pittsburgh, US cents/lb	12 Jan 2022	450 - 590	3.48%	Dec 2021	446.67 - 553.33
MB-NI-0182	Nickel-copper scrap Monel R-400 scrap solids, clips, dealer buying price, delivered to yard Pittsburgh, US cents/lb	05 Jan 2022	340 - 390	2.10%	Dec 2021	315 - 400
MB-NI-0231	Nickel-copper scrap Monel scrap turnings, broker buying price, delivered to yard Pittsburgh, US cents/lb	12 Jan 2022	300 - 375	-9.40%	Dec 2021	298.33 - 376.67
MB-NI-0183	Nickel-copper scrap Monel scrap turnings, dealer buying price, delivered to yard Pittsburgh, US cents/lb	05 Jan 2022	220 - 301	4.20%	Dec 2021	220 - 280

**Lead scrap prices**

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-PB-0004	Lead scrap buying price, delivered smelters US, \$/cwt	11 Jan 2022	81 - 85	0.61%	Dec 2021	80 - 85
MB-PB-0003	Lead scrap remelt buying price, delivered smelters US, \$/cwt	11 Jan 2022	87 - 90	0.00%	Dec 2021	87 - 90
MB-PB-0002	Lead scrap cable buying price, delivered smelters US, \$/cwt	11 Jan 2022	86 - 90	0.00%	Dec 2021	86 - 90
MB-PB-0111	Lead scrap heavy soft lead, dealer buying price, delivered to yard US, US cents/lb	03 Jan 2022	38	0.00%	Dec 2021	38
MB-PB-0112	Lead scrap undrained whole batteries, dealer buying price, delivered to yard US, US cents/lb	03 Jan 2022	15	0.00%	Dec 2021	15.5
MB-PB-0005	Lead scrap whole batteries buying price, delivered smelters US, \$/cwt	11 Jan 2022	26 - 30	3.70%	Dec 2021	26 - 28
MB-PB-0009	Lead scrap heavy soft lead, dealer buying price, delivered to yard Montreal, Canadian cents/lb	03 Jan 2022	50	0.00%	Dec 2021	50
MB-PB-0010	Lead scrap heavy soft lead, dealer buying price, delivered to yard Toronto, Canadian cents/lb	03 Jan 2022	68	6.25%	Dec 2021	64
MB-PB-0033	Lead scrap undrained whole batteries, dealer buying price, delivered to yard Montreal, Canadian cents/lb	03 Jan 2022	15	0.00%	Dec 2021	16.5

Zinc scrap prices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-ZN-0122	Zinc scrap old zinc scrap, dealer buying price, delivered to yard US, US cents/lb	03 Jan 2022	35	0.00%	Dec 2021	27.5
MB-ZN-0004	Zinc scrap old zinc (clean), buying price, delivered smelters US, US cents/lb	11 Jan 2022	69 - 72	4.44%	Dec 2021	66 - 69
MB-ZN-0003	Zinc scrap new zinc clippings buying price, delivered smelters US, US cents/lb	11 Jan 2022	88 - 91	3.47%	Dec 2021	85 - 88
MB-ZN-0002	Zinc scrap galvanizers dross buying price, delivered smelters US, US cents/lb	11 Jan 2022	87 - 92	4.07%	Dec 2021	84 - 88
MB-ZN-0050	Zinc scrap old zinc, dealer buying price, delivered to yard Montreal, Canadian cents/lb	03 Jan 2022	30	0.00%	Dec 2021	30

Titanium scrap prices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-TI-0002	Titanium scrap turnings, unprocessed type 90/6/4, 0.5-2% Sn max, cif Europe, \$/lb	12 Jan 2022	1.8 - 1.9	0.00%	Dec 2021	1.8 - 1.9
MB-TI-0001	Titanium scrap turnings, unprocessed type 90/6/4, 0.5% Sn max, cif Europe, \$/lb	12 Jan 2022	1.8 - 2	0.00%	Dec 2021	1.8 - 2



Minor metals prices

Source: dashboard.fastmarkets.com/m/1fa335bf-a37e-4af1-90ad-ddc3eb8d0576

Global cobalt metal & intermediate prices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-CO-0005	Cobalt standard grade, in-whs Rotterdam, \$/lb	14 Jan 2022	34 - 34.4	0.00%	Dec 2021	32.78 - 33.56
MB-CO-0004	Cobalt alloy grade, in-whs Rotterdam, \$/lb	14 Jan 2022	34 - 34.4	0.00%	Dec 2021	32.78 - 33.56
MB-CO-0001	Cobalt 99.8% Co min, ex-works China, yuan/tonne	14 Jan 2022	500000 - 515000	0.69%	Dec 2021	474500 - 484800
MB-CO-0017	Cobalt sulfate 20.5% Co basis, exw China, yuan/tonne	14 Jan 2022	104000 - 105000	0.48%	Dec 2021	97000 - 98800
MB-CO-0012	Cobalt tetroxide 72.6% Co min, delivered China, yuan/tonne	14 Jan 2022	400000 - 405000	0.63%	Dec 2021	367600 - 373000
MB-CO-0020	Cobalt hydroxide index 30% Co min, cif China, \$/lb	14 Jan 2022	29.71	1.40%	Dec 2021	27.47
MB-CO-0021	Cobalt hydroxide payable indicator, min 30% Co, cif China, % payable of Fastmarkets' standard-grade cobalt price (low-end)	14 Jan 2022	88 - 90	0.00%	Dec 2021	88.2 - 90
MB-CO-0023	Cobalt hydroxide, min 30% Co, inferred, China, \$/lb	14 Jan 2022	30.26	0.00%	Dec 2021	

Europe minor metals prices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-CO-0004	Cobalt alloy grade, in-whs Rotterdam, \$/lb	14 Jan 2022	34 - 34.4	0.00%	Dec 2021	32.78 - 33.56
MB-CO-0005	Cobalt standard grade, in-whs Rotterdam, \$/lb	14 Jan 2022	34 - 34.4	0.00%	Dec 2021	32.78 - 33.56
MB-AS-0001	Arsenic 99% min As, in-whs Rotterdam, \$/lb	14 Jan 2022	1.4 - 1.7	0.00%	Dec 2021	1.4 - 1.7
MB-SB-0002	Antimony MMTA standard grade II, in-whs Rotterdam, \$/tonne	14 Jan 2022	13000 - 13600	-0.75%	Dec 2021	12870 - 13560
MB-SB-0001	Antimony max 100 ppm Bi, in-whs Rotterdam, \$/tonne	14 Jan 2022	13100 - 13600	0.00%	Dec 2021	12900 - 13600
MB-BI-0001	Bismuth 99.99% Bi min, in-whs Rotterdam, \$/lb	14 Jan 2022	3.9 - 4.2	0.00%	Dec 2021	3.95 - 4.2
MB-CR-0001	Chromium alumino-thermic 99% min, in-whs Rotterdam, \$/tonne	14 Jan 2022	11700 - 12850	-2.00%	Dec 2021	11760 - 12910
MB-GA-0001	Gallium 99.99% Ga min, in-whs Rotterdam, \$/kg	14 Jan 2022	390 - 415	0.00%	Dec 2021	390 - 412
MB-GER-0003	Germanium 99.99% Ge, in-whs Rotterdam, \$/kg	14 Jan 2022	1410 - 1480	0.00%	Dec 2021	1393 - 1465
MB-IN-0002	Indium 99.99%, in-whs Rotterdam, \$/kg	14 Jan 2022	252 - 285	-0.56%	Dec 2021	257 - 290.5
MB-MG-0001	Magnesium 99.9%, in-whs Rotterdam, \$/tonne	14 Jan 2022	8550 - 9050	0.00%	Dec 2021	8060 - 8620
MB-MN-0001	Manganese 99.7% electrolytic manganese flake, in-whs Rotterdam, \$/tonne	14 Jan 2022	7100 - 7400	0.00%	Dec 2021	7290 - 7590
MB-RE-0001	Rhenium APR catalytic grade, in-whs dup Rotterdam, \$/kg	14 Jan 2022	995 - 1100	5.28%	Dec 2021	890 - 1100
MB-RE-0002	Rhenium metal pellets 99.9% Re min, in-whs dup, Rotterdam \$/lb	14 Jan 2022	360 - 600	-9.43%	Dec 2021	360 - 700
MB-SE-0002	Selenium 99.5% Se min, in-whs Rotterdam, \$/lb	14 Jan 2022	9.7 - 11.25	0.00%	Dec 2021	9.7 - 10.94
MB-SI-0004	Silicon grade 5-5-3 98.5% Si min, in-whs Rotterdam, €/tonne	14 Jan 2022	4100 - 5700	-5.77%	Dec 2021	5300 - 6000
MB-SI-0001	Silicon grade 4-4-1 99% Si min, in-whs Rotterdam, €/tonne	14 Jan 2022	5000 - 6500	-4.17%	Dec 2021	5500 - 6500
MB-TE-0001	Tellurium 99.9-99.99% Te min, in-whs Rotterdam, \$/kg	14 Jan 2022	60 - 75	0.00%	Dec 2021	60.6 - 73.5

China minor metals prices

Symbol	Description	Date	Price	+/-	Month	Monthly Average

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-CO-0001	Cobalt 99.8% Co min, ex-works China, yuan/tonne	14 Jan 2022	500000 - 515000	0.69%	Dec 2021	474500 - 484800
MB-CO-0021	Cobalt hydroxide payable indicator, min 30% Co, cif China, % payable of Fastmarkets' standard-grade cobalt price (low-end)	14 Jan 2022	88 - 90	0.00%	Dec 2021	88.2 - 90
MB-CO-0020	Cobalt hydroxide index 30% Co min, cif China, \$/lb	14 Jan 2022	29.71	1.40%	Dec 2021	27.47
MB-CO-0023	Cobalt hydroxide, min 30% Co, inferred, China, \$/lb	14 Jan 2022	30.26	0.00%	Dec 2021	
MB-CO-0017	Cobalt sulfate 20.5% Co basis, exw China, yuan/tonne	14 Jan 2022	104000 - 105000	0.48%	Dec 2021	97000 - 98800
MB-CO-0012	Cobalt tetroxide 72.6% Co min, delivered China, yuan/tonne	14 Jan 2022	400000 - 405000	0.63%	Dec 2021	367600 - 373000
MB-SB-0003	Antimony MMTA standard grade II, ddp China, yuan/tonne	14 Jan 2022	73000 - 74000	0.00%	Dec 2021	73000 - 74000
MB-BI-0002	Bismuth 99.99% Bi min, in-whs China, yuan/tonne	14 Jan 2022	43000 - 44000	-2.25%	Dec 2021	44800 - 45300
MB-GA-0002	Gallium 99.99% Ga min, in-whs China, yuan/kg	14 Jan 2022	2280 - 2300	-1.51%	Dec 2021	2372 - 2450
MB-GER-0004	Germanium 99.999% Ge min, in-whs China, yuan/kg	14 Jan 2022	9200 - 9450	0.00%	Dec 2021	9180 - 9450
MB-GER-0001	Germanium dioxide, in-whs China, \$/kg	14 Jan 2022	920 - 955	0.00%	Dec 2021	912 - 955
MB-IN-0003	Indium 99.99%, exw China, yuan/kg	14 Jan 2022	1450 - 1480	-0.68%	Dec 2021	1508 - 1542
MB-MG-0002	Magnesium 99.9% Mg min, fob China main ports, \$/tonne	14 Jan 2022	7200 - 7300	-13.69%	Dec 2021	7180 - 7400
MB-MG-0003	Magnesium 99.9%, exw China, yuan/tonne	14 Jan 2022	41000 - 43000	-18.45%	Dec 2021	43000 - 44400
MB-MN-0007	Manganese 99.7% electrolytic manganese flake, fob China, \$/tonne	14 Jan 2022	6500 - 6700	0.00%	Dec 2021	6260 - 6500
MB-SI-0002	Silicon export 98.5% Si min, fob China, \$/tonne	14 Jan 2022	3050 - 3200	0.00%	Dec 2021	3180 - 3360
MB-SE-0003	Selenium 99.9% Se min, in-whs China, yuan/kg	14 Jan 2022	130 - 170	0.00%	Dec 2021	130 - 183
MB-TE-0002	Tellurium 99.99% Te min, in-whs China, yuan/kg	14 Jan 2022	450 - 460	0.00%	Dec 2021	458 - 465
MB-TA-0001	Tantalite, basis 25% min Ta2O5, cif China, \$ per lb Ta2O5	14 Jan 2022	82 - 85	1.83%	Dec 2021	76.4 - 81.6

US minor metals prices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-CR-0002	Chromium alumino-thermic 99% min ex-US warehouse \$/lb	13 Jan 2022	4.85 - 5	0.00%	Dec 2021	4.85 - 5
MB-SI-0003	Silicon, ddp US, US cents/lb	13 Jan 2022	450 - 500	-2.56%	Dec 2021	468 - 496
MB-TI-0007	Titanium plate commercially pure, fob shipping point US, \$/lb	10 Jan 2022	11 - 13	0.00%	Dec 2021	11 - 13
MB-TI-0006	Titanium bar alloy AMS 4928, fob shipping point US, \$/lb	10 Jan 2022	24 - 25	0.00%	Dec 2021	24 - 25
MB-TI-0004	Titanium ingot 6Al-4V, fob shipping point US, \$/lb	10 Jan 2022	8 - 8.5	0.00%	Dec 2021	8 - 8.5
MB-TI-0008	Titanium sheet commercially pure, fob shipping point US, \$/lb	10 Jan 2022	13 - 15	0.00%	Dec 2021	13 - 15
MB-TI-0005	Titanium plate alloy AMS 4911, fob shipping point US, \$/lb	10 Jan 2022	27 - 28	0.00%	Dec 2021	27 - 28

Global location minor metals prices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-CD-0001	Cadmium 99.95% min, cif global ports, cents/lb	14 Jan 2022	125 - 140	0.00%	Dec 2021	125 - 138.8
MB-CD-0002	Cadmium 99.99% min, cif global ports, cents/lb	14 Jan 2022	130 - 140	0.00%	Dec 2021	130 - 140
MB-HF-0001	Hafnium, max 1% Zr, in-whs global locations, \$/kg	14 Jan 2022	900 - 1100	0.00%	Dec 2021	900 - 1083.33



Base metals prices

Source: dashboard.fastmarkets.com/m/d7d11f17-248b-4073-82c4-f750b2994d8e

Aluminium prices & premiums

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-AL-0343	Aluminium P1020A (MJP) spot premium, cif Japan, \$/tonne	14 Jan 2022	160 - 180	0.00%	Dec 2021	161.67 - 180
MB-AL-0001	Aluminium P1020A (MJP) quarterly premium, cif Japan, \$/tonne	07 Jan 2022	177	-18.62%	Dec 2021	215 - 220
MB-AL-0344	Aluminium P1020A premium, cif South Korea, \$/tonne	11 Jan 2022	170 - 180	6.06%	Dec 2021	160 - 170
MB-AL-0307	Aluminium P1020A premium, fca South Korea, \$/tonne	11 Jan 2022	175 - 185	0.00%	Dec 2021	175 - 185
MB-AL-0329	Aluminium P1020A premium, cif Taiwan, \$/tonne	11 Jan 2022	160 - 200	0.00%	Dec 2021	167.5 - 200
MB-AL-0328	Aluminium P1020A premium, bonded in-whs, Shanghai, \$/tonne	29 Dec 2021	50 - 80	-13.33%	Dec 2021	50 - 80
MB-AL-0345	Aluminium P1020A premium, cif Shanghai, \$/tonne	29 Dec 2021	50 - 70	-7.69%	Dec 2021	50 - 70
MB-AL-0346	Aluminium P1020A premium, in-whs dup Rotterdam, \$/tonne	14 Jan 2022	350 - 360	3.65%	Dec 2021	250.24 - 266.43
MB-AL-0004	Aluminium P1020A premium, in-whs dp Rotterdam, \$/tonne	14 Jan 2022	430 - 460	0.57%	Dec 2021	321.11 - 345
MB-AL-0316	Aluminium P1020A premium, fca dp Italy, \$/tonne	11 Jan 2022	490 - 510	14.94%	Dec 2021	377.5 - 396.25
MB-AL-0319	Aluminium P1020A premium, fca dp Spain, \$/tonne	11 Jan 2022	490 - 500	20.73%	Dec 2021	382.5 - 397.5
MB-AL-0021	Aluminium P1020A premium, delivered Sao Paulo region, \$/tonne	11 Jan 2022	400 - 450	13.33%	Dec 2021	375 - 425
MB-AL-0022	Aluminium P1020A premium, cif dup Brazilian main ports, \$/tonne	11 Jan 2022	380 - 410	1.28%	Dec 2021	380 - 400
MB-AL-0020	Aluminium P1020A premium, ddp Midwest US, US cents/lb	14 Jan 2022	31.5 - 34.5	5.16%	Dec 2021	27.22 - 29.78
MB-AL-0231	Aluminum P1020A all-in price, delivered Midwest US, US cents/lb	14 Jan 2022	166.31 - 169.31	1.56%	Dec 2021	149.23 - 151.99
MB-AL-0337	Aluminium P1020A premium, cif dup Turkey, \$/tonne	11 Jan 2022	340 - 350	4.55%	Dec 2021	295 - 310
MB-AL-0381	Aluminium low-carbon differential P1020A, Europe, \$/tonne	07 Jan 2022	0 - 10	0.00%	Dec 2021	0 - 10
MB-AL-0378	Aluminium P1020A premium, in-whs dp Rotterdam, inferred low-carbon midpoint, \$/tonne	14 Jan 2022	450	0.56%	Dec 2021	338.06
MB-AL-0377	Aluminium P1020A premium, in-whs dup Rotterdam, inferred low-carbon midpoint, \$/tonne	14 Jan 2022	360	3.60%	Dec 2021	263.33
MB-AL-0333	Aluminium P1020A warrant premium, in-whs Southeast Asia, \$/tonne	12 Jan 2022	50 - 70	9.09%	Dec 2021	40 - 62
MB-AL-0334	Aluminium P1020A, warrant premium, in-whs East Asia, \$/tonne	12 Jan 2022	40 - 65	0.00%	Dec 2021	40 - 66
MB-AL-0338	Aluminium P1020A warrant premium, in-whs US, \$/tonne	12 Jan 2022	115 - 125	0.00%	Dec 2021	115 - 125
MB-AL-0297	Aluminium 6063 extrusion billet premium, cif Thailand, \$/tonne	14 Jan 2022	465 - 500	1.58%	Dec 2021	465 - 485
MB-AL-0298	Aluminium 6063 extrusion quarterly billet premium, cif MJP, \$/tonne	15 Oct 2021	180 - 200	16.92%	Dec 2021	180 - 200
MB-AL-0302	Aluminium 6063 extrusion billet premium, ddp North Germany (Ruhr region), \$/tonne	14 Jan 2022	1500 - 1550	0.33%	Dec 2021	1470 - 1520
MB-AL-0300	Aluminium 6063 extrusion billet premium, ddp Italy (Brescia region), \$/tonne	14 Jan 2022	1500 - 1550	0.33%	Dec 2021	1470 - 1540
MB-AL-0299	Aluminium 6063 extrusion billet premium, ddp Spain, \$/tonne	14 Jan 2022	1500 - 1550	4.10%	Dec 2021	1430 - 1500
MB-AL-0002	Aluminium 6063 extrusion billet premium, in-whs dp Rotterdam, \$/tonne	14 Jan 2022	1460 - 1510	0.34%	Dec 2021	1430 - 1480
MB-AL-0296	Aluminium 6063 extrusion billet premium, cif Turkey (Marmara region), \$/tonne	14 Jan 2022	700 - 750	0.00%	Dec 2021	700 - 750
MB-AL-0052	Aluminum 6063 extrusion billet premium, delivered Midwest US, US cents/lb	14 Jan 2022	27 - 34	17.31%	Dec 2021	24 - 28



Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-AL-0287	Aluminium 6063 & 6060 extrusion billet premium, cif Brazilian main ports, \$/tonne	14 Jan 2022	700 - 720	1.43%	Dec 2021	680 - 720
MB-AL-0382	Aluminium low-carbon differential value-added product, Europe, \$/tonne	07 Jan 2022	20 - 30	0.00%	Dec 2021	20 - 30
MB-AL-0379	Aluminium 6063 extrusion billet premium, ddp Italy (Brescia region), inferred low-carbon midpoint, \$/tonne	14 Jan 2022	1550	0.32%	Dec 2021	1530
MB-AL-0380	Aluminium 6063 extrusion billet premium, ddp North Germany (Ruhr region), inferred low-carbon midpoint, \$/tonne	14 Jan 2022	1550	0.32%	Dec 2021	1520
MB-AL-0341	Aluminium primary foundry alloy silicon 7 ingot premium, cif dup over P1020A Turkey, \$/tonne	14 Jan 2022	500 - 600	0.00%	Dec 2021	500 - 600
MB-AL-0349	Aluminium primary foundry alloy silicon 7 ingot annual premium, cif MJP, \$/tonne	15 Jan 2021	100 - 120	-15.38%	Dec 2021	100 - 120
MB-AL-0348	Aluminium primary foundry alloy silicon 7 ingot annual premium, cif main South Korean ports, \$/tonne	15 Jan 2021	90 - 120	0.00%	Dec 2021	90 - 120
MB-AL-0342	Aluminium primary foundry alloy silicon 7 ingot /T-bar premium, dlvd dup over P1020A Midwest US, US cents/lb	14 Jan 2022	17 - 22	62.50%	Dec 2021	11 - 13
MB-AL-0340	Aluminium primary foundry alloy silicon 7 ingot premium, ddp Eastern Europe, \$/tonne	14 Jan 2022	850 - 900	9.38%	Dec 2021	750 - 850
MB-AL-0339	Aluminium primary foundry alloy silicon 7 ingot premium, ddp Germany, \$/tonne	14 Jan 2022	850 - 900	9.38%	Dec 2021	750 - 850
MB-AL-0045	Aluminum 6061 alloyed ingot, US cents/lb	03 Jan 2022	1.67 - 1.73	3.03%	Dec 2021	1.61 - 1.69
MB-AL-0046	Aluminum 6063 alloyed ingot, US cents/lb	03 Jan 2022	1.75 - 1.81	2.89%	Dec 2021	1.69 - 1.77
MB-AL-0277	Aluminum alloy C355.2 ingot, delivered, \$/lb	14 Jan 2022	2.13	0.95%	Dec 2021	1.86
MB-AL-0289	Aluminium import arbitrage, \$/tonne	14 Jan 2022	(106.67)		Dec 2021	(116.34)
MB-AL-0290	Aluminium import arbitrage, yuan/tonne	14 Jan 2022	(678.94)		Dec 2021	(742.36)
MB-AL-0256	Aluminium fixing price for LME trade, rand/tonne	14 Jan 2022	45695.1	0.81%	Dec 2021	42891.1

Metallurgical bauxite & alumina prices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-ALU-0010	Alumina index inferred, fob Brazil, \$/dmt	14 Jan 2022	356.14	-0.13%	Dec 2021	372.3
MB-ALU-0003	Alumina index adjustment to fob Australia index, Brazil, \$/dmt	13 Jan 2022	10.18	-20.53%	Dec 2021	14.54
MB-ALU-0002	Alumina index, fob Australia, \$/tonne	14 Jan 2022	345.96	-0.14%	Dec 2021	356.24
MB-ALU-0001	Alumina metallurgical grade, exw China, yuan/tonne	13 Jan 2022	2700 - 2950	2.73%	Dec 2021	2810 - 2980
MB-BX-0015	Bauxite, fob Trombetas, Brazil, \$/dmt	16 Dec 2021	32	0.00%	Dec 2021	32
MB-BX-0014	Bauxite, fob Kamsar, Guinea, \$/dmt	16 Dec 2021	27	0.00%	Dec 2021	27

Copper prices & premiums

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-CU-0412	Copper EQ cathode premium, cif Shanghai, \$/tonne	11 Jan 2022	(15) - 0		Dec 2021	5 - 20
MB-CU-0411	Copper EQ cathode premium, cif Europe, \$/tonne	11 Jan 2022	20 - 30	0.00%	Dec 2021	20 - 30
MB-CU-0369	Copper grade A cathode premium, cif Rotterdam, \$/tonne	11 Jan 2022	50 - 60	10.00%	Dec 2021	45 - 55
MB-CU-0372	Copper grade A cathode premium, delivered Germany, \$/tonne	11 Jan 2022	110 - 130	41.18%	Dec 2021	80 - 90
MB-CU-0406	Copper grade A cathode premium, cif Leghorn, \$/tonne	11 Jan 2022	85 - 95	9.09%	Dec 2021	75 - 90



Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-CU-0380	Copper grade A cathode ER premium, cif Shanghai, \$/tonne	14 Jan 2022	65 - 72	0.00%	Dec 2021	84.14 - 94.62
MB-CU-0383	Copper grade A cathode ER premium, bonded in-whs Shanghai, \$/tonne	14 Jan 2022	66 - 75	0.00%	Dec 2021	94.52 - 104.9
MB-CU-0403	Copper grade A cathode premium, cif Shanghai, \$/tonne	14 Jan 2022	55 - 72	0.00%	Dec 2021	75.24 - 94.62
MB-CU-0405	Copper grade A cathode premium, in-whs Shanghai, \$/tonne	14 Jan 2022	60 - 75	0.00%	Dec 2021	84.52 - 104.9
MB-CU-0384	Copper grade A cathode SX-EW premium, cif Shanghai, \$/tonne	14 Jan 2022	55 - 62	0.00%	Dec 2021	75.24 - 81.81
MB-CU-0382	Copper grade A cathode SX-EW premium, bonded in-whs Shanghai, \$/tonne	14 Jan 2022	60 - 66	0.00%	Dec 2021	84.52 - 93.67
MB-CU-0399	Copper grade A cathode premium, cif Southeast Asia, \$/tonne	11 Jan 2022	80 - 90	0.00%	Dec 2021	80 - 90
MB-CU-0386	Copper grade A cathode premium, cif Taiwan, \$/tonne	11 Jan 2022	75 - 90	0.00%	Dec 2021	75 - 90
MB-CU-0404	Copper grade A cathode premium, cif South Korea, \$/tonne	11 Jan 2022	75 - 85	0.00%	Dec 2021	75 - 85
MB-CU-0310	Copper grade 1 cathode premium, ddp Midwest US, \$/tonne	11 Jan 2022	176.37 - 220.46	0.00%	Dec 2021	
MB-CU-0002	Copper grade 1 cathode premium, ddp Midwest US, US cents/lb	11 Jan 2022	8 - 10	0.00%	Dec 2021	8 - 10
MB-CU-0309	Copper grade 1 cathode all-in price, ddp Midwest US, US cents/lb	14 Jan 2022	449.15 - 451.15	-2.65%	Dec 2021	440.72 - 442.72
MB-CU-0400	Copper grade A cathode warrant premium, in-whs North Europe, \$/tonne	12 Jan 2022	5 - 10	0.00%	Dec 2021	5 - 10
MB-CU-0401	Copper grade A cathode warrant premium, in-whs South Europe, \$/tonne	12 Jan 2022	15 - 25	0.00%	Dec 2021	15 - 25
MB-CU-0397	Copper grade A cathode warrant premium, in-whs Southeast Asia, \$/tonne	12 Jan 2022	15 - 40	10.00%	Dec 2021	13 - 24
MB-CU-0398	Copper grade A cathode warrant premium, in-whs East Asia \$/tonne	12 Jan 2022	10 - 20	0.00%	Dec 2021	13 - 23
MB-CU-0377	Copper grade A cathode warrant premium, in-whs US, \$/tonne	12 Jan 2022	10 - 25	0.00%	Dec 2021	10 - 25
MB-CU-0336	Copper Aurubis grade A cathode annual premium, exw Europe, \$/tonne	16 Jan 2019	96	11.63%	Dec 2021	
MB-CU-0410	Copper rod premium, ddp Midwest US, US cents/lb	06 Jan 2022	21 - 23	0.00%	Dec 2021	21 - 23
MB-CU-0361	Copper import arbitrage, \$/tonne	14 Jan 2022	(41.08)		Dec 2021	14.61
MB-CU-0362	Copper import arbitrage, yuan/tonne	14 Jan 2022	(261.45)		Dec 2021	93.24
MB-CU-0338	Copper fixing price for LME trade, rand/tonne	14 Jan 2022	151933.32	-0.51%	Dec 2021	151838.38
MB-CU-0321	Copper Republican copper price for Palabora 7.90mm South Africa Rand per tonne	30 Nov 2021	151699.21	4.46%	Dec 2021	

Copper concentrate & copper blister prices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-CU-0287	Copper concentrates TC index, cif Asia Pacific, \$/tonne	14 Jan 2022	60	2.21%	Dec 2021	56.44
MB-CU-0288	Copper concentrates RC index, cif Asia Pacific, US cents/lb	14 Jan 2022	6	2.21%	Dec 2021	5.64
MB-CU-0422	Copper concentrates counterparty spread, \$/tonne	04 Jan 2022	9.58	-8.33%	Dec 2021	10.45
MB-CU-0423	Copper Concentrates Co-VIU, \$/tonne	04 Jan 2022	(0.45)		Dec 2021	0.28
MB-CU-0508	Copper concentrates TC implied smelters purchase, cif Asia Pacific, \$/tonne	14 Jan 2022	64.79	2.05%	Dec 2021	61.67
MB-CU-0510	Copper concentrates RC implied smelters purchase, cif Asia Pacific, cents/lb	14 Jan 2022	6.48	2.05%	Dec 2021	6.17
MB-CU-0509	Copper concentrates TC implied traders purchase, cif Asia Pacific, \$/tonne	14 Jan 2022	55.21	2.41%	Dec 2021	51.22
MB-CU-0511	Copper concentrates RC implied traders purchase, cif Asia Pacific, cents/lb	14 Jan 2022	5.52	2.41%	Dec 2021	5.12



Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-CU-0408	Copper blister 98-99% RC spot, cif China, \$/tonne	31 Dec 2021	150 - 170	0.00%	Dec 2021	150 - 170
MB-CU-0409	Copper blister 98-99% RC annual benchmark, cif China, \$/tonne	31 Dec 2021	145 - 165	6.90%	Dec 2021	145 - 165

Nickel prices & premiums

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-NI-0241	Nickel briquette premium, delivered Midwest US, US cents/lb	11 Jan 2022	65 - 90	0.00%	Dec 2021	67.5 - 90
MB-NI-0242	Nickel 4x4 cathode all-in price, delivered Midwest US, US cents/lb	14 Jan 2022	1090.83 - 1100.83	3.05%	Dec 2021	962.9 - 970.76
MB-NI-0243	Nickel briquette all-in price, delivered Midwest US, US cents/lb	14 Jan 2022	1100.83 - 1125.83	3.00%	Dec 2021	975.29 - 997.9
MB-NI-0240	Nickel 4x4 cathode premium, delivered Midwest US, US cents/lb	11 Jan 2022	55 - 65	0.00%	Dec 2021	55 - 63.75
MB-NI-0245	Nickel min 99.8% briquette premium, cif Shanghai, \$/tonne	29 Dec 2021	400 - 500	28.57%	Dec 2021	400 - 500
MB-NI-0142	Nickel min 99.8% full plate premium, cif Shanghai, \$/tonne	11 Jan 2022	330 - 350	7.94%	Dec 2021	305 - 335
MB-NI-0143	Nickel min 99.8% full plate premium, in-whs Shanghai, \$/tonne	11 Jan 2022	350 - 375	8.21%	Dec 2021	325 - 352.5
MB-NI-0001	Nickel 4x4 cathode premium, in-whs Rotterdam, \$/tonne	11 Jan 2022	220 - 290	0.00%	Dec 2021	220 - 290
MB-NI-0002	Nickel briquette premium, in-whs Rotterdam, \$/tonne	11 Jan 2022	150 - 170	0.00%	Dec 2021	150 - 170
MB-NI-0003	Nickel uncut cathode premium, in-whs Rotterdam, \$/tonne	11 Jan 2022	70 - 90	0.00%	Dec 2021	70 - 90
MB-NI-0139	Nickel min 99.8% full plate warrant premium, in-whs East Asia, \$/tonne	12 Jan 2022	30 - 45	0.00%	Dec 2021	30 - 43
MB-NI-0137	Nickel min 99.8% full plate warrant premium, in-whs Southeast Asia, \$/tonne	12 Jan 2022	30 - 45	0.00%	Dec 2021	30 - 45
MB-NI-0140	Nickel min 99.8% briquette warrant premium, in-whs East Asia, \$/tonne	12 Jan 2022	50 - 60	0.00%	Dec 2021	50 - 60
MB-NI-0138	Nickel min 99.8% briquette warrant premium, in-whs Southeast Asia, \$/tonne	12 Jan 2022	50 - 60	0.00%	Dec 2021	50 - 60
MB-NI-0141	Nickel min 99.8% warrant premium, in-whs North Europe, \$/tonne	12 Jan 2022	50 - 175	0.00%	Dec 2021	38 - 157
MB-NI-0244	Nickel sulfate min 21%, max 22.5%; cobalt 10ppm max, exw China, yuan/tonne	14 Jan 2022	36000 - 37000	2.82%	Dec 2021	34500 - 35300
MB-NI-0246	Nickel sulfate, cif China, Japan and Korea, \$/tonne	04 Jan 2022	4898	-1.33%	Dec 2021	4964
MB-NI-0247	Nickel sulfate premium, cif China, Japan and Korea, \$/tonne	04 Jan 2022	1900	-17.39%	Dec 2021	2300
MB-NI-0107	Nickel import arbitrage, yuan/tonne	14 Jan 2022	3937.14	-20.19%	Dec 2021	1610.79
MB-NI-0106	Nickel import arbitrage, \$/tonne	14 Jan 2022	618.58	-20.04%	Dec 2021	252.32
MB-NI-0093	Nickel fixing price for LME trade, rand/tonne	14 Jan 2022	350674.38	3.48%	Dec 2021	319300.16

Nickel ore & laterite ore prices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-NIO-0001	Nickel ore 1.8% basis 15-20% Fe water content: 30-35% Si:Mg ratio<2 lot size 50,000 tonnes, cif China, \$/tonne	14 Jan 2022	115 - 118	0.00%	Dec 2021	116.8 - 120.4
MB-NIO-0002	Laterite ore with 1.5% Ni content, cif China, \$/tonne	14 Jan 2022	81 - 83	0.00%	Dec 2021	81 - 83

Lead prices & premiums

Symbol	Description	Date	Price	+/-	Month	Monthly Average
--------	-------------	------	-------	-----	-------	-----------------



Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-PB-0108	Lead 99.99% ingot premium, cif Southeast Asia, \$/tonne	07 Dec 2021	125 - 145	-1.82%	Dec 2021	125 - 145
MB-PB-0107	Lead 99.97% ingot premium, cif Southeast Asia, \$/tonne	07 Dec 2021	80 - 110	0.00%	Dec 2021	80 - 110
MB-PB-0084	Lead 99.97% ingot premium, cif Taiwan, \$/tonne	11 Jan 2022	100 - 120	2.33%	Dec 2021	100 - 115
MB-PB-0083	Lead 99.99% ingot premium, cif Taiwan, \$/tonne	11 Jan 2022	140 - 150	3.57%	Dec 2021	135 - 145
MB-PB-0087	Lead 99.97% ingot premium, cif India, \$/tonne	04 Jan 2022	50 - 130	0.00%	Dec 2021	50 - 130
MB-PB-0086	Lead 99.99% ingot premium, cif India, \$/tonne	04 Jan 2022	140 - 150	0.00%	Dec 2021	140 - 150
MB-PB-0099	Lead 99.99% ingot premium, delivered Midwest US, US cents/lb	11 Jan 2022	19 - 22	0.00%	Dec 2021	18 - 20.5
MB-PB-0006	Lead 99.97% ingot premium, ddp Midwest US, US cents/lb	11 Jan 2022	17 - 20	0.00%	Dec 2021	16 - 19
MB-PB-0056	Lead 99.97% ingot all-in price, ddp Midwest US, US cents/lb	14 Jan 2022	124.98 - 127.98	0.57%	Dec 2021	120.1 - 123.1
MB-PB-0109	Lead 99.97% ingot warrant premium, in-whs North Europe, \$/tonne	12 Jan 2022	30 - 50	0.00%	Dec 2021	24 - 42
MB-PB-0110	Lead 99.97% ingot warrant premium, in-whs South Europe, \$/tonne	12 Jan 2022	30 - 50	0.00%	Dec 2021	24 - 38
MB-PB-0106	Lead min 99.97% ingot warrant premium, in-whs East Asia \$/tonne	12 Jan 2022	5 - 20	0.00%	Dec 2021	5 - 20
MB-PB-0105	Lead min 99.97% ingot warrant premium, in-whs Southeast Asia \$/tonne	12 Jan 2022	5 - 20	0.00%	Dec 2021	5 - 20
MB-PB-0097	Lead 99.97% ingot warrant premium, in-whs US, \$/tonne	12 Jan 2022	20 - 30	0.00%	Dec 2021	20 - 30
MB-PB-0064	Lead fixing price for LME trade, rand/tonne	14 Jan 2022	36571.42	0.89%	Dec 2021	36595.63

Lead concentrate prices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-PB-0101	Lead concentrate TC High Silver, Annual Benchmark, \$ per tonne	03 Jun 2019	98	0.00%	Dec 2021	98
MB-PB-0100	Lead concentrate TC, low silver, annual benchmark, \$/tonne	15 Mar 2018	99	-28.26%	Dec 2021	99
MB-PB-0103	Lead spot concentrate TC, low silver, cif China, \$/tonne	31 Dec 2021	55 - 75	0.00%	Dec 2021	55 - 75
MB-PB-0104	Lead spot concentrate TC, high silver, cif China, \$/tonne	31 Dec 2021	50 - 70	0.00%	Dec 2021	50 - 70

Tin prices & premiums

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-SN-0029	Tin 99.9% low lead ingot premium, in-whs Rotterdam, \$/tonne	11 Jan 2022	1500 - 2000	0.00%	Dec 2021	1500 - 2000
MB-SN-0002	Tin 99.9% ingot premium, in-whs Rotterdam, \$ per tonne	11 Jan 2022	1000 - 1400	0.00%	Dec 2021	1050 - 1400
MB-SN-0036	Tin 99.85% ingot premium, in-whs Baltimore, \$/tonne	11 Jan 2022	1900 - 2200	0.00%	Dec 2021	1900 - 2200
MB-SN-0038	Tin 99.9% ingot premium, cif Taiwan, \$/tonne	11 Jan 2022	350 - 500	0.00%	Dec 2021	325 - 450
MB-SN-0012	Tin grade A min 99.85% ingot all-in price, ddp Midwest US, \$/tonne	14 Jan 2022	42900 - 43300	-2.36%	Dec 2021	41668.81 - 42197.38
MB-SN-0011	Tin grade A min 99.85% ingot premium, ddp Midwest US, \$/tonne	11 Jan 2022	2100 - 2500	0.00%	Dec 2021	2100 - 2500
MB-SN-0042	Tin min 99.85% ingot warrant premium, in-whs South East Asia, \$/tonne	12 Jan 2022	50 - 150	0.00%	Dec 2021	50 - 150
MB-SN-0005	Tin rand fixing price for LME trade, rand/tonne	14 Jan 2022	626916.78	-2.18%	Dec 2021	629447.24

Zinc prices & premiums

Symbol	Description	Date	Price	+/-	Month	Monthly Average



Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-ZN-0115	Zinc SHG 99.995% ingot premium, fca Malaysia, \$/per tonne	11 Jan 2022	140 - 150	-3.33%	Dec 2021	140 - 155
MB-ZN-0113	Zinc SHG 99.995% ingot premium, fca Singapore, \$/per tonne	11 Jan 2022	140 - 150	-3.33%	Dec 2021	140 - 155
MB-ZN-0093	Zinc SHG min 99.995% ingot premium, cif Southeast Asia, \$/tonne	11 Jan 2022	145 - 160	0.00%	Dec 2021	145 - 160
MB-ZN-0116	Zinc SHG 99.995% ingot premium, cif Taiwan \$/tonne	11 Jan 2022	150 - 160	0.00%	Dec 2021	150 - 160
MB-ZN-0119	Zinc min 99.995% ingot premium, in-whs Shanghai, \$/tonne	11 Jan 2022	80 - 90	0.00%	Dec 2021	77.5 - 87.5
MB-ZN-0106	Zinc SHG min 99.995% ingot premium, cif Shanghai, \$/per tonne	11 Jan 2022	80 - 90	0.00%	Dec 2021	77.5 - 87.5
MB-ZN-0102	Zinc SHG min 99.995% ingot premium, ddp Italy, \$/per tonne	11 Jan 2022	380 - 420	0.00%	Dec 2021	380 - 420
MB-ZN-0103	Zinc SHG min 99.995% ingot premium, fca dp Italy, \$/tonne	11 Jan 2022	350 - 380	0.00%	Dec 2021	350 - 380
MB-ZN-0099	Zinc SHG min 99.995% ingot premium, dp fca Antwerp, \$/tonne	11 Jan 2022	300 - 350	6.56%	Dec 2021	260 - 290
MB-ZN-0001	Zinc SHG min 99.995% ingot premium, dp fca Rotterdam, \$/tonne	11 Jan 2022	300 - 350	6.56%	Dec 2021	260 - 290
MB-ZN-0082	Zinc SHG min 99.995% ingot premium monthly average, delivered UK, £/tonne	04 Jan 2022	2822	6.57%	Dec 2021	2648
MB-ZN-0005	Zinc SHG min 99.995% ingot premium, ddp Midwest US, US cents/lb	11 Jan 2022	18 - 22	17.65%	Dec 2021	15 - 19
MB-ZN-0061	Zinc SHG min 99.995% ingot all-in price, ddp Midwest US, US cents/lb	14 Jan 2022	179.36 - 183.36	-0.37%	Dec 2021	169.16 - 173.16
MB-ZN-0104	Zinc SHG min 99.995% warrant premium, in-whs US, \$/per tonne	12 Jan 2022	10 - 15	0.00%	Dec 2021	10 - 15
MB-ZN-0117	Zinc SHG min 99.995% warrant premium, in-whs North Europe, \$/tonne	12 Jan 2022	80 - 100	0.00%	Dec 2021	80 - 100
MB-ZN-0123	Zinc SHG min 99.995% warrant premium, in-whs Southeast Asia, \$/tonne	12 Jan 2022	10 - 30	0.00%	Dec 2021	10 - 20
MB-ZN-0083	Zinc import arbitrage, \$/tonne	14 Jan 2022	(249.75)		Dec 2021	(243.21)
MB-ZN-0084	Zinc import arbitrage, yuan/tonne	14 Jan 2022	(1589.61)		Dec 2021	(1552.06)
MB-ZN-0072	Zinc rand fixing price for LME trade, rand/tonne	14 Jan 2022	54634.61	-0.20%	Dec 2021	54173.84

Zinc concentrate & zinc alloy prices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-ZN-0121	Zinc concentrate TC spot, delivered South China, yuan/tonne	31 Dec 2021	3650 - 3950	-2.56%	Dec 2021	3650 - 3950
MB-ZN-0120	Zinc concentrate TC spot, delivered North China, yuan/tonne	31 Dec 2021	3950 - 4100	-1.83%	Dec 2021	3950 - 4100
MB-ZN-0110	Zinc spot concentrate TC, cif China, \$/per tonne	14 Jan 2022	90 - 120	17.98%	Dec 2021	74 - 97.5
MB-ZN-0111	Zinc concentrate TC annual benchmark, cif China, \$/per tonne	24 Jul 2019	245	66.67%	Dec 2021	245