

All metals news

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Top stories

Kamoa to build Cu smelter at DRC complex

By Yasemin Esmen - Thursday 18 November

A day after Kamoa Copper reported its first full quarter of production, the company announced that it will build a smelter in its Kamoa-Kakula Copper Complex in the Democratic Republic of Congo (DRC).

Kamoa Copper announced on Wednesday November 17 that it produced 41,545 tonnes of copper concentrate in the three months ending September 30.

Approximately 35% of this was sent to the local Lualaba Copper Smelter near Kolwezi for processing into blister copper ingots. The remainder was destined for international markets, the company said.

Production in the mine started in May 2021 and achieved commercial production in July. Reaching a total of 77,500 tonnes of copper concentrate produced by November 15, the company revised its 2021 production guidance to 92,500-100,000 tonnes from the initial 80,000-95,000 tonnes.

“Turning an operating profit in just the first quarter of commercial production at Kamoa highlights the ability of the mine to deliver as promised, and to self-fund its expansion to produce up to 800,000 tonnes of copper yearly, as demonstrated in previous independent studies,” Ivanhoe Mines founder and executive co-chair Robert Friedland said.

Kamoa Copper is a joint venture between Ivanhoe Mines, Zijin Mining Group, Crystal River Global Limited, and the Government of the Democratic Republic of Congo.

On Thursday November 18, the company announced that China Nerin Engineering was awarded the basic engineering contract for the planned smelter at Kamoa-Kakula Copper Complex.

The direct-to-blister flash smelter will be built adjacent to the company’s concentrator plants and will incorporate technology from sustainable technology producer Metso Outotec. It has been sized to process the majority of the copper concentrate forecast to be produced by Kamoa-Kakula’s Phase 1, Phase 2 and Phase 3 concentrators, Kamoa Copper said.

The smelter will have a nameplate capacity of 500,000 tonnes per annum of 99% purity blister copper. It will be built concurrently with the project’s Phase 3 mine and concentrator expansion, and the upgrading of turbine 5 at the Inga II hydropower complex, the company said.

Earthworks for the smelter is expected to start in the second quarter 2022.

US rebar prices up slightly at 13-year high

By Abby Verret - Thursday 18 November

Domestic steel reinforcing bar prices in the United States increased slightly to a 13-year high, with many market participants expecting it to go up again before long.

Fastmarkets’ price assessment for [steel reinforcing bar \(rebar\)](#), fob mill US was \$50.50 per hundredweight (\$1,010 per short ton) on Wednesday November 18, up by 0.50% from the week before and at its highest point since the assessment hit an all-time peak of \$52.80 per cwt in July 2008.

US market

The [recent round of rebar mill hikes](#) has [taken hold slowly in the market](#), but consensus remains that the increases have been accepted and will likely not be the last of the year.

Most participants agree that seasonal slowdowns, price-honored orders and well-stocked inventories have led to new mill spot prices taking longer than usual to fully appear in the market.

The increases will stick though, and there could be at least one more round of mill hikes before the end of the year, according to various sources.

“I’m actually surprised we didn’t see another increase recently since scrap went up more than the \$40-per-ton rebar increase,” one Midwest fabricator source said about the unexpectedly high November price jump for shredded scrap, rebar’s key feedstock.

Scrap prices are expected to go up again or at least [hold at the current high levels in December](#), increasing the likelihood of another rebar price hike in the minds of market participants.

Some sources have also said rebar mills are busier compared to usual November trends, further supporting another potential price increase. Multiple market participants have mentioned lead times remain in the three-six week range.

Imports

Fastmarkets’ assessment for [steel reinforcing bar \(rebar\)](#), import, loaded truck Port of Houston for immediate delivery was at \$980-1,000 per ton (\$49-50 per cwt) on November 18, flat since November 3.

With prices similar to domestic material and ongoing complications such as Section 232 ambiguity and long lead times, market participants continue to expect less foreign rebar to come in for the next few months.



Cu scrap tags static with year-end needs met

By Kirstyn Petras - Thursday 18 November

The copper scrap market in the United States remained stable on Wednesday November 17, with market participants reporting little price movements heading towards the end of the year.

"I do feel like 2022 will be a better year for demand but that remains to be seen," one market source said.

Copper scrap discounts for refiners and brass mills were rangebound on Wednesday, with Comex copper prices little changed week on week.

The most-active December Comex copper contract settled at \$4.266 per lb on Wednesday, down slightly from \$4.323 per lb on November 10. The contract had increased to \$4.4495 per lb on November 12, but saw a steady decline the remainder of the week.

Fastmarkets assessed the copper scrap No1 copper, discount, buying price, delivered to refiners at 18-22 cents per lb on November 17, unchanged from the previous week. Copper scrap No2 copper, discount, buying price, delivered to refiners was also unchanged at 52-55 cents per lb.

Brass ingot makers' scrap discounts were also stable, with copper scrap No1 bare bright, discount, buying price, delivered to brass ingot makers assessed at 11-13 cents per lb November 17.

Brass scrap price movements were mostly rangebound, with one seller indicating that brass prices were the only ones seeing movement.

The buying price for yellow brass solids, delivered to brass ingot makers increased for the second consecutive week. The price moved up to \$2.70-2.75 per lb November 17 from \$2.62-2.70 per lb November 10.

Last week, one producer said that buyers have been looking for supply of yellow brass solids but less product has been available due to overseas competition, leading to increasing prices.

Buying prices for comp borings, turnings, delivered to brass ingot makers and radiators, delivered to brass ingot makers, however, were steady at \$3.15-3.20 per lb and \$2.53-2.57 per lb, respectively.

COPPER AND BRASS SCRAP		
Brass mill scrap discounts*	11/17/2021	11/10/2021
No1 copper	12 to 15	12 to 15
Refiners' copper scrap discounts*	11/17/2021	11/10/2021
No1 copper	18 to 22	18 to 22
No2 copper	52 to 55	52 to 55
Brass ingot makers' scrap discounts*	11/17/2021	11/10/2021
No1 bare bright	11 to 13	11 to 13
No1	23 to 27	23 to 27
No2	55 to 57	55 to 57
Light copper	58 to 62	58 to 62
Brass ingot makers' scrap prices (in cents per lb)	11/17/2021	11/10/2021
No1 comp solids	328 to 332	328 to 332
Comp borings, turnings	315 to 320	324 to 329
Radiators	253 to 257	253 to 257
Yellow brass solids	270 to 275	262 to 270
*Discounts, in cents, based on the most actively traded Comex copper contract.		Source: Fastmarkets

Nucor to add blast, prime line at KY plate mill

By Abby Verret - Thursday 18 November

Nucor Corp will add a blast and prime line at its new steel plate mill that is under construction in Brandenburg, Kentucky, the company announced in a release on Thursday November 18.

The line will have approximately a 120,000-ton annual capacity, the Charlotte, North Carolina-headquartered steel producer said.

"By adding a blast and prime line to our state-of-the-art plate mill, we will be able to better serve customers in key markets, including our nation's military, infrastructure, heavy equipment, offshore wind and other energy products," vice president and general manager of Nucor Steel Brandenburg Johnny Jacobs said.

The mill, which is scheduled to come online in the fourth quarter of 2022, will be able to produce 97% of domestically-consumed plate products, according to Nucor.

The Brandenburg plate mill is a \$1.7 billion capital investment and will provide approximately 400 jobs once fully operational.

Fastmarkets' assessment for steel cut-to-length plate carbon grade, fob mill US held at \$90 per hundredweight (\$1,800 per short ton) on November 12, an all-time high and up sharply from \$27.50 per cwt one year earlier.

John Deere workers ratify contract, end strike

By Robert England - Thursday 18 November

United Autoworkers (UAW) employees ratified a new six-year labor contract with John Deere & Company on Wednesday November 17 ending a strike that began on October 14.

By a vote of 61-39%, union members approved a collective bargaining agreement covering more than 10,000 production and maintenance employees at 14 facilities across the United States.

John May, chairman and chief executive officer was upbeat about the agreement and the return of workers that began with the first shift on Thursday November 18. "I'm pleased our highly skilled employees are back to work building and supporting the industry-leading products which make our customers more profitable and sustainable."

Both management and labor representatives described the new labor contract as groundbreaking.

"Through our collective bargaining agreements, we're giving employees the opportunity to earn wages and benefits that are the best in our industries, and are groundbreaking in many ways," May said.

United Autoworkers touted the agreement's \$8,500 signing bonus, 20% increase in wages over the lifetime of the contract (10% the first year), the return of cost-of-living adjustments, three 3% lump-sum payments, and enhanced retirement and performance benefits. Healthcare benefits remained unchanged.

"Our members courageous willingness to strike in order to attain a better standard of living and a more secure retirement resulted in a groundbreaking contract and sets a new standard for workers not only within the UAW but throughout the country," according to Chuck Browning, vice president of the UAW and director of the UAW Agricultural implement department.

Fastmarkets' assessment for [steel cut-to-length plate carbon grade, fob mill US](#) held at \$90 per hundredweight (\$1,800 per short ton) on November 12, an all-time high and up sharply from \$27.50 per cwt one year earlier.

Cleveland-Cliffs completes FPT acquisition

By Amy Hinton - Thursday 18 November

Cleveland-Cliffs Inc has completed the planned \$775 million purchase of Ferrous Trading & Processing Co (FPT), the company announced on Thursday November 18.

Detroit-based FPT is now a wholly-owned subsidiary of Cleveland-Cliffs following the receipt of regulatory approval pertaining to the acquisition on Wednesday November 17. A number of the former's associated entities, unspecified by Cliffs in its announcement, now come under the latter's umbrella as part of the buyout.

Cliffs announced that it had [entered into an agreement to buy FPT on October 11](#) in a deal comprising 22 of its scrap processing facilities and marks the Cleveland-based steelmaker's much-lauded entrance into the US scrap arena.

This strategic consolidation will ensure prime scrap flow to Cliffs' existing steelmaking facilities, with the steelmaker able to absorb FPT's estimated 15% share of the US prime scrap market. FPT processes an estimated 1.5 million tpy of prime scrap.

Fastmarkets assessed the [steel scrap No1 busheling, consumer buying price, delivered mill](#) at \$640 per gross ton on November 8, up from \$620 per gross ton in October's ferrous trade.

"The way the scrap business historically worked has now changed for good. With our closing of the FPT acquisition today, we are now immediately focused on amplifying the value of what we believe is the next precious metal. To drive this, we have already begun the dialogue with our steel customers with a focus on increasing our scrap offtake from them under a real closed-loop proposition. We are starting from a position of strength with the existing business that FPT has in place, and are excited to expand upon this core using the FPT scalable footprint," chief executive officer Lourenco Goncalves said following the deal's closure.

Chinese nickel sulfate producers face squeeze in annual contract talks

By Yingchi Yang - Thursday 18 November

Chinese nickel sulfate producers face difficult annual contract negotiations for 2022, with upstream miners taking an aggressive stance while downstream battery precursor material producers are hinting at lower demand amid plans to implement integrated operations.

The Chinese nickel sulfate price has undergone considerable volatility in 2021, climbing in August to its highest since Fastmarkets began tracking the market in July 2018 amid a shortage of mixed hydroxide precipitate (MHP), the key raw material.

But the price has trended lower in the past two months because of the increased supply of MHP along with more nickel briquette being imported into China as an alternative to nickel sulfate.

Fastmarkets assessed the price of [nickel sulfate min 21%, max 22.5%; cobalt 10ppm max, exw China](#) at 35,500-36,000 yuan (\$5,560-5,639) per tonne on Friday November 12, unchanged from a week earlier week but down by 2,000-2,500 yuan per tonne from the all-time high of 37,500-38,500 yuan per

tonne reached on August 13.

"With more battery precursor producers either actively sourcing materials directly from miners or setting up joint ventures with foreign partners to invest in upstream raw materials production projects, there is probably no need for them to purchase nickel sulfate from the refineries in the future," a nickel sulfate buyer told Fastmarkets.

As well, a growing market share of lithium iron phosphate (LFP) batteries in China continues to deter buying of nickel sulfate from nickel-cobalt-manganese (NCM) battery precursor producers, putting further pressure on nickel sulfate producers.

"We heard that previously some NCM battery precursor producers, who are meant to be the buyers [of nickel sulfate], were even selling nickel sulfate," a Shanghai-based trader told Fastmarkets.

Strong feedstock prices

China's nickel sulfate producers mainly use MHP as a raw material for production, while nickel briquette and nickel powder, attained via sulfuric acid dissolving, along with scrap and nickel matte are some other raw materials typically used.

Although MHP supply in China has increased after [the start-up of Lygend's Indonesia HPAL projects](#) and [the resumption of the New Caledonia MHP project](#), strong demand both from refineries and end users continues to underpin prices.

Combined global MHP/mixed sulphide precipitate (MSP) production will total 215,000 tonnes of contained nickel in 2021, up by 37,000 tonnes from 178,000 tonnes in 2020, Fastmarkets' research team estimates.

Total output of NCM batteries in China in the first 10 months of the year was 72.0GWh, up by 165% from a year earlier, according to the China Battery Cooperation Union.

"We did see that some upstream suppliers broke their contracts and stopped selling MHP to refineries to raise and re-negotiate the contract prices [for MHP] earlier this year so they are really strong," a nickel sulfate producer source told Fastmarkets.

"Although we know that currently LFP batteries are more popular in the Chinese domestic market considering its cheap price, NCM batteries still have a high output, supporting the stable demand of MHP," the same source added.

MHP payables - as a percentage of the nickel cash price on the London Metal Exchange - have therefore been firm at historically high levels.

"It is hard for MHP payables to drop due to the strong demand, and they have only retreated slightly from their highest ever level of 94-95% of the LME nickel cash price to sit at 92-93%, so the upstream miners and suppliers still have great bargain power with that," Vicky Zhao, senior analyst on Fastmarkets' battery raw materials research team, said.

The price of the most popular nickel sulfate alternative - nickel briquette - also continued to rise because the metal's long-term contract negotiations for 2022 have been tough for buyers.

Chinese buyers are resisting offer prices for 2022 that are much higher than for 2021 while the demand for nickel metals in the Korean and Japanese markets, which are usually higher priced than Chinese market, has been strong recently.

"We have to give high offers [of briquette] to Chinese buyers because it is the same price that we closed our other deals at with market participants from other countries so why should we lower it?" a source at one of the biggest nickel miners in the world told Fastmarkets.

"We are still confident about the EV [electric vehicle] market and demand for our nickel briquette," the same miner source added.

The strong performance of the new energy vehicle (NEV) sector in China continued in October, with output and sales figures hitting historical highs despite the power crunch across the country and high raw material prices, according to data released by the China Association of Automobile Manufacturers (CAAM) on November 10.

Production of NEVs in China totaled 397,000 units last month, up by 12.4% month on month and up by 133.2% year on year. Sales of such vehicles rose by 7.2% month on month and by 134.9% year on year to 383,000 units, the CAAM data shows.

Some market participants also pointed out that ternary precursor scrap prices also have also risen to reflect the higher price of lithium metal included in the scrap.

Downstream sectors seek integration

For the downstream sector, there is a growing trend among nickel miners and battery precursor makers - and even automotive manufacturers - to collaborate and integrate further.

But this allows battery precursor makers to bypass the refineries by buying directly from miners or securing supply via their investments in raw materials projects, putting nickel sulfate producers at a competitive disadvantage.

Chinese battery precursor producer CNGR Advanced Material Co announced last week [increased investment in its Indonesian nickel matte project](#) to secure more alternative materials for production. This is in addition to the [nickel matte that stainless steel producer Tsingshan Holding Group has said it will provide to CNGR](#).

Another leading battery precursor maker in China, Huayou Cobalt, has also set up [an MHP production joint venture](#) with Chinese lithium battery producer EVE Energy and three other partners. Huayou Cobalt's MHP project recently started its first trial production, market sources told Fastmarkets. EVE Energy has also announced an [NCM joint venture to exploit the upstream industry chain](#).

EV maker Tesla has also decided to source mined nickel [to secure more battery raw materials](#), it announced in March.

The entire supply chain is seeking greater integration while end users are trying to stabilize their costs as well as strengthen their position in the upstream sector, giving them more bargaining power, market sources told Fastmarkets.

"We haven't bought nickel sulfate for some time, and we are not planning to buy any because the refineries' prices are just too high especially when we have our own raw materials projects, so we are not that interested in long-term contract negotiation for nickel sulfate for next year," a second nickel sulfate buyer told Fastmarkets.

"More and more companies are integrating because we have to think about the high production cost... cost efficiency is one of the biggest problems that new energy battery makers and battery precursor producers have to solve," he added.

Nickel sulfate contract negotiations for 2022, which usually conclude in November, either continue at the time of publication or have yet to start. No concluded deals have yet been reported to Fastmarkets.

DCE's most-traded iron ore futures contract hits record low

By Zihao Yu - Thursday 18 November

Iron ore prices fell in China on Thursday November 18 in response to a new round of controls imposed on blast furnace operation and emissions restrictions in the city of Handan in Hebei province, sources said.

Fastmarkets iron ore indices

62% Fe fines, cfr Qingdao: \$87.27 per tonne, down \$3.81 per tonne

62% Fe low-alumina fines, cfr Qingdao: \$88.26 per tonne, down \$3.04 per tonne

58% Fe fines high-grade premium, cfr Qingdao: \$60.58 per tonne, down \$2.73 per tonne

65% Fe Brazil-origin fines, cfr Qingdao: \$102 per tonne, down \$3.90 per tonne

63% Fe Australia-origin lump ore premium, cfr Qingdao: \$0.1100 per dry metric tonne unit (dmtu), unchanged

62% Fe fines, fot Qingdao: 587 yuan per wet metric tonne (implied 62% Fe China port price: \$83.79 per dry tonne), down by 21 yuan per wmt

Key drivers

The most-traded January iron ore futures contract on the Dalian Commodity Exchange (DCE) fell by 5% from Wednesday's closing price of 538.50 yuan (\$84) per tonne to close at a record low in the most-traded contract of 511.50 yuan per tonne - the previous low was 515 yuan per tonne on January 7, 2019.

The most-traded December iron ore forward-month swap contract on the Singapore Exchange (SGX) also decreased. By 6:06pm Singapore time, it had fallen by \$2.41 per tonne from Wednesday's settlement price of \$88.81 per tonne.

According to sources, steelmaking restrictions in Handan came into force from November 18 and will remain in place until December 31, including sintering restrictions and blast furnace shutdowns of 30-50% in some steel mills.

The restrictions have soured market sentiment and weighed on the near-term demand outlook for iron ore, which pressured iron ore prices lower, a trading source in Shanghai said.

The imbalance between supply and demand of iron ore supply has also been driving down prices, a trading source in Singapore added.

Although steel prices have held up relatively well, which might otherwise support iron ore prices within a narrow range at these lower levels, the weakening of iron ore demand is significant especially given the current over-supply situation, making it likely that prices will drop further, he also said.

Rebar production and inventory levels are decreasing alongside demand, a trading source in southern China said. The forthcoming winter season could further depress steel demand to due a seasonal slowdown in the construction section, which also cause demand for iron ore to shrink, he added.

Quote of the day

"Iron Ore Carajas fines prices have slumped so much that to sell it at ports in Shandong province is no longer profitable compared with a profit of around \$56 per tonne at the previous peak, which implies weak demand for high-grade fines due to falling steel mills' margins," a second trading source in Singapore said.

Trades/offers/bids heard in the market

Spot market, 170,000 tonnes of 62% Fe Pilbara Blend fines, traded at the December average of a 62% Fe index at a premium of \$0.90 per tonne, laycan November 27-December 6.

Spot market, 170,000 tonnes of 62% Fe Pilbara Blend fines, traded at the January average of a 62% Fe index at a premium of \$0.70 per tonne, December arrival.
Rio Tinto, Globalore, 170,000 tonnes of 62% Fe Pilbara Blend fines, offered at \$87.75 per tonne cfr China, December 11-20.

Market participant indications

Fastmarkets index for iron ore 62% Fe fines

Pilbara Blend fines: \$84.36-87.20 per tonne cfr China
Brazilian Blend fines: \$87-89.50 per tonne cfr China
Newman fines: \$85.59-87.58 per tonne cfr China
Mining Area C fines: \$76.33-76.99 per tonne cfr China
Jimblebar fines: \$66.65-71.14 per tonne cfr China

Fastmarkets index for iron ore 65% Fe Brazil-origin fines

Iron Ore Carajas fines: \$101-103 per tonne cfr China

Port prices

Pilbara Blend fines were traded at 565-620 yuan per wmt in Shandong province, Tangshan and Tianjin City on Thursday compared with 590-645 yuan per wmt on Wednesday.

The latest range is equivalent to about \$80-89 per tonne in the seaborne market.

Dalian Commodity Exchange

The most-traded January iron ore futures contract closed at 511.50 yuan (\$80) per tonne on Thursday, down by 27 yuan per tonne from Wednesday's closing price.

Alex Theo in Singapore and Alice Li in Shanghai contributed to this article.

Base metals

Cobalt and nickel supply tightness will challenge the electrification of transport - IFA panelists

By Dalila Ouerghi - Thursday 18 November

Production of key battery raw materials cobalt and nickel will remain tight and will pose challenges to the electrification of transport, panelists said on Monday November 15 during Fastmarkets' International Ferroalloys Conference in Prague.

"This year was really the first year that we saw a step change in nickel demand caused by demand from the electric vehicles (EV) sector and we saw nickel consumption from the EV sector up by more than 100%," chief executive officer of Canada Nickel Company, Mark Selby, said during the session titled 'Battery market growth and ferroalloy consumption trends'.

"We'll see 50-100% growth rate for the next 2-3 years and the big issue is getting enough nickel in the right form temporarily; it's a huge opportunity going forward," Selby added. "I think lithium iron phosphate [LFP] batteries are going to dominate the lower end [of the EV sector] and are going to be end up used more and more in the mid-range just because there is not enough nickel to use in all those applications but I am not very concerned about that when you look at what the US automakers are doing."

"[The US automakers'] first vehicles that are looking to electrify are all their big pickup trucks, all of their big SUVs and [those vehicles] need the energy density of nickel, cobalt, manganese [NMC] batteries... they cannot use LFP batteries in those applications and in addition to those uses you have the electrification of big transport fleets... There will be more than enough demand from those applications to use the nickel that is available," Selby said.

Mitchell Smith, president and chief executive officer of Global Energy Metals Corporation, echoed the same view.

"Certainly there is substitution for nickel and cobalt in some applications and there are different types of batteries being used for different types of vehicles, while the amount of cobalt used for some of these batteries is being reduced to a very small amount," Smith said.

He added that this is not a concern in terms of demand because of the high amounts of cobalt required for the global electrification of transport.

"Most of it [cobalt] comes as a by-product of copper and nickel production and definitely there is a focus on sourcing clean, sustainable supply," Smith added.

When asked about the need to have high prices to incentivize new production in coming years, Mark Selby said that to support the next wave of nickel supply to the market, prices should remain north of \$10 per pound for a certain period of time to allow capital to be raised.

"The other dimension is that by the mid-2020s the European Union will be putting carbon taxes on imports of materials and there is a huge chunk of nickel supply that has a massive carbon footprint in Indonesia," he said. "The cost structure of that production will fundamentally change when those carbon taxes are put in place."

EV battery recycling infrastructure not keeping pace with demand, report says

By Andrea Hotter - Thursday 18 November

The infrastructure to recycle electric vehicle (EV) batteries is currently not optimized either to handle end-of-life battery capacity or to meet critical materials demands placed on the market with the ramping-up of electrification, according to US-based consultancy Lux Research.

In a report issued on Thursday November 18, the consultancy said that, despite a flurry of activity in the past few years, widespread battery recycling adoption was being hindered by technology limitations and uncertain profitability.

"The recycling industry has historically been buoyed by high-cobalt-content consumer electronics batteries. As EV batteries begin to dominate lithium-ion waste streams, recyclers will have to process diverse cathode chemistries at higher volumes," the report said.

EV batteries contain key minerals such as cobalt, nickel, lithium, copper and manganese, and recycling them would help to create a more circular economy as well as help to alleviate the supply bottlenecks that have appeared with the growth in electrification.

According to Lux Research, more than 100GWh of lithium-ion batteries were deployed in battery EVs and plug-in hybrid EVs in 2020, and that number is rapidly increasing.

"When those batteries reach their end of life, they [will] represent a large environmental risk [but will] contain valuable metals that can be recovered via recycling," the report said.

By the end of 2020, more than 100,000 tonnes (17.6GWh) of batteries reached their end of life; by 2030, this will rise to more than 1 million tonnes (about 150GWh), Lux Research added.

Companies such as TES, [Northvolt](#), [Li-Cycle](#), GEM and Redwood Materials have projects to recycle EV batteries.

But one of the main barriers to battery recycling in the near term is a lack of technology and process innovation, the report said.

“Current battery collection infrastructure and recycling technology are not optimized for cost-effective reuse of valuable materials. Improvements in recycling rate, efficiency and cost savings drive current research & development efforts, but integration into large-scale recycling will take time,” the report said.

“As battery waste volumes increase over the next few years, the recyclers with the best technology will be the most competitive,” it added.

Diversity in EV battery configurations, meanwhile, posed a challenge to large-scale adoption, Lux Research said.

“While the current battery recycling infrastructure has focused on consumer electronics, whose batteries are nearly the same in size and material composition, the lithium-ion batteries used in EV lack standardization,” the report said.

“The variability in design and composition poses a challenge for waste collection and sorting. It also makes it difficult to automate disassembly and recycling processes, requiring costly manual pack removal, pack disassembly, module removal and cell separation,” it added.

Similarly, the report noted that the path to profitability was not guaranteed.

“The value of waste batteries lies in the recovered cathode materials. Recovered battery-grade metals fetch a higher price but require careful refining processes,” the report said.

“Furthermore, less valuable cathode chemistries such as the lithium-iron-phosphate [LFP] battery drag down the economic outlook,” it added. “Regulations across the globe will force recyclers to accept high volumes of batteries, but it’s up to them to make this profitable.”

Western Canada copper mine logistics disrupted by major floods

By Ana de Liz, Julian Luk - Thursday 18 November

The logistics of a cluster of copper mines in western Canada have been disrupted by extreme weather conditions in the province of British Columbia (BC) this week, Fastmarkets has learnt.

“All transportation routes, rails and highways, to the interior of the province are closed due to washouts and [land]slides,” one Canadian miner source said on Thursday November 18.

The province declared a state of emergency on November 17.

The region is home to Canada’s major copper deposits, with mines including Teck’s Highland Valley, Taseko’s Gibraltar, New Gold’s New Afton, Imperial Metals’ Red Chris, Centerra Gold’s Mount Milligan, as well as Copper Mountain Mining’s operation named after the company.

Teck Resources said on November 18 that its copper mining operations were still running, but the logistics between west coast terminals and its BC operations have been disrupted by mudslides, so it has had to divert some trains to Prince Rupert, the province’s northern-most outlet port.

The effects on Teck’s fourth-quarter sales will depend on the duration of the logistics disruption, the company added.

There has been major damage to rail bridges and the Coquihalla highway, the main route for the transport of mined copper output out of BC via the

city of Kamloops.

Local media has reported that it would take months to repair Coquihalla, citing a local government official. With mines low on inventory, declarations of force majeure were possible in the near future.

Canada exported 1,661,000 tonnes and 446,200 tonnes of copper concentrates in 2019 and 2020 respectively, according to the International Copper Study Group.

Fastmarkets’ [copper concentrates TC index, cif Asia Pacific](#), was most recently calculated at \$57.90 per tonne/5.79 cents per lb on November 12.

LME base metal futures largely up, tin posts new record price

By Callum Perry - Thursday 18 November

Base metal futures prices on the London Metal Exchange were largely up at the 5pm close on Thursday November 18, with tin reaching a new all-time high.

The three-month tin price closed at \$38,453 per tonne, a rise of 1.2% from \$37,975 per tonne at the 5pm close on Wednesday.

This marks a new all-time high for the soldering metals three-month price, with the previous record being \$38,330 on October 20. Tin had reached \$40,000 during trading on Thursday.

This comes off the back of a report that the Malaysian Smelting Corporation (MSC) is tentatively looking at [ending their force majeure on November 30](#). However, there are questions about whether this will be enough to end the market tightness.

“The [tin] market is and will still be pretty short even if MSC get back to full capacity,” one tin trader said.

Elsewhere in the complex, LME three-month nickel saw the biggest price increase, ending its week long decline. The price rallied slightly, rising by 1.5% to \$19,639 per tonne, up from \$19,355 at Wednesday’s 5pm close.

Nickel stocks continued to decline further, [reaching 124,866 tonnes](#), further supporting the global market tightness.

The three-month copper price rose modestly at Thursday’s 5pm close. Copper rose by 0.3%, up to \$9,441.50 per tonne, after falling to \$9,406.50 per tonne on Wednesday, its lowest level since October 8.

The cash-to-three-month copper spread widened slightly to a \$67-per-tonne backwardation at the 5pm close, up from \$11.50 backwardation on Wednesday.

This is still significantly lower than backwardations in previous weeks and comes after [more Chinese material entered into LME warehouses](#) due to the implementation of measures from the LME to [cool the market on October 19](#).

Elsewhere, the three-month aluminium price remained steady at \$2,616 per tonne, losing only \$0.5 on the \$2,616.50-per-tonne price at the 5pm close on Wednesday.

The light-metal traded on low volumes, with only 9,747 lots traded on Thursday November 18, the lowest volumes since September 7.

The three-month price continued to be supported by tight market supplies, with on-warrant stocks in LME warehouses reaching 587,900 tonnes, their lowest levels since 2005.

“Falling warehouse stocks continue to support our view of strong demand coupled with smelter disruptions creating tightness in the underlying



fundamentals," Fastmarkets analyst James Moore said.

The only two metals with no increase in their three-month prices were lead and zinc.

The worst performer of the day was lead; the three-month lead price fell by 1.7% to \$2,215 per tonne, its lowest level since October 12.

The three-month zinc price fell by 1% to \$3,159 per tonne, down from \$3,192 per tonne on Wednesday.

Other highlights

- The US Dollar Index declined modestly to 95.53, at the time of writing, down from 95.72 on Wednesday.

Aluminium industry needs CBAM to help finance decarbonization, Century CEO says

By Andrea Hotter - Thursday 18 November

The aluminium industry needs to support the introduction of a Carbon Border Adjustment Mechanism (CBAM) to help finance the sector's push to decarbonization, the chief executive officer of United States-based Century Aluminum said.

Jesse Gary told the virtual Goldman Sachs global metals and mining conference that a CBAM would need to be extended to cover scope 2 emissions to create the pricing response to drive the returns necessary for this transition.

"Going forward we're big fans of CBAM - we think it makes a lot of sense, we think it has the potential to drive some of the response," he told the conference on Thursday November 18.

"But we probably need to see it [CBAM] roll out with a little stricter implementation and make sure we're focusing on scope 2 as well as scope 1, and ultimately scope 3, emissions," he said.

The European Union is planning to introduce a [CBAM from 2023](#), under which European Union importers will buy carbon certificates corresponding to the carbon price that would have been paid had the goods been produced under the EU's carbon-pricing rules.

It forms part of the region's ambitious decarbonization roadmap, which aims to achieve net-zero carbon emissions by 2050. Initial versions of CBAM will focus on scope 1 emissions, which are direct greenhouse gas (GHG) emissions that occur from sources controlled or owned by an organization, such as fuel combustion in boilers or furnaces.

Scope 2 emissions are indirect GHG emissions associated with the purchase of electricity, steam, heat or cooling, which is where the majority of carbon is produced in aluminium via smelting. The energy-intensive nature of producing aluminium means that companies that operate using hydroelectric power have an advantage in GHG emissions terms compared to fossil-fuel based producers.

"This initial phase [of CBAM] is probably going to have very little impact - it's mostly a declaratory program, through 2026, and focused on scope 1 emissions," Gary said.

"The scope one emissions' focus is probably not sufficient for aluminium - most of the carbon content comes from scope 2 emissions, which is the energy side. We probably need to see that expand in order to avoid leakage and make sure we're really applying policy to the area where you can see the most benefit, which is the energy side," he added.

Carbon leakage occurs when businesses transfer production to other countries with less stringent constraints on emissions, potentially leading to an increase in their total emissions.

The industry average of CO₂ is estimated to be 16 tonnes per tonne of aluminium, while low-carbon aluminium is broadly viewed as emitting four tonnes of CO₂ per tonne of aluminium. According to Gary, emissions from carbon anodes, which fall under scope 1 emissions, are around two tonnes of the total 16 tonnes, with the balance comprised by scope 2 emissions from the energy-intensive smelter process.

To help low-carbon producers achieve returns on their investment in decarbonizing production, a mechanism like CBAM is probably necessary, Gary said. The US does not have a national method of pricing carbon, and therefore lacks a market-based mechanism that creates financial incentives to reduce greenhouse gas (GHG) emissions.

"The EU market does have a price for carbon through an Emissions Trading Scheme (ETS), we can see what that is - if you take that price and start to apply it more broadly, you can see it could be significant enough to drive some investments (in low-carbon aluminium)," Gary noted.

The EU established the world's first international ETS in 2005. It operates on a principle of cap-and-trade, and currently covers numerous sectors, including power generation and aviation, with an extension to cover shipping scheduled to be phased in from 2023.

"As a whole, I think as an industry we should be supporting CBAM and make sure that we implement it in such a way that we avoid carbon leakage going forward," he added.

Expansions

To meet decarbonization targets, companies are [increasing their production of low-carbon metal](#).

Earlier this month, Chicago-based Century said it had started construction of a new low-carbon billet casthouse at its Grundartangi, Iceland smelter.

The casthouse will have a capacity of 150,000 tonnes of billet and will also double the plant's annual foundry alloys capacity to 120,000 tonnes, all of which replaces standard-grade ingot production with low-carbon output.

The project will be fully financed with Icelandic green financing from Arion Bank, with the low-carbon nature of the project helping to reduce capital costs slightly, Gary said.

The metal will service the European market, where billet premiums are at all-time highs amid continued strong demand and concern about availability going into next year.

Fastmarkets assessed the [aluminium 6063 extrusion billet premium, ddp North Germany \(Ruhr region\)](#) at \$1,450-1,500 per tonne, stable for the past month.

Gary said that demand for billet in Europe is being driven by the building products sector along with continuing strength in the automotive market.

"The section of the market that is the furthest ahead [on the green side] is definitely building and construction, driven a lot by government policies and big government-backed construction projects, where they are requiring green aluminium for their sourcing," he told the conference.

"We're also seeing it [green aluminium] start to go into our customers' automotive original equipment manufacturers (OEMs) contracts as well, where OEMs are starting to demand at least the option to demand green aluminium in their product mix," he added.

In addition to its smelter in Iceland, Century operates three smelters in the US.

Chile presidential election preview: Main candidates' mining policy and implications for key copper country

By Ana de Liz - Thursday 18 November

Fastmarkets has summarized mining-related policy proposals for the key candidates ahead of Chile's presidential election as presented on their political programs, with the population of the world's biggest copper producing country set to cast their vote on Sunday November 21.

What is at stake?

Chile produced a third of the world's copper in 2020, in the form of concentrates, anodes and cathodes. It is also home to large [lithium](#), zinc, molybdenum, gold, silver and lead reserves, among others.

The Chilean people's choice in the election could sway Chilean mining policies, including the fate of a controversial tax reform bill that may put a [quarter of Chilean copper](#) output at risk.

While current mining officials told Fastmarkets they are eyeing an alternative bill, the direction of travel for the new president and new members of Congress is uncertain on a [proposed tax change](#) that will determine profitability and business sustainability of major miners in the country.

Chile is home to the biggest copper deposits on the planet, including BHP's Escondida; Codelco's Andina and El Teniente projects; Collahuasi, which is jointly owned by Glencore and Anglo American; Teck Resources' Quebrada Blanca project and Antofagasta's Centinela.

Key candidates

Among seven candidates, two front runners have emerged in recent polls: Gabriel Boric Font, a left-wing candidate representing a coalition called Social Convergence, and Jose Antonio Kast Rist, a conservative candidate put forward by the Republican Party of Chile.

Meanwhile, Yasna Provoste Campillay, member of the Democrat-Christian Party and the only female candidate in the race, has fielded 13% of intended votes in a poll conducted on November 7, after which a "blackout" period is mandated by the country's legislation whereby no political canvassing can be published ahead of the election.

The 155 seats in the country's lower house of Congress are also set to be renewed in the election, together with 27 of its 50 Senate posts.

Fastmarkets has summarized the mining-specific proposals made by the three front-running presidential candidates as seen in their political programs to revitalize Chile's mining industry, accounting for over one-tenth of the country's economic output and key to economic recovery after the ramifications of Covid-19.

"We've seen candidates emerge on both sides of the political spectrum, but the uncertainty around the political situation and the outcome of the election is an impairment to longer-term investment planning, and the result of that uncertainty is likely to delay, if not ultimately derail, investment commitments," Concord's head of research Duncan Hobbs said, noting the uncertainty that emerged [ahead of Peru's elections](#) earlier this year.

"We should be mindful of lower copper mining output than expected from countries like Chile and Peru, and other metals coming from those countries, at a time when expected future demand for those metals looks very good," Hobbs added.

Codelco reform, diversification from copper, harmonization of water resources – Kast's key proposals

Kast's official political program includes a stress on diversification to "not depend only on copper and molybdenum and better face international markets" and adding that his party aims for the "transformation of Codelco [the Chilean state-owned copper mining entity] into a diversified mining company."

Kast also says he will "prioritize" a model that allows creation of subsidiaries of Codelco, involved in sectors such as mineral processing plants or electrical energy production. He has proposed a "harmonization" of the country's water resources - battled for by the mining industry and the country's population.

His vision is that "all economic activities in Chile, particularly the manufacturing and mining industries, must commit to the national community to promote long-term sustainability."

Diversification into lithium, environment, new wealth distribution systems – Boric's key proposals

Boric's mining policy outline is relatively brief and abstract, taking up less than one page of his program - as opposed to other candidates, who referenced the mining industry throughout their presentation documents.

Similarly to Kast, the Social Convergence candidate also mentions that mining-related discussions "cannot be based only on the development of copper [mining], but must also be broadened to include metals such as lithium."

The main points of action for would be to "take into relevant environmental aspects for the [development of] mining [activities], such as tailings and desalination." Boric also proposes an "extension and rise in the carbon tax" and its related "polluting activities and motor vehicles."

Boric, who advocates combatting social equality, hopes to establish a "value-generation system" that allows Chile to go from "being a purely extractive country to one that generates wealth from its natural resources."

Reducing mining dependency, a lithium national company and blockchain – Provoste's key propositions:

The only female candidate in the presidential race, Provoste pushed for the "diversification of the country's production matrix" and "reducing economic dependence on mining production" in her political program.

Among her proposals, however, is the creation of a "Lithium National Company," which would be in charge of the country's exploration and exploitation contracts for lithium and its mining projects in Chile's salt flats.

Provoste has also put forward the "promotion of the certification of the sustainability of mining processes based on blockchain." The candidate noted in her political program that "special attention [would be paid to] the interaction between mining, climate change and particular ecosystems, such as salt flats and wetlands."

What next?

The first round of elections is scheduled on November 21, and should no candidate win more than 50% of the vote, a second round would take place on December 19, with the winning candidate set to take charge in March 2022.

The process to change the country's constitution, meanwhile, was kickstarted in May 2021 when 155 members of a new commission were elected to write the new constitution, a process that will remain ongoing despite the election's victor.



Whoever wins, the country's copper mining commission has stated that [nearly \\$69 billion is set up for investment](#) in some of the country's biggest mines, with around 70% of that investment set to come from private companies that have operations in Chile.

Julian Luk, in London, contributed to this article.

MSC to 'tentatively' end force majeure on November 30

By Ana de Liz - Thursday 18 November

The Malaysian Smelting Corporation is "looking into the possibility" of ending a six-month force majeure period at the end of November, a company document seen by Fastmarkets said.

The tin producer [declared force majeure on June 7](#) due to rising Covid-19 cases in the country and the aftermath of [furnace rebricking efforts](#) at its main Butterworth smelter.

"In tandem with the opening of economic sectors and barring any unforeseen circumstances beyond the control of MSC, kindly be informed that MSC is currently looking into the possibility of ceasing its declaration of force majeure tentatively on 30th November 2021," the company said to its customers in a note on November 18.

The International Tin Association had previously reported on the tentative schedule of the Malaysian tin producer to rescind its force majeure declaration earlier in November.

The company will look to gradually resume its operations "in an orderly manner" it said in the note. It asked its clients to provide their tentative delivery schedule of ore to MSC as soon as possible to "avoid any overwhelming receipt of tin concentrates which may give rise to delays in treatment of materials and various other issues."

MSC operates a tolling system; it usually returns refined material to customers within 30 days but the metal delivery time period was extended to 60 days in June.

"If necessary, we will contact you to further discuss the tentative delivery schedules after receiving the information from you," the company said.

MSC's smelters are in the Penang province, which has recently entered Phase 4 of the Malaysian government's Covid-19 recovery plan, which allows MSC to have 100% of its workforce on site. The company was previously operating with around [80% of its workforce](#).

When MSC announced its force majeure, Covid-19 cases were on a seven-day average of 7,104 cases, peaking in late August when the numbers surpassed 24,000 daily cases on August 26. On November 17, the country registered just over 6,200 cases, according to the Johns Hopkins University.

MSC expects to commission its new Pulau Indah smelter - set to gradually replace operations at the Butterworth smelter - between late 2021 and the start of 2022, it said in its most recent interim financial report.

The three-month tin price on the London Metal Exchange was at \$38,580 per tonne on Thursday, having touched \$40,000 per tonne during early trading.

China's domestic premium for copper cathodes surges on low supply

By Sally Zhang - Thursday 18 November

The premium for copper cathodes in China's domestic spot market has surged, buoyed by low spot availability, market participants told Fastmarkets.

The premium in the Shanghai spot copper market, which is paid on top of the copper contract price on the Shanghai Futures Exchange, was reported at around 1,200 yuan (\$188.1) per tonne for regular electro-refined (ER) copper cathodes, Fastmarkets learned.

"Spot stocks are low now in Shanghai and this is driving up the premium all the way; some spot business happened at more than 1,000 yuan per tonne, a very high level," a Shanghai-based trader said.

Deliverable stocks of copper at SHFE-registered warehouses stood at 38,037 tonnes in the week to November 12, down by 53.8% from 82,342 tonnes on January 8.

[Shanghai bonded copper stocks](#) were assessed at 180,500-194,500 tonnes on November 15, down by 45.9% from 339,000-354,000 tonnes on January 11.

The spread between the SHFE December copper contract and January copper contract was at a backwardation of 500 yuan per tonne on November 18 amid low stocks.

Previously, there were steep backwardations on London Metal Exchange's copper forward curve, with the cash/three month backwardation briefly soaring up to over \$1,000 per tonne in mid October, which [eased notably](#) in November to \$14.90 per tonne with deliveries of copper cathodes by Chinese smelters.

Falling SHFE copper price also supported the spot premium, the same trader source said.

[SHFE copper](#) closed at 68,910 yuan per tonne on November 18, down by 1,230 per tonne from a day earlier.

The astonishingly high spot premium in China's domestic market, together with easing backwardations on the LME, cheered import appetite for the red metal in the week. This came after absence of import activity for about two weeks amid LME steep backwardations, which put off spot buying.

Fastmarkets assessed the [Shanghai copper premium](#) at \$83-100 per tonne on November 17, widening upward by \$2 per tonne from \$83-98 per tonne on November 16. The premium is up by \$3-5 per tonne from \$80-95 per tonne on November 15, a level unchanged since October 26.

US Midwest draws AI extrusions investments

By Yasemin Esmen - Thursday 18 November

Aluminium extrusions production in the United States Midwest is experiencing growth, with two new investments in Michigan and Indiana, both of which received help from their states.

In Michigan, Governor Gretchen Whitmer and the Michigan Economic Development Corp (MEDC) announced on Tuesday November 16 that Extruded Aluminum Corp (EAC) will be expanding its operations with the support of the Michigan Business Development Program.

Located in Otisco Township in Ionia County, aluminium extrusion



manufacturer EAC will be receiving \$250,000 from the program's performance-based grant.

The company will acquire a 14-acre lot adjacent to its current facility to house additional production, handling, and processing equipment.

"As the market for extruded aluminium products continues to grow, we have to increase our production capacity to meet our clients' needs," EAC president Charles Hall said.

EAC processes extruded aluminium products for a variety of industries, including solar energy, material handling, truck/trailer, military and automotive.

Further south, in Syracuse, Indiana, Aluminum Insights announced its \$17.5-million investment in an aluminium extrusion facility on November 9.

This investment will serve the company's customers in the Upper Midwest to support their extrusion needs, integrate seamlessly into their supply chain, and partner in innovation, Aluminum Insights said.

The new 76,000-square-foot building with 500 kilowatts of rooftop solar panels will house a 2,920-ton, 8-inch press line and several CNC fabrication work cells that include routing, cutting and machining of extrusions.

Aluminum Insights received an \$825,000-worth investment from the Indiana Economic Development Corp (IEDC) in the form of incentive-based tax credits.

"Bringing equipment of this caliber to a new facility designed specifically for this purpose will enable us to operate at a very high level from inception." Jeff Miller, Aluminum Insights chief executive officer, said.

Installation of the extrusion equipment will begin in early January 2022 and the plant is expected to be fully operational in April 2022.

Fastmarkets assessed the [aluminium P1020A Midwest premium, ddp Midwest US](#) at 30-32 cents per lb on Tuesday, unchanged since May.

Minor metals

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

By pricing@fastmarkets.com - Thursday 18 November

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 29.20-29.90 on Thursday November 18, 2021.

- Offer at \$29.30
- Offer at \$29.50
- Offer at \$29.85 for standard tonnage
- Offer at \$30.05 for small tonnage
- Bid at \$29.00 for standard tonnage
- Bid at \$29.00
- Prices indicated at \$29.00-29.65
- Prices indicated at \$29.00-29.90
- Prices indicated at \$29.20-29.90
- Prices indicated at \$29.25-29.75
- Prices indicated at \$29.25-29.90
- Prices indicated at \$29.25-30.00
- Prices indicated at \$29.30-30.00
- Prices indicated at \$29.40-29.95

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 - Thursday 18 November

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 29.20-29.90 on Thursday November 18, 2021.

- Purchase at \$28.85 for standard tonnage (discarded - old activity)
- Offer at \$29.40
- Offer at \$29.85 for standard tonnage
- Offer at \$30.50 for standard tonnage
- Bid at \$29.00
- Bid at \$29.00
- Deal heard at \$29.75 for large tonnage
- Prices indicated at \$29.00-29.65
- Prices indicated at \$29.00-29.90
- Prices indicated at \$29.20-29.90
- Prices indicated at \$29.25-29.75
- Prices indicated at \$29.25-29.90
- Prices indicated at \$29.25-30.00
- Prices indicated at \$29.30-30.00
- Prices indicated at \$29.40-29.95

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Chinese cobalt metal prices soften amid falling futures, weak buying pressures salts market

By Carrie Shi, Zihao Li - Thursday 18 November

Key data from the Wednesday November 17 pricing session in China.

COBALT 99.8% CO MIN <i>(in yuan per tonne, exw China)</i>				
New price	Previous price	Change to midpoint of range	Midpoint % change	
419,000-435,000	424,000-435,000	▼2,500	▼0.58	
COBALT TETROXIDE 72.6% CO MIN <i>(in yuan per tonne, delivered China)</i>				
New price	Previous price	Change to midpoint of range	Midpoint % change	
340,000-345,000	340,000-345,000	0	0	
COBALT SULFATE 20.5% CO BASIS <i>(in yuan per tonne, exw China)</i>				
New price	Previous price	Change to midpoint of range	Midpoint % change	
90,000-93,000	90,000-93,000	0	0	

Source: Fastmarkets

Key drivers

- China's spot cobalt metal price fell amid a decline in local futures prices, while downstream demand was curbed by still high spot levels.
- Cobalt tetroxide prices in China were flat amid limited trading activity. Though most sellers would like to push up offers due to rising production costs resulting from the rally in the international benchmark metal price, sluggish downstream buying prevented further increases with buyers unwilling to accept the higher prices.
- The Chinese cobalt sulfate spot market was extremely quiet due to weak downstream demand, with sellers struggling to pass on rising raw material costs downstream because amid buyer resistance.

Key quotes

"China's cobalt metal price is high, and downstream demand has become worse. It has been a struggle for China's cobalt metal price to follow the upward trend of international cobalt metal price," - a trader

"Demand for lithium cobalt oxide (LCO) cathode materials from China's battery manufacturers is still weak amid the continuing shortage of semiconductor chip, which put continuous pressure on upstream cobalt tetroxide prices," - a cobalt tetroxide consumer

"We received few inquiries from downstream buyers for cobalt sulfate, and the market is very flat. Most of the buyers are still unwilling to accept prices above 90,000 yuan (\$14,097) per tonne for cobalt sulfate," - a cobalt sulfate producer source

Ores and alloys

Fastmarkets AMM: Ferro-alloys November 18

By Chris Kavanagh - Thursday 18 November

The latest ferro-alloy prices from Fastmarkets price reporters.

PRICE DESCRIPTION	LOCATION	CURRENT PRICE	PREVIOUS PRICE	PERCENTAGE CHANGE
CHROME ORE				
Chrome Ore, South Africa, US2 concentrate, 47% iron base, c.i.f. China, \$ per tonne	South Africa	165	165	▲1.15%
Chrome Ore, Turkey Longsight 40-42%, c.i.f. main Chinese ports, \$ per tonne	Turkey	220-230	220-230	0.00%
FERRO-CHROME				
High carbon				
Ferro-chrome 94% Cr, max. 50-60% Cr base, 7% Si, United States warehouse Pittsburgh, \$ per lb Cr	USA	1.35-1.40	1.35-1.40	▲0.00%
Ferro-chrome 94% Cr, max. 80% Cr base, 1.2% Si, major European distribution, \$ per lb Cr	EU	1.15-1.20	1.2-1.2	▲0.00%
Ferro-chrome low phosphorus, max. 80% Cr, max. 7% Si, max. 0.015% P, max. 0.005% S, \$ per lb	EU	1.25-1.30	1.35-1.40	▲0.00%
Ferro-chrome Japan Import, 94% Cr, base 80% Cr, c.i.f. Japan, Aloy unmet, \$ per lb Cr	Japan	0.80-0.85	0.80-0.85	0.00%
Ferro-chrome South Korea Import, 94% Cr, base 80% Cr, c.i.f. South Korea, Aloy unmet, \$ per lb Cr	South Korea	0.80-0.85	0.80-0.85	0.00%
Ferro-chrome China Import, charge chrome 50% Cr base, c.i.f. Shanghai, Aloy unmet, \$ per lb Cr	China	0.84	0.85	▲1.12%
Ferro-chrome China spot, 94% Cr, base 80% Cr, delivered Aloy unmet, \$ per tonne	China	7,100-7,200	7,200-7,200	▲0.00%
Ferro-chrome China contract, 94% Cr, base 80% Cr, delivered Aloy unmet, \$ per tonne	China	6,800-7,100	6,500-6,800	▲0.00%
Ferro-chrome European Benchmark India/UK, charge base 50% and high carbon, \$ per lb	EU	1.15	1.15	0.00%
Ferro-chrome Turkey Cr, charge base 50% Cr, quality, major European distribution, \$ per lb Cr	EU	1.35	1.40	▲0.00%
Low carbon				
Ferro-chrome 0.01% Cr, max. 80% Cr, United States warehouse, Aloy unmet, T.S. Pittsburgh, \$ per lb Cr	USA	2.00-2.1	2.00-2.10	0.00%
Ferro-chrome 0.01% Cr, max. 80% Cr, United States warehouse, Aloy unmet, T.S. Pittsburgh, \$ per lb Cr	USA	2.00-2.4	2.00-2.4	0.00%
Ferro-chrome 0.01% Cr, max. 80% Cr, United States warehouse, Aloy unmet, T.S. Pittsburgh, \$ per lb Cr	USA	2.00-2.05	2.00-2.05	▲0.00%
Ferro-chrome 0.01% Cr, average 50-70% Cr, major European distribution, \$ per lb Cr	EU	2.20-2.30	2.10-2.1	▲0.00%
Ferro-chrome 0.01% Cr, max. 80% Cr, European warehouse, in warehouse, \$ per lb Cr	EU	2.20-2.37	2.2-2.4	▲0.00%
MANGANESE ORE				
Manganese Ore India 44% Mn, c.i.f. Thailand, \$ per dry ton	China	7.20	7.20	▲0.00%
Manganese Ore India 37% Mn, T.S., Port Swettenham, \$ per dry ton	South Africa	8.10	8.00	▲0.00%
FERRO-MANGANESE				
High carbon				
Ferro-manganese 70% Mn, standard 7.0% C, United States warehouse Pittsburgh, \$ per long ton	USA	1,300-1,400	1,300-1,400	0.00%
Ferro-manganese base 70% Mn (close per Mn), standard 7.0% C, major European distribution, \$ per tonne	EU	800-1,000	800-1,000	0.00%
Ferro-manganese 50 (Chinese iron market), max. 80% Mn, max. 7.0% C, in warehouse, \$ per tonne	China	7,300-7,500	7,300-7,500	0.00%
Medium carbon				
Ferro-manganese medium carbon, max. 80% Mn, max. 1.2% C, in warehouse, \$ per lb	USA	1.14-1.15	1.14-1.15	0.00%
Ferro-manganese 0.01% Cr, max. 80% Cr, in warehouse, \$ per lb	USA	1.01-1.03	1.01-1.03	0.00%
Ferro-Pittsburgh, \$ per lb	USA	0.91-0.95	0.91-0.95	▲0.00%
Ferro 50-70% Mn (close per Mn), major European	EU	800-1,000	800-1,000	0.00%
A.S. \$ per tonne T.S. India	India	1,200-1,300	1,200-1,300	▲0.00%
50% max. 70% Si, in warehouse, \$ per tonne	China	6,400-6,500	6,400-6,700	▲0.00%

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China's APT export price flat, domestic tungsten market weakens

By Ruby Liu - Thursday 18 November

Chinese exporters of ammonium paratungstate (APT) kept their spot offers unchanged in the week to Wednesday November 17 amid slow conditions after foreign buyers took to the sidelines upon noticing weakness in China's domestic market.

Fastmarkets' weekly price assessment for **tungsten APT 88.5% WO3 min, fob main ports China** was \$313-319 per metric tonne unit (mtu) on Wednesday, unchanged from a week earlier.

China-based market sources said they would keep their export offers flat until overseas buyers started to show real buying intention.

"Overseas inquiries for APT were very limited in the past week. The prices suggested by some buyers abroad were too low to be accepted. Thus, I would rather not make offers or just keep my offers unchanged," a trader said.

"Once overseas buyers, particularly those downstream manufacturers, began to procure APT, I would negotiate prices with them," he added.

Market sources also told Fastmarkets that they are confident in overseas demand, thus there is no need to cut prices.

"The company I work for is negotiating long-term contracts for APT and tungsten oxide next year with overseas consumers. Those consumers show stable demand for those tungsten intermediates and tell us that they are steadily recovering their production and sales," a producer source said.

Other producer sources said they received similar feedback from foreign buyers.

"Since the overseas market has potential demand for APT while local supply remains tight, I think we don't need to take a rush to reduce export prices in the first place. I will wait for solid [spot] inquiries from established overseas buyers," the first producer source said.

Uncertainty due to price fluctuations in the domestic market and the potential appreciation of the Chinese yuan also encouraged China-based exporters not to reduce their offers this week.

"The domestic market is unpredictable; domestic prices could rise and fall in a very short period. If I reduce offers now, I wouldn't have the confidence to be able to source cheap material in the domestic market once a deal is concluded," a second trader said.

The second trader added that some domestic market participants are trying to build up APT stocks and prices may not experience significant falls as a result.

He also noted that many participants believe the Chinese yuan will continue to strengthen against US dollar.

The Chinese currency was trading at around 6.38395 yuan to \$1 on Wednesday, according to Oanda.com. This compares with 6.40470 yuan to \$1 on November 1.

Chinese yuan was exchanged at 6.3840 per US dollar on November 17, while the exchange rate was 6.4047 on November 1, according to Oanda.

"Exporters like me have to take appreciation of yuan into consideration when making an offer price in dollars," the second trader said.

Weakened domestic market

China's domestic tungsten market weakened this past week, with prices for tungsten concentrate and APT both falling after some sellers lowered their offers to facilitate sales ahead of the year-end.

Fastmarkets' weekly price assessment for **tungsten concentrate 65% WO3, in-whs China** was 108,000-111,000 yuan (\$16,857-17,326) per tonne on Wednesday, down by 1,000-3,000 yuan per tonne from 111,000-112,000 yuan per tonne a week earlier.

Market sources told Fastmarkets that some cargo holders, who needed to generate cash before the end of the year, had reduced prices to facilitate sales.

"However, the current concentrate prices still couldn't meet buyers' expectation. Buyers want to purchase the raw materials at prices below 100,000 yuan per tonne. No cargo holders would reduce prices to such a low level," a second producer source said.

Downstream APT prices in China's domestic market also declined due to falling prices for the auxiliary materials that APT refineries use, such as sodium hydroxide.

"Sodium hydroxide prices once were around 6,000 yuan per tonne in September, but the prices drop by about 2,000 yuan per tonne to less than 4,000 yuan per tonne now," a third trader said. "With reduced input costs, buyers expect APT producers to lower prices."

Producer Xiamen Tungsten reduced its long-term contract prices for APT in the second half of November to 166,000 yuan per tonne, a decline of 5,000 yuan per tonne from 171,000 yuan per tonne for the first half of the month.

Domestic spot APT prices also fell to around 165,000-168,000 yuan per tonne this past week, according to market sources. Prices had been around 169,000-171,000 yuan per tonne in the prior week.

Sources told Fastmarkets that downstream plants are very cautious about spending money to buy raw material at the end of year, when companies usually review their full-year performance and prepare financial reports.

China's ferro-silicon prices fall further on weakened steel demand

By Jessica Long - Thursday 18 November

China's ferro-silicon prices are not showing any signs of a recovery, having been declining since late September, due to weakened steel demand, improved power supply and cheaper raw materials, especially semi-coke.

Fastmarkets' price assessment for **ferro-silicon 75% Si min export, fob China** was \$2,100-2,300 per tonne on Wednesday November 17, down by \$700 per tonne (25%) from \$2,800-3,000 per tonne a week earlier. The assessment is also 51.6% lower than where it was on September 29, when prices rose to a year-to-date high of \$4,450-4,550 per tonne.

Fastmarkets' price assessment for **ferro-silicon 75% Si min, in-whs China** was 9,500-10,000 yuan (\$1,487-1,565) per tonne on Wednesday, down by 1,500-2,500 yuan per tonne (18.1%) from 11,000-12,500 yuan per tonne on November 10. The assessment is 57.9% lower than a year-to-date high of 22,000-23,000 per tonne on September 29.

Weakened downstream demand due to the steel sector being in its low season as temperatures drop is the principal driver of the decreasing ferro-silicon prices in China, sources said. The onset of the winter heating season in northern China also puts the steel sector under tighter restrictions to lower emissions.

"As I know, steel production in November reached 71 million tonnes, down by



2 million tonnes compared with September... If the downstream steel sector is weakening, how can ferro-silicon prices strengthen?" a market participant told Fastmarkets.

In addition, the power supply situation affecting many provinces in China is improving, and the operating rates of ferro-silicon producers are higher in October, sources said.

"The previous power cuts among many ferro-alloy producers are now been alleviated to some extent. Therefore, the supply of ferro-silicon is on the rise, which makes the spot market less tight. Naturally prices may weaken," a second market participant told Fastmarkets.

Even though electricity tariffs have been raised, prices for semi-coke, a key ferro-silicon raw material, have moved from over 3,000 yuan per tonne to under 1,700 yuan per tonne, which takes away support from the ferro-silicon market.

"I've even heard of semi-coke being offered at 3,700 yuan per tonne or even higher previously and one tonne of ferro-silicon production requires one tonne of semi-coke. Now that semi-coke prices have plummeted to around 1,700 yuan per tonne, ferro-silicon prices obviously went downward," a third market participant told Fastmarkets.

"Ferro-silicon is a typical market in which participants would conduct purchases when prices are rising and withdraw to the sidelines when prices fall," a fourth market participant said.

The same source said that the price drop was the result of concerns driven by weak ferro-silicon futures. Those who have stock in hand are now destocking, which also results in prices falling.

Most market participants are still taking a wait-and-see approach with ferro-silicon since they believe producers will suspend production once prices fall to cost levels. When this happens, supply will fall and prices will rise again.

Steel

CIS billet prices soften on stronger competition, weaker markets

By Vlada Novokreshchenova - Thursday 18 November

The export price for CIS-origin steel billet softened toward the end of the current week amid increased competition in the nearby markets in Turkey and Egypt, Fastmarkets heard on Thursday November 18.

Weakness in finished steel prices added to the negative sentiment.

The [removal of a 10% safeguard duty on billet imports into Egypt early this week](#) [LINK] at first added some optimism to the market, but when various sellers started to target this destination, mills' bullishness dwindled.

Over the past week, [Egypt has booked around 100,000 tonnes of billet](#) originating from Iran, the CIS, India and Turkey within the range of \$655-690 per tonne cfr.

CIS-origin cargoes in particular were booked at \$675-685 per tonne cfr, equivalent to \$625-635 per tonne fob Black Sea.

The cheapest prices were achieved in a deal for Iran-origin material at \$655 per tonne cfr.

In Turkey, CIS billet sellers also faced increased competition because an Indian billet cargo was sold at \$645 per tonne cfr. This came against bookings of CIS-origin billet at \$670 per tonne cfr last week.

Following the booking of that Indian cargo and the [weakening of export long steel prices this week](#), Turkish customers reduced their bids for CIS-origin billet to \$635-640 per tonne cfr (\$605-610 per tonne fob Black Sea).

This resulted in lower offers from CIS suppliers. Most recent offers were heard at prices equivalent to \$620-640 per tonne fob Black Sea, compared with \$650-655 per tonne fob Black Sea earlier this week.

Market sources estimated the workable price for CIS-origin material to be around \$630 per tonne fob on November 18.

Fastmarkets' daily [steel billet index, export, fob Black Sea, CIS](#), consequently dropped to \$630 per tonne fob on Thursday, down by \$4 per tonne day on day.

Import billet price range in Egypt widens after safeguard duty removal

By Vlada Novokreshchenova - Thursday 18 November

The removal of a safeguard duty on imports of steel billet into Egypt earlier this week has resulted in a revival of trading activity in the local market, with various sellers rushing to grasp the opportunity because of unfavorable situations in other areas.

The Egyptian Ministry of Industry & Trade [suspended the country's 10% safeguard duty on imported billet](#) with effect from Monday November 15.

Following that move, around 100,000 tonnes of billet originating from various countries have been heard booked by the Egyptian market over the past week.

The lowest price of \$655 per tonne cfr was achieved in a booking of 50,000 tonnes of Iran-origin billet. The material was said to be sold from a trader's position so shipment was expected to be prompt.

A total of 20,000 tonnes of billet was said to be booked from the CIS region. One tranche of 10,000 tonnes was sold at \$675 per tonne cfr, according to market sources. The remainder was reported sold at \$685 per tonne cfr.

On November 17, 20,000 tonnes of India-origin billet were heard booked by a trader for further sale to Egypt at \$590 per tonne fob. The estimated cost of freight from India to Egypt was \$90 per tonne, according to market sources. With an additional \$5 per tonne to cover the trader's margin and banking costs, this would be equivalent to \$685 per tonne cfr Egypt.

The highest price paid was \$690 per tonne cfr for a cargo of 10,000 tonnes of Turkey-origin billet.

As a result, Fastmarkets' weekly price assessment for [steel billet, import, cfr main port Egypt](#), widened to \$655-690 per tonne on November 18, against \$660-670 per tonne last week.

Rebar

At the same time, rebar prices in Egypt were unchanged over the past week.

The trade ministry's order removing safeguard duties on billet also referred to imports of rebar. But according to the market sources, this will not result in a major revival of imports because anti-dumping duties remain in place for material originating from China, Turkey and Ukraine, sources said.

The duties were effective from June 6, 2017, and were set at 29% on rebar from China, 7.0-22.8% on rebar from Turkey, and 17.2-27.0% on rebar from

Ukraine. All will remain unchanged and applicable until June 5, 2022.

Egypt imported just 25,589 tonnes of rebar in 2020. The tonnage imported in 2017 was also comparatively insignificant at 199,951 tonnes.

As a result, domestic rebar prices in Egypt were stable this week and Fastmarkets' weekly price assessment for [steel reinforcing bar \(rebar\), domestic, exw Egypt](#), was £14,900-15,350 (\$946-975) per tonne on November 18.

Market sources said that some changes in price may be seen in early December, when the effects of the import billet market revival will be clearer.

Italian domestic ferrous scrap prices push upward in November

By Maria Tanatar - Thursday 18 November

Italian domestic steel scrap prices increased in the month to Tuesday November 16, supported by a combination of reduced supply and strong demand, sources have told Fastmarkets.

Month-on-month comparison prices have recovered by about €10 (\$11) per tonne. But market sources said that, taking into account that scrap prices dropped in the second half of October, the recovery since the start of November was about €30 per tonne.

In other European markets, including Germany, [domestic scrap prices have also increased](#) by around €30-35 per tonne this month.

The main drivers behind the price increase were strong demand among the steelmakers and the short supply of scrap, particularly of new grades.

Market sources said that Italian mills were not able to book as much scrap as they intended and that further price increases were possible.

Fastmarkets' latest monthly price assessment for [steel scrap, No E3 \(old thick scrap\), domestic, delivered mill, Italy](#), was €380-420 per tonne on November 16, compared with €380-410 per tonne in October.

And the monthly price assessment for [steel scrap, E40 shredded, delivered to mill, Italy](#), was €450-460 per tonne on the same day, up by €10 per tonne month on month from €440-450 per tonne.

Both assessments were based on transactions heard in the market.

Availability of new ferrous scrap grades, including E8, remained particularly problematic this month.

The automotive industry, a major supplier of new scrap, has had greatly reduced output due to a global shortage of semiconductors for onboard electronics. Market sources have reported that mills supplying the automotive sector have booked about 30% less steel than expected, and consequently the supply of new scrap grades has dropped by 25-30%.

[Passenger car sales in the EU declined by 30.26% month-on-month in October 2021](#) due to the semiconductors shortage, the European Automotive Manufacturers Association (ACEA) said.

As a result, Fastmarkets' monthly price assessment for [steel scrap, No E8 \(thin new production steel scrap\), domestic, delivered mill, Italy](#), was €460-480 per tonne on November 16, up by €10 per tonne from €450-470 per tonne in mid-October.

The assessment was based on deals heard in the market.

South Korean steel scrap deals pull down Japanese prices again

By Lee Allen - Thursday 18 November

Japanese steel scrap export prices fell again in the week to Thursday November 18, after lower-priced deals to South Korea emerged, sources told Fastmarkets.

A major South Korean mill purchased about 30,000 tonnes of Japanese steel scrap at bid prices that it had lodged earlier this week, sources told Fastmarkets on Thursday.

On Wednesday, the mill bid at ¥49,500 (\$432) per tonne fob for H2 scrap, ¥56,000 per tonne fob for shredded, ¥57,000 per tonne fob for heavy scrap (HS) and ¥63,500 per tonne fob for Shindachi bara prime scrap.

Fastmarkets heard the South Korean buyer had to reject more than half of the material it was offered by suppliers at those bid prices. The H2 bid price was down by ¥2,000 per tonne from the [previous sales of H2 heard to this buyer at ¥51,500 per tonne fob around two weeks ago](#).

Bids for H2 were heard at \$490 per tonne cfr Vietnam this week, which sources told Fastmarkets would be equivalent to ¥49,000 per tonne fob. Offers came in at ¥51,000-54,000 per tonne fob for H2, depending on supplier.

Fastmarkets' price assessment for [steel scrap H2, export, fob main port Japan](#), was ¥49,500-51,500 per tonne on Wednesday November 17, down ¥500-2,000 per tonne week on week from ¥51,500-52,000 per tonne.

But such low prices were not possible for all suppliers due to a more robust local market in the country.

"Collection prices are still hovering at about ¥53,000-54,000 per tonne fas, so it is very difficult to sell at a lower price unless exporters consider short-position sales. For short sales, I think some would consider ¥50,000 per tonne fob," a Japanese scrap trader said on November 17.

A short-position sale would mean that Japanese trader selling a cargo now will have to rely on the market dropping further to secure a cargo from the dockside market in a few weeks' time at a lower price than they can currently source the material.

"We would need [to achieve] ¥53,000 per tonne fob to sell H2 to Vietnam," a second Japanese scrap trader source said on Wednesday. "Some suppliers that can only supply 2,000 tonnes and cannot sell to the domestic market may accept ¥51,500 per tonne fob, but [the number of those suppliers] is limited

A South Korean steelmaker source said that the eagerness of Japanese suppliers to sell at current prices means prices are likely to continue to fall in the short term.

Higher grades

Another major mill in South Korea bought HS at ¥65,500 per tonne cfr late last week, sources said - equivalent to ¥61,500 per tonne fob after deducting freight costs.

Offers for the grade were heard at ¥63,000-65,000 per tonne fob over the last week.

Fastmarkets' weekly price assessment for steel scrap HS, export, fob main port Japan, was ¥61,500 per tonne on Wednesday, down from ¥62,500-63,000 per tonne a week earlier.

Two cargoes of shredded scrap in bulk were heard sold to a medium-sized South Korean steelmaker late last week at ¥61,000 per tonne cfr, which



sources said would be equivalent to ¥57,000 per tonne fob, minus freight costs.

Offers for the grade came in at ¥59,000-62,000 per tonne fob Japan. [Supply of the material remains high due to a drop in domestic intake at a major mill in Kyushu](#), sources said.

Fastmarkets' price assessment for [steel scrap, shredded, export, fob main port Japan](#), was ¥57,000 per tonne on November 17, down from ¥58,000-60,000 per tonne a week earlier.

The higher-grade Shindachi press bundle was sold to a major South Korean steelmaker over the past week at ¥69,000 per tonne cfr, sources said.

Shindachi bara, which is the prime scrap more commonly sold into the export market, was on offer at ¥64,000-66,000 per tonne fob Japan this week but, aside from the South Korean bids at ¥63,500 per tonne fob, little buying interest was heard, they added.

Fastmarkets' price assessment for [steel scrap Shindachi bara, export, fob main port Japan](#), was ¥63,500-64,000 per tonne on Wednesday, down ¥2,000 per tonne from ¥65,500-66,000 per tonne last week.

Domestic CRC prices down in Southern Europe on slow trading, competitive imports

By Maria Tanatar - Thursday 18 November

Domestic prices for cold-rolled coil in Southern Europe moved down in the week to Wednesday November 17 due to limited trading activity and competitive import offers, sources told Fastmarkets.

In the meantime, domestic prices in the north of Europe have been fairly stable despite a similar lack of demand.

Both Southern and Northern European spot buyers have been avoiding booking significant volumes of coil for next year before steelmakers settle their contracts with long-term buyers. Sources expect these negotiations to be finalized by the end of December.

Producers have also been relatively inactive in the spot market. They still have some fourth-quarter rolling tonnages of coil products to offer spot buyers.

This material became available due to the slump in demand from the automotive sector, which forced producers to redirect material to the spot market. Demand from automakers has fallen by about 30%, market participants said, because the global semiconductor shortage meant that they could not produce the usual numbers of vehicles, causing their steel consumption to decline.

Northern European mills, however, prefer to sell hot-rolled coil at these discounted prices rather than accept the decline in downstream products.

Several sources said that a couple of major European automotive manufacturers have requested bigger volumes for the first quarter of next year, indicating that the semiconductor situation has started to improve.

Fastmarkets' weekly price assessment for [steel CRC, domestic, exw Southern Europe](#) was €1,050-1,100 (\$1,188-1,244) per tonne on November 17, down by €20-50 per tonne from €1,100-1,120 per tonne a week earlier.

The assessment was based on offers and achievable prices estimated by market sources.

The corresponding weekly price assessment for [steel cold-rolled coil, domestic, exw Northern Europe](#) narrowed down to €1,120-1,140 per tonne on November 17, compared with €1,120-1,150 per tonne a week earlier.

The assessment reflects average achievable prices estimated by market sources.

A couple of market sources said that the region's mills were ready to accept €1,000 per tonne ex-works for CRC, but the information was not widely confirmed and, therefore, was not included in the assessment.

In addition to slow demand, domestic CRC prices in the south of Europe have also been impacted by a decline in import offers.

Fastmarkets' weekly price assessment for [steel CRC, import, cfr main port Southern Europe](#) was €965-1,000 per tonne on November 17, down by €20-35 per tonne week on week from €1,000-1,020 per tonne.

The assessment was based on offers from India, Brazil and South Korea.

European HRC prices flat on subdued buying, set to rise in Q1 2022

By Julia Bolotova - Thursday 18 November

European hot-rolled coil prices remained broadly stable on Thursday November 18 on limited trading, but sentiment for the first quarter of 2022 has turned cautiously optimistic, sources told Fastmarkets.

Limited tonnages of December-rolling HRC are still available at lower prices, but for January next year mills are targeting higher levels to cover surging costs amid an expected recovery in end-user demand.

December rolling material was still available due to cancellations by the automotive industry, sources said, although they added that the available volumes were starting to run out in the spot market.

Trading activity in the spot market across Europe remains subdued because buyers are wary of booking big volumes of HRC for next year before the steel mills settle their long-term-contracts with end users.

Demand from the automotive industry, one of the key consumers of HRC, is widely expected to pick up next year, supporting the upbeat mood in the market.

"Demand looks to be improving, stocks are OK and imported [HRC volumes] are limited due to safeguards and logistics [issues]," one trading source said.

Transportation problems persist across Europe because of a lack of trucks and truck drivers.

The situation at European ports has also remained tense, with buyers complaining that it takes up three to four weeks for a vessel to offload, sources said.

Fastmarkets calculated its [daily steel hot-rolled coil index, domestic, exw Northern Europe](#), at €1,001.43 (\$1,132.90) per tonne on Thursday November 18, up by just €3.93 per tonne from €997.50 per tonne on November 17.

The index was, however, down by €10.71 per tonne week on week and by €3.57 per tonne month on month.

Official offers from Northern European mills for January 2022 have been heard at €1,040-1,080 per tonne ex-works.

Deal prices for December-rolling material, meanwhile, have been heard at €930-980 per tonne ex-works, depending on supplier and tonnages, sources told Fastmarkets.

A deal for January-rolled coil has been heard in Germany at €1,070 per tonne delivered.

And a deal for the material from Central Europe was heard at €960 per tonne



ex-works in Germany.

Fastmarkets calculated its corresponding [daily steel hot-rolled coil index, domestic, exw Italy](#), at €890 per tonne on November 18, down by €1.25 per tonne from €891.25 per tonne on November 17.

The Italian index was unchanged week on week, but down by €15 per tonne month on month.

The calculation was based on achievable prices and offers reported at €850-920 per tonne ex-works.

Sources told Fastmarkets, that at least one producer in Italy still had December rolling HRC volumes available at €850-870 per tonne ex-works.

Local mills were looking to achieve €920 per tonne ex-works in deals for January rolling, while buyers put the workable level for first-quarter HRC at around €900 per tonne ex-works.

Turkish deep-sea scrap bookings resume at lower prices

By Cem Turken - Thursday 18 November

Turkish steel producers have resumed their deep-sea scrap import bookings with a single cargo deal, sources told Fastmarkets on Thursday November 18.

A steel mill in the Marmara region booked a United Kingdom cargo comprising 17,000 tonnes of HMS 1&2 (80:20) at \$488 per tonne and 5,000 tonnes of shredded at \$507 per tonne cfr.

The previous UK cargo deal was heard at \$490 per tonne cfr on HMS 1&2 (80:20) basis at the start of the week, along with Baltic Sea and United States cargoes sold at \$494.50 and \$500 per tonne cfr respectively on the same basis.

The daily scrap indices consequently fell on Thursday November 18.

Fastmarkets' calculation of the daily index for [steel scrap, HMS 1&2 \(80:20 mix\), North Europe origin, cfr Turkey](#) was \$484.01 per tonne on Thursday, down by \$5.21 per tonne day on day.

The corresponding daily index for [steel scrap, HMS 1&2 \(80:20 mix\), US origin, cfr Turkey](#) was calculated at \$491.98 per tonne on November 18, also down by \$5.21 per tonne day on day, leaving the premium for US-origin material over European scrap flat at \$7.97 per tonne.

Steel mills in the country have been showing little interest in deep-sea scrap imports - they have only been booking to meet their urgent needs due to limited finished steel sales in the export and domestic markets.

Turkish billet export, import prices fall on soft demand

By Cem Turken - Thursday 18 November

Import and export prices for steel billet in Turkey have weakened over the past seven days, in line with limited demand and falling scrap import costs, market participants told Fastmarkets on Thursday November 18.

Turkish steel mills showed little interest in deep-sea scrap imports over the past week amid slow export sales.

Fastmarkets' calculation of the [daily index for steel scrap, HMS 1&2 \(80:20 mix\), North Europe origin, cfr Turkey](#) was \$489.22 per tonne on Wednesday November 17, down from the \$495.42 per tonne on November 10.

Suppliers in the Commonwealth of Independent States (CIS) have lowered their offer prices to Turkey to \$650-660 per tonne cfr, with bids for the material at around \$640 per tonne or lower.

While no significant import deals were heard for material from the CIS region over the past week, an Indian supplier was heard selling 30,000 tonnes of billet to Turkey at \$645 per tonne cfr.

Fastmarkets' [weekly price assessment for steel billet import, cfr main port Turkey](#) was \$640-650 per tonne on November 18, down from \$650-670 per tonne last week.

In exports, meanwhile, a Turkish steel mill was heard selling 10,000 tonnes of billet to Egypt at \$660 per tonne fob, but most steel mills were focused on keeping their offers firm at about \$695 per tonne, sources said.

Fastmarkets' [weekly price assessment for steel billet, export, fob main port Turkey](#) was \$660-695 per tonne fob on Thursday November 18, down from \$695-700 per tonne of last week.

Domestic billet prices in Turkey, have been mainly stable over the past week, with Fastmarkets' [weekly price assessment for steel billet, domestic, exw Turkey](#) unchanged at \$690-695 per tonne on November 18.

Turkish rebar, wire rod export prices fall on limited demand

By Cem Turken - Thursday 18 November

Turkish long steel export prices have gone down over the past week amid poor demand from the country's major overseas destinations, market participants told Fastmarkets on Thursday November 18.

Turkish steelmakers have lowered their export offers for rebar to \$730-735 per tonne, down from last week's \$740-745 per tonne fob on an actual-weight basis.

However, the workable price was assessed at \$720 per tonne fob, according to the market participants.

Fastmarkets' [weekly price assessment for steel reinforcing bar \(rebar\), export, fob main port Turkey](#), was \$720-730 per tonne on November 18, down from last week's \$730-740 per tonne on an actual-weight basis.

Overall demand for wire rod in the export markets has been limited over the past week, leading Turkish steelmakers to lower their offers by around \$10 per tonne to \$820-830 per tonne fob on an actual-weight basis.

Bids came in at \$810 per tonne or lower, sources said.

Fastmarkets' [weekly price assessment for steel wire rod \(mesh quality\), export, fob main port Turkey](#), was \$810-820 per tonne on November 18, down from \$820-830 per tonne last week.

Turkish domestic long steel prices soar after lira plunges

By Cem Turken - Thursday 18 November

Domestic prices for steel rebar and wire rod in Turkey have gone up sharply over the past week because of the depreciation of the country's currency, market participants told Fastmarkets on Thursday November 18.

The Turkish lira went to new record high against the US dollar after the Turkish central bank's monetary policy meeting on Thursday. The central bank cut the benchmark interest rate by another 100 basis points to 15%.



The lira had already been losing ground against the US dollar after the Turkish central bank cut the benchmark interest rate by 2% to 16% in late October.

The currency was trading at 11.045-11.060 lira to \$1 at the time of publication, according to Oanda.com live rates. This compared with 10.028 lira to \$1 on November 16 and 9.895 lira to \$1 on November 11, according to the same source.

The weaker lira has led to rising finished steel prices because mills in Turkey buy most of their raw materials in US dollars before selling to the domestic market in the local currency.

In response to the dramatic decline in the country's currency, the Turkish steel producers had to increase their domestic rebar and wire rod offers.

The steel mills in the Istanbul and Izmir regions were offering rebar to local buyers at 9,300-9,350 lira (\$884-889) per tonne ex-works, while the prices in the Karabük and Iskenderun regions were 9,200-9,250 lira per tonne.

These prices included 18% VAT.

Consequently, Fastmarkets' weekly price assessment for [steel reinforcing bar \(rebar\), domestic, exw Turkey](#), was 9,200-9,300 lira per tonne on November 18, up from the 8,550-8,700 lira per tonne of last week.

The corresponding weekly price assessment for [steel wire rod \(mesh quality\), domestic, exw Turkey](#), was 10,300-10,400 lira per tonne on November 18, up from 9,700-9,900 lira per tonne, including 18% VAT.

SSAB announces two further partnerships to use its fossil-free steel

By Carrie Bone - Thursday 18 November

Swedish steelmaker SSAB has announced a further two partnerships involving its fossil-fuel-free steel, to commence in 2026, the company said in separate announcements this week.

It is to collaborate on the research and development of fossil-free steel with automotive safety supplier Autoliv for use in products such as airbags and seatbelts, it said on November 15.

"We are looking forward to working with Autoliv and to starting the research and development of innovative fossil-free steel components for [use in] their automotive safety products," SSAB chief executive officer Martin Lindqvist said.

"We are initiating a number of pilot projects together with Autoliv with the aim of reducing the [effect of these operations on] climate... and to strengthen competitiveness," he added.

SSAB hopes to supply fossil-free steel to the market on a commercial scale in 2026 after converting its Oxelösund blast furnace operation to use an electric-arc furnace, and by replacing coking coal with power from fossil-free electricity and hydrogen.

The process will use the Hybrit technology. This is a project involving SSAB, iron ore company LKAB and power company Vattenfall that started in 2016 and will result in the virtual elimination of carbon dioxide emissions from steel production.

"We are committed to becoming carbon-neutral in our own operations by 2030 and furthermore aim for net-zero emissions across our supply chain by 2040," Mikael Bratt, chief executive of Autoliv, said.

"This means reducing our carbon emissions through the use of renewable electricity in our own and suppliers' operations, improving energy and

materials efficiency, and adopting low-carbon logistics and low-carbon materials," he added.

"We are now turning our commitment into action and are well-positioned to continue supporting our customers and partners to reach their sustainability goals. Gradually switching to fossil-free steel in our products is an important step toward achieving our climate targets," he said.

On November 18, SSAB announced that it will also partner with ventilation specialist Lindab to use fossil-free steel in ventilation systems and building products. The two companies will work together on the introduction of SSAB's fossil-free steel to Lindab, SSAB said.

"I am happy to welcome Lindab as a fossil-free steel partner," Lindqvist said. "Together, we are contributing to reduced carbon dioxide emissions in the building and ventilation sector, as well as strengthening competitiveness while maintaining the high quality of [our] products. We are building a fossil-free value chain all the way to the end-customer."

Ola Ringdahl, chief executive officer of Lindab, said: "For us, fossil-free steel is central to our sustainability work. It is the single [material] that has the greatest effect on the environment. We have had a close relationship with SSAB for a long time and we are very happy about the collaboration on fossil-free steel. We look forward to being able to offer our customers the same high quality as before, but with an even stronger sustainability profile."

Earlier this year, SSAB announced it had produced and delivered the [world's first fossil-fuel-free steel at its site in Oxelösund](#).

Since then it has announced other partnerships involving the [construction industry](#) and the [automotive manufacturing sector](#).

Steel wire rod prices in Northern Europe steady on solid demand

By Julia Bolotova - Thursday 18 November

Steel wire rod prices in Northern Europe were largely stable in the week to Wednesday November 17, supported by some restocking activity and good end-user demand, sources have told Fastmarkets.

Fastmarkets' weekly price assessment for [steel wire rod \(mesh quality\), domestic, delivered Northern Europe](#), remained at €810-850 (\$916-962) per tonne on November 17, the same as seven days earlier.

The assessment reflected deals, offers and achievable prices reported by market participants over the past week.

Trading activity in the region was quite good over the period, with customers continuing to book wire rod for the first quarter of 2022, sources said.

End-user demand remained healthy in the region, which has also been supportive of prices.

"The market is still pretty strong. Buyers are restocking for next year," one source told Fastmarkets.

Meanwhile, European mills were determined to increase their prices because of the increased costs for raw materials, transportation, gas and electricity.

"It is important to get better prices, at least to compensate for costs," one mill source said.

So far in November, scrap prices in Germany [have risen by €20-40 per tonne across various grades](#).

Logistics remained complicated in the region due to the acute shortage of trucks and truck drivers across Europe.



"Logistics is a nightmare, and isn't getting any better. We can feel it across the whole supply chain," a distributor said.

As a result, market sources were not ruling out the chance that wire rod prices would inch further upward in the remainder of this year.

"I think producers will try to push through another price rise before Christmas," a trading source in Germany told Fastmarkets.

Meanwhile, overseas wire rod offers to the region were scarce.

Major suppliers long ago exhausted their import allocations for the fourth quarter under the EU safeguarding scheme, and domestic EU buyers were cautious about booking material for the first quarter of next year.

"Prices from the CIS and Turkey are currently very close to European mills' offers," one buyer said.

Fastmarkets' weekly price assessment for [steel wire rod \(mesh quality\), import, cfr main port Northern Europe](#), was €780-800 per tonne on November 17, narrowing from €780-820 per tonne a week earlier.

Bangladesh import steel scrap prices dip amid weaker sentiment across Asia

By Paul Lim, Lee Allen, Tianran Zhao - Thursday 18 November

Bangladeshi import steel scrap prices have fallen over the past week despite a continued rise in offer prices for rebar and domestic shipbreaking scrap in the country, sources told Fastmarkets on Thursday November 18.

- Bangladeshi import prices ease downward
- Taiwanese buyers secure containerized scrap at \$445-452 per tonne cfr
- Lack of demand for scrap in China due to hot metal being more attractive to mills.

Bangladesh

Souring sentiment in Asia has led to [lower prices in key markets such as those in South Korea, Japan and Vietnam in recent days](#) [LINK]. Although Bangladeshi container prices have largely been stable over the past two weeks, offer prices for deep-sea cargoes to the country have come down noticeably.

Offers for deep-sea cargoes from the United States West Coast were heard at \$560-565 per tonne cfr Bangladesh for HMS 1&2 (80:20) over the past week, while an offer for UK-origin shredded scrap in bulk was heard at \$585 per tonne cfr on Thursday.

An Australian cargo totaling 30,000 tonnes was heard offered around \$555-560 per tonne cfr Bangladesh for HMS 1&2 (80:20) last week, but the Bangladeshi mill buyer was heard to have waited before taking a decision on the material. The cargo was instead [heard sold to Vietnam at \\$540 per tonne cfr on Friday last week](#).

Deals for two cargoes of bulk Japanese H1:H2 scrap were heard at \$560 per tonne cfr Bangladesh this week, but these could not be confirmed at the time of publication.

Fastmarkets' price assessment for bulk cargoes of [steel scrap, HMS 1&2 \(80:20\), deep-sea origin, import, cfr Bangladesh](#), was \$540-560 per tonne on November 18, down by \$15-25 per tonne week on week from \$565-575 per tonne cfr one week earlier.

Key market sources said that Bangladeshi mills may not step into the deep-sea bulk market while prices were still dropping.

"When people see a downtrend, they watch and wait for the market [to

fall]," an exporter source said. "One major mill says they have not bought any containers recently, but I heard they did buy two pig iron cargoes from India at \$535-538 per tonne cfr Bangladesh in October, totaling around 70,000 tonnes."

Local shipbreaking scrap prices were heard to stay strong at 54,500-55,000 taka (\$623-629) per tonne this week, narrowing from [last week's 54,000-55,500 taka per tonne](#), while rebar offers moved up to 78,000-79,000 taka per tonne from a major mill. But it was unclear whether end-users could accept such a high bar price, the exporter said.

"There are not a lot of cargoes available on the [US] West Coast at the moment. One cargo was sold to Peru recently, where the turnaround time is only about 14-15 days from the West Coast," a South Asian scrap trader said.

"If US East Coast sellers are struggling to sell to Turkey at \$500 per tonne cfr for HMS 1&2 (80:20) right now, why can't US shippers sell to Bangladesh at \$540 per tonne?" a Singapore-based trading source said. "On the other hand, there is better sentiment in the US domestic market, with expectations of a \$50-60 per tonne increase for December."

Containers of plate and structural (P&S) scrap from Jordan were sold at \$580 per tonne cfr Bangladesh this week, while a mix of HMS 1 and P&S from unspecified origins, in containers, was also sold at \$580 per tonne cfr.

UK-origin HMS 1&2 (80:20) was heard offered at \$540-545 per tonne cfr Bangladesh on Thursday. Sources said earlier in the week that buyers would have accepted at \$545-550 per tonne cfr for similar material.

Fastmarkets' price assessment for [steel scrap, HMS 1&2 \(80:20\), containerized, import, cfr Bangladesh](#), was \$540-550 per tonne cfr on Thursday, down by \$5-10 per tonne from \$550-555 per tonne week on week.

Shredded scrap in containers was heard offered from the UK at \$576-585 per tonne cfr over the past week, with buyers able to accept prices of \$570-575 per tonne cfr.

Taiwan

More transactions for containerized HMS 1&2 (80:20) have been concluded recently at \$445, \$450, \$451 and \$452 per tonne cfr Taiwan by major electric-arc furnace-based producers.

One producer purchased at least 2,000 tonnes of containerized scrap from the US West Coast this week at \$445 per tonne.

But there remains no interest for bulk Japanese H1&H2 (50:50) cargoes, especially after last week's transaction at \$482 per tonne cfr Taiwan.

Fastmarkets' daily price assessment for containerized [steel scrap, HMS 1&2 \(80:20 mix\), US material import, cfr main port Taiwan](#), was \$445-452 per tonne on Thursday, widening downward by \$7 per tonne from \$452 per tonne on Wednesday.

China

A limited number of bids was heard for imported scrap in China on November 18 due to the lack of demand for material, according to sources.

No firm bids were heard for imported HRS101-grade scrap. Market participants estimated that the prevailing market price for such material was \$460-480 per tonne cfr north China on the day.

Fastmarkets' calculation of the [steel scrap, index, heavy recycled steel materials, cfr north China](#), was \$470 per tonne on November 18, unchanged from a day earlier.

"With the weak iron ore and coking coal prices, hot metal becomes cheaper than scrap," a mill source in Hebei told Fastmarkets. "Also, because more production curbs [are imposed] during winter, it is not good news for raw material demand. Around \$470 per tonne would be the domestic-import parity price, but I don't think anyone is interested in purchasing cargoes."

The wide gap between bids and offers was another reason for the low liquidity in the imported scrap market, Fastmarkets heard. Offers from Japan for heavy scrap were heard at \$505-510 per tonne fob on November 18, with market sources indicating that the equivalent cost would be about \$550-560 per tonne cfr China.

EU October car sales fall 30% on semiconductor shortage

By Elina Virchenko - Thursday 18 November

Passenger car sales in the EU declined month-on-month in October 2021 due to the continuing global shortage of semiconductors for use in onboard electronics, making it the fourth consecutive month to show a double-digit percentage decrease.

In October, EU passenger car sales decreased by 30.26% year-on-year to 665,001 units, the lowest October volume since 1995, the European Automotive Manufacturers Association (ACEA) said on Thursday November 18.

Despite this, [thanks to increased sales from March to May](#), new car registrations in the first 10 months of 2021 have increased by 2.25% year-on-year, to around 8.19 million units.

“Despite the recent drop in sales due to the semiconductor supply crisis, substantial gains earlier in the year helped to keep cumulative volumes in positive territory,” the association said.

Due to the consequent weaker demand from the automotive sector, domestic prices for hot-dipped galvanized coil have softened across Europe.

Fastmarkets’ weekly price assessment for [steel hot-dipped galvanized coil, domestic, exw Northern Europe](#), was €1,120-1,150 (\$1,267-1,301) per tonne on November 17, down by €10-20 per tonne from €1,140-1,160 per tonne a week earlier.

In mid-November, several sources said that a couple of major European automotive manufacturers had [requested bigger volumes of flat steel for the first quarter of next year](#), indicating that the situation with semiconductors has started to improve.

On average, about 900kg of steel is used in each car, according to the World Steel Association (Worldsteel).

EU NEW PASSENGER CAR REGISTRATIONS		
	Month/Year	Year-on-year change %
France	118,519	▼30.71
Germany	178,683	▼34.86
Italy	101,015	▼35.74
Spain	59,044	▼20.46
UK*	106,265	▼24.61

*UK figure is not included in ACEA EU total. Compiled by Fastmarkets using ACEA data

EU sets definitive anti-dumping duties on CR stainless steel from India, Indonesia

By Ross Yeo - Thursday 18 November

The European Commission (EC) has set definitive anti-dumping duties at rates of 10.2-35.3% on imports of stainless steel cold-rolled flat products originating in India and Indonesia.

This decision, which was published in the Official Journal of the EU on Thursday November 18, follows [the imposition of preliminary duties](#) on May 27.

The EC calculated preliminary anti-dumping duties on products from India at 13.9% for Jindal Stainless and Jindal Stainless Hisar, with duties of 35.3% for Chromeni Steels and all other companies.

Duties for suppliers from Indonesia have been calculated at 10.2% for IRNC and at 20.2% for Jindal Stainless Indonesia and all other companies.

The definitive measures were imposed on imports of flat-rolled products of stainless steel, originating in India or Indonesia, not further worked than cold-rolled, and currently falling under CN codes 7219 31 00, 7219 32 10, 7219 32 90, 7219 33 10, 7219 33 90, 7219 34 10, 7219 34 90, 7219 35 10, 7219 35 90, 7219 90 20, 7219 90 80, 7220 20 21, 7220 20 29, 7220 20 41, 7220 20 49, 7220 20 81, 7220 20 89, 7220 90 20 and 7220 90 80.

The EC initiated [anti-dumping proceedings against imports of CR stainless steel products](#) in September 2020.

Seaborne coking coal prices down after a sharp fall in domestic cargoes

By Alice Li - Thursday 18 November

Seaborne coking coal prices in the cfr China market dropped further on Thursday November 18 after domestic cargoes plunged due to weak demand, while the fob Australia coking coal market continued to be quiet without firm buying interest, market sources said.

Fastmarkets indices

Premium hard coking coal, cfr Jingtang: \$523.84 per tonne, down \$26.35 per tonne

Hard coking coal, cfr Jingtang: \$348.75 per tonne, down \$50.22 per tonne

Premium hard coking coal, fob DBCT: \$372.60 per tonne, unchanged

Hard coking coal, fob DBCT: \$324.85 per tonne, unchanged

Market sentiment for seaborne coking coal prices was further dampened after domestic coking coal prices in China’s coal hub Shanxi province dropped by about 1,000 yuan (\$157) per tonne day on day to 2,600-2,800 yuan per tonne on Thursday.

“Mills are trying to save [on the cost of] raw materials due to the falling steel prices and there is more room for a price decrease in the coking coal market than the iron ore market,” an international trader source said.

United States-origin premium low-volatility hard coking coal was offered at about \$420 per tonne in the reported week but no buying interest was reported.

“US-origin miners have canceled the offers for December-laycan cargoes; they wait [for the] buyer side to actively give bids if [buyers] have firm demand,” a trader source from Shanghai said.

The fob Australia coking coal market was muted on Thursday without any



visible trading activities, sources told Fastmarkets.

Dalian Commodity Exchange

The most-traded January coking coal futures contract closed at 1,845.50 yuan (\$289.06) per tonne on Thursday, down by 54.50 yuan per tonne day on day.

The most-traded January coke contract closed at 2,770 yuan per tonne on Thursday, down by 7 yuan per tonne day on day.

Chinese HRC prices tick lower on demand concerns

By Paul Lim, Zihuan Pan - Thursday 18 November

Spot prices for hot-rolled coil in China continued to move lower on Thursday November 18, while futures prices resumed their decline amid increasing demand concerns.

Domestic

Eastern China (Shanghai): 4,650-4,700 yuan (\$729-736) per tonne, down by 30-40 yuan per tonne

The most-traded HRC contract on the Shanghai Futures Exchange resumed its decline on Thursday, reversing gains from the previous day's rally and finishing the day at 4,333 yuan per tonne, which was its lowest closing price since February 2.

Losses in the HRC futures contract accelerated in afternoon trade. The most-traded contract for iron ore, a key raw material for steelmaking, on the Dalian Commodity Exchange also tumbled to an intraday low of 510.5 yuan per tonne - the lowest since January 2019 - amid the release of weekly figures for China's HRC inventory and output.

A major local information provider reported on Thursday afternoon that HRC inventories held by traders and mills in China dipped by 9,300 tonnes to 3.33 million tonnes in the week to November 18, while output of such material increased by 8,900 tonnes to 3.02 million tonnes.

Apparent demand for HRC in China - a combination of output and inventory changes - decreased by 35,500 tonnes to 3.03 million tonnes in the same week.

A Shanghai-based industry analyst believed that the decline in HRC prices for the day was largely driven by weak demand rather than the iron ore tumble.

The HRC price decline came despite tightened production curbs in some cities to combat smog and mills' attempt to stem the price downtrend.

A number of cities such as Tangshan, Handan in Hebei province and Anyang in Henan province, implemented the level 2 anti-smog alert earlier in the week, which means high-emission enterprises such as steel mills in the regions will come under stricter production curbs.

Handan city has issued **production curbs** on key sectors for the rest of the year to control air quality. From Thursday November 18 until the end of the year, steel mills in the city are required to cut their blast furnace (BF) production by up to 100%, depending on the grades assigned to them based on their emission control efforts.

On Thursday, a major mill in eastern China froze its HRC base price in Rizhao and Linyi of Shandong province at 4,953 yuan per tonne until further notice. The mill typically changes ex-works prices every day.

Export

Fastmarkets' steel hot-rolled coil index export, fob main port China: \$774.74 per tonne, down by \$1.89 per tonne

Offers for SS400 HRC from mills and trading houses steadied at \$780-810 per tonne fob China on Thursday.

Short sellers, meanwhile, offered material at \$775-790 cfr Vietnam, equivalent to \$740-755 per tonne fob China. At least two traders estimated the freight rates from China to Vietnam at around \$35 per tonne for January shipment.

Trading activities for Chinese HRC exports remained muted with the pullback in the Shanghai HRC futures prices sending buyers back to the sidelines.

Vietnamese buyers continued to harbor bearish sentiment, preferring to wait for more stability in the Chinese domestic markets before looking to purchase more cargoes.

Major domestic producer Formosa Ha Tinh Steel Corporation has closed negotiations with Vietnamese buyers, looking to reduce its volumes to hedge against falling spot prices in Asia.

It was heard to have sold around 300,000 tonnes of transactions to both domestic and overseas buyers so far.

Market chatter

"I haven't concluded any deals [for Chinese HRC exports] this week, but buying interest seems to be increasing. Some clients even were ready to place orders yesterday [when Shanghai HRC futures prices staged a small rally]," a Shanghai-based trader said. "Buyers are waiting for signs of stabilizing [in prices]."

Shanghai Futures Exchange

The most-traded January HRC contract ended at 4,333 yuan per tonne on Thursday, down by 117 yuan from **Wednesday's** close.

Tangshan relocating 20 mln tpy of crude steel capacity to Caofeidian

By Alice Li - Thursday 18 November

China's Tangshan city - the country's steelmaking hub - plans to raise crude steel capacity in its Caofeidian district to 20 million tonnes per year by 2025 to further improve the quality of steelmaking projects, its local government said in its 14th Five-Year Plan, for 2021-2025, which was released recently.

Tangshan, in northern China's Hebei province, has been working to relocate low-quality steelmaking projects or those located downtown to the countryside or seaside in the past few years, including to areas such as Caofeidian, due to environmental protection requirements, an industry analyst said.

"If the number of steel projects located near railways and ports remain high, it will continue to increase the pressure on highway transportation and lead to road damage, air pollution and traffic congestion," the same source added.

Currently, there are two major steel mills in Caofeidian district - Shougang Jingtang Iron & Steel and Tangshan Wenfeng Special Steel. Their annual hot metal capacity is about 13.47 million tonnes and 2 million tonnes respectively, according to the companies' websites.

Hebei Iron & Steel has been in the process of relocating its Tangyin Steel subsidiary from the Tangshan city center to Caofeidian since late-2020. It plans plan to commence 2.52 million tpy of hot metal production from May 2022, according to a company announcement.



The Tangshan local government said that that high-quality steel will make up more than a 70% proportion of production at Caofeidian. It added that about 30% of all steel products produced in Caofeidian will be used locally in Tangshan.

Among the high-quality steel products are value-added flat steel, high-strength cold-rolling sheet and plate.

Handan production cuts prompt Chinese steelmakers to turn bullish on prices, reduce spot deliveries

By Jessica Zong, Zihuan Pan - Thursday 18 November

Chinese steel mills are turning increasingly bullish about steel prices, despite the declines of recent weeks, after new production curbs were announced by local city governments.

Steel mills in southern Hebei's Handan city plan to strictly follow the government instructions to curb production in the expectation that lower production rates will offer some support to steel prices.

Some of that city's steel mills, and some in nearby Xingtai city, also plan to decrease deliveries to the spot market due to weakening demand, and to keep more stock in their warehouses, sources said.

Steel mills in the two cities mainly produce flat steels, including plate and hot-rolled coil.

An HRC producer in eastern China, meanwhile, plans to reduce the frequency of its ex-works price announcements to reduce the influence of weak futures.

It had listed its HRC ex-works price at 4,953 yuan (\$777) per tonne on Thursday and now plans to maintain that price for the next few days instead of changing it every day.

"Prices have, indeed, dropped too much in [recent] days," a trader in Shanghai said.

Fastmarkets' price assessment for [steel hot-rolled coil domestic, ex-whs Eastern China](#) was 4,680-4,740 yuan per tonne on November 18, down by 600-650 yuan per tonne from 5,330-5,340 yuan per tonne from October 29.

But other market participants are not as bullish as the steel mills.

"Winter is the weak season for steel demand and that will be a big factor to consider for spot prices," a second trader in Shanghai said.

"Even though steel mills have cut deliveries of spot cargoes, prices may still not rise as long as mill inventories increase," an industry analyst said.

China's rebar prices stop falling on restocking demand

By Jessica Zong - Thursday 18 November

Restocking demand kept China's domestic rebar prices from falling further on Thursday November 18.

Domestic Eastern China (Shanghai): 4,660-4,690 yuan (\$731-735) per tonne, unchanged

Several trading companies raised their procurement rates during the day to

build up their inventories, market sources said.

After weeks of destocking, traders do not have a lot of stock now, they said.

For instance, Hangzhou, a major market in eastern China, only had 340,000 tonnes of last Friday, according to a local industry information provider. This is about one-third of its highest stock level so far this year.

But not all traders rushed to restock.

More of them took a wait-and-see approach amid concerns over further price decreases due to weak end-user demand in the winter.

Market chatter

"The National Bureau of Statistics reported China's rebar output at 18.92 million tonnes in October, down by 20.6% from a year earlier. With supply and demand both decreasing, rebar prices will move up and down," an industry analyst said.

Billet

As at 3pm, billet was being traded at 4,180 yuan per tonne including value-added tax in Tangshan, unchanged from the previous day.

Shanghai Futures Exchange

The most-traded January rebar futures contract closed at 4,169 yuan per tonne on Thursday, down by 47 yuan per tonne from the previous day.

China's Handan city rolls out anti-smog production curbs for rest of 2021

By Zihuan Pan - Thursday 18 November

Handan city, a major steelmaking hub in northern China's Hebei province, has issued production curbs on key sectors for the rest of 2021 to fight against air pollution during the smog-prone winter heating season.

From Thursday November 18 until the end of the year, steel mills in the city are required to cut their blast furnace (BF) production by up to 100%, depending on the grades assigned to them based on their emission control efforts, according to the plan published by local media on the same day.

Grade-A mills - those deemed to have the best measures in place to lower emissions - are allowed to set their own plans to curb production.

Steelmakers under grades B and B- must cut their BF production rates by at least 30%.

A cut of at least 50% will be imposed on grade-C mills, while grade-D mills are required to completely idle their BFs.

The curbs on captive facilities such as sintering machines, shaft furnaces, converters and lime kilns cannot be lower than those on the mills' respective BFs, while independent pelletizing plants are required to halt operations.

The plan comes on top of Hebei's steel production curbs for winter heating season, which requires steel mills across the province to meet their respective crude production reduction targets for 2021 between mid-November and the year end.

Handan will also impose production curbs on coking, cement, lime and casting plants until the end of the year, while brick-tile, zinc oxide, glass, construction ceramics, rock wool, carbon plants are required to suspend production.



Steel scrap

CME busheling futures trade 165 lots

By Amy Hinton - Thursday 18 November

CME Group's busheling futures contracts traded 165 lots (3,300 gross tons) on Wednesday November 17, up by 93 lots from 72 lots during the previous session.

No lots were traded against the front-month December contract, which closed down by \$4 day on day at \$626 per gross ton, [according to a daily report from the exchange](#).

The January-November 2022 contracts each traded 15 lots, and all closed unchanged day on day.

The January-March 2022 contracts closed at \$615, \$613 and \$608 per ton respectively on Wednesday; and the April-June 2022 contracts settled at \$606, \$600 and \$590 per ton.

The July-September 2022 contracts settled flat at \$580, \$570 and \$555 per ton on Wednesday, while the October 2022 and November 2022 contracts closed at \$525 per ton and \$520 per ton respectively.

Open interest stood at 3,902 lots, or 78,040 tons, up by 75 lots from 3,827 lots the previous day.

Certain mill sources in have been predicting "strong sideways" pricing on prime grades - including No1 busheling - in December's upcoming domestic ferrous scrap trade, but stipulated that dealers are more bullish and are expecting to enjoy a greater increase on those grades.

Fastmarkets assessed the [steel scrap No1 busheling, consumer buying price, delivered mill Chicago](#) at \$580 per ton on November 4, up by 3.57% from \$560 per ton on October 7.

CME's busheling futures contracts are settled against Fastmarkets' [steel scrap No1 busheling index, busheling index, delivered Midwest mill](#), which was calculated at \$602.02 per ton on November 10, up by 3.19% from \$583.43 per ton on October 11.

Industrial minerals

Chilean producer SQM's revenue up in Q3 on higher iodine, lithium prices

By Sofia Okun - Thursday 18 November

A summary of results for the lithium and iodine divisions of Chilean producer Sociedad Quimica y Minera (SQM) for the third quarter of 2021, taken from its quarterly update published on Thursday November 18 and a follow-up call with analysts.

Key figures

Lithium and derivatives in Q3 2021

Sales volumes: 22,000 tonnes, up by 24% year on year

Revenue: \$185 million, up by 194% year on year

Lithium and derivatives in the first nine months of 2021

Sales volumes: 70,000 tonnes, up by 80% year on year

Revenue: \$483 million, up by 96% year on year

Iodine and derivatives in Q3

Sales volumes: 3,100 tonnes, up by 43% year on year

Revenue: \$108.6 million, up by 47% year on year

Iodine and derivatives in the first nine months of 2021

Sales volumes: 9,500 tonnes, up by 25% year on year

Revenue: \$328 million, up by 25% year on year

Adjusted earnings before interest, taxes, depreciation and amortization (Ebitda) in Q3 2021

\$251 million, up by 171% year on year

Adjusted Ebitda in the first nine months of 2021

\$626 million, up by 144% year on year

Operations outlook

In lithium, sales volume increased more than 80% compared with last year.

SQM's lithium producing exceeded 120,000 tonnes per year while it continues efforts to reach its 180,000-tonne capacity in 2022.

The company estimated lithium sales volumes at close to 100,000 tonnes for this year, it said in the update. This is a 5,000-tonne increase from its forecast in the second quarter.

Iodine sales volumes increased by 25% year on year in the first nine months of 2021. SQM estimated its iodine sales volumes will reach 12,500 tonnes by year end.

Average iodine prices are expected to increase in the fourth quarter "due to limited supply capacity." But SQM is ramping up iodine capacity, with an extra 1,000 tonnes to be added in early 2023, followed by approximately 2,500 tonnes in 2024.

Key quotes

"We reported significantly higher net income for the nine months ended September 30, 2021, [\$264 million] when compared to the similar period of 2020 [\$97.5 million]. These results were primary driven by much higher sales volumes in [the] lithium, iodine, specialty plant nutrition and potassium business lines, as well as higher realized prices in all our business lines," SQM chief executive officer Ricardo Ramos said.

"We forecast average [lithium] prices to be close to 50% higher in the fourth quarter this year when compared to prices reported in the third quarter [of] 2021," he said.

"In the iodine market, the rapid post-Covid recovery is being reflected in a 25% increase in our sales volumes in the first three quarters of 2021 compared to the same period last year. This strong demand growth should have a positive impact on prices going forward, since supply is not keeping up," Ramos said.

"Any price prediction is difficult to do," he said during the company's earnings call, noting that SQM's priority is securing lithium and iodine contract volumes.

Flake, amorphous and spherical graphite prices surge on high costs and solid demand

By Jon Stibbs, Sybil Pan - Thursday 18 November

Key data from the graphite pricing sessions in Asia and Europe for the week ended Thursday November 18.

GLOBAL GRAPHITE PRICES			
	New price	Previous price	% Change
Graphite flake 94% C, +100 mesh, fob China, \$/tonne	1,000	970	▲3.09
Graphite flake 94% C, -100 mesh, fob China, \$/tonne	700	600	▲16.67
Graphite flake 94% C, +80 mesh, fob China, \$/tonne	1,200	1,120	▲7.14
Graphite flake 94% C, +100 mesh, cif Europe, \$/tonne	1,245	1,200	▲3.75
Graphite flake 94% C, -100 mesh, cif Europe, \$/tonne	755	745	▲1.34
Graphite flake 94% C, +80 mesh, cif Europe, \$/tonne	1,395	1,345	▲3.72
Graphite spherical 99.95% C, 15 microns, fob China, \$/tonne	3,100-3,300	2,800-3,000	▲10.34
Graphite amorphous 80% C, -200 mesh, fob China, \$/tonne	480-550	450-500	▲8.42
Graphite amorphous 80% C, -200 mesh, FCL, cif Europe, \$/tonne	635-750	575-670	▲11.25
Adjustment	This quarter's VIU	Previous quarter's VIU	Quarterly Change
Carbon VIU in %	4.10	5.30	▼1.20
94% C	95% C	96% C	97% C
0.0%	5.30%	10.60%	15.90%

Source: Fastmarkets

China

- Flake graphite markets all jumped amid supply tightness following earlier power restrictions and the forthcoming winter halt in Heilongjiang province, in addition to reduced imports stemming from global shipping problems.
- Fine flake prices surged by 16.67% this past week, the largest change within a one-week period in three years, with sellers holding material testing the market with high prices.
- Prices for amorphous graphite rose following the interruption of operations in the country's major production hub of Hunan province. The widening spread also reflected a weakening domestic steelmaking market.
- Spherical graphite prices also jumped with soaring fine flake prices.

Europe

- Price increases in the fob China market were reflected in higher cif Europe prices for all sizes of flake.
- Imports from African flake suppliers have been slowed by logistical problems at ports, which in turn has tightened supply in Europe.
- Demand for flake and amorphous graphite has remained firm, although inventories have been run down while consumers seek to avoid buying on the spot market, if possible.
- High prices mean buyers have been reluctant to buy more material than necessary, but concern remains that the approaching winter season in China means supply will likely remain tight.

Fastmarkets prices the amorphous graphite markets in the third week of every month. The prices shown here relate to October 20, with the previous assessment made on September 16.

Graphite flake premium calculator

The Value in Use (VIU) was updated to 4.10% on October 7 for the fourth quarter of 2021, from 5.30% in the third quarter.

The Carbon-VIU measures, in percentage terms, the price value of one extra % of carbon content as reported in the market.

The VIU is calculated using statistical methods and the large amount of prices and data collected by Fastmarkets. The VIU shown is the value implied by the market and not an in-house assessment.

An example of what the Carbon VIU means practically: A published Carbon VIU of 5% means that material with a 95% carbon content is priced by the market, on average, 5% more expensive than 94% carbon content material, assuming other factors are equal.

Download the November-December 2021 issue of MMM

By Davide Ghilotti - Thursday 18 November

Welcome to the November-December 2021 issue of Metal Market Magazine, where we look back at the rally experienced across the main battery raw materials this year and where the near- and long-term bottlenecks are likely to arise.

The October issue – which you can still download [via this link](#) – focused on the ongoing rally in mineral sands and the fundamentals driving rare earths supply projects outside China.

In this November-December issue, meanwhile, you will be pleased to find:

- Cover story: Kathleen Quirk, president and chief financial officer of US copper producer Freeport-McMoRan, stresses teamwork and the strength of her colleagues in discussing her career with Andrea Hotter
- Lithium, cobalt, nickel and graphite outlook: Choice of battery chemistries, supply chain disruptions and consumer demand are a few of many factors with roles to play in the fortunes of battery raw materials markets this year, write William Adams and Amy Bennett
- Power shortages in China: Questions about power shortage impacts on the energy-intensive parts of battery production, Susan Zou and Sybil Pan write
- Primobius advances technology for lithium-ion battery recycling: Primobius plans are advancing rapidly to proceed with commercial recycling in 2022, Richard Barrett reports

Also available to you is a downloadable PDF of the full magazine issue.

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Untangling multiple drivers of battery material markets

By IM Staff - Thursday 18 November

The choice of battery chemistries, supply chain disruptions and consumer demand are a few of many factors with roles to play in the fortunes of battery raw materials markets this year. Fastmarkets expert analysts William Adams and Amy Bennett summarize the drivers at play and the outlook for lithium, cobalt, nickel and graphite in global battery production

Lithium booms

The lithium market started to turn brighter about a year ago – it has since become dazzling. Over the past 12 twelve months, the market has shifted from a state where the supply chain was destocked and stockpiles loomed to one where there is just no spare material around and extreme tightness prevails. Not surprisingly prices have shot higher, with those for lithium hydroxide on a cif China, Japan and Korea basis more than doubling since the end of 2020 (see chart).

Demand has grown considerably faster than the market was expecting and this has happened because government policy has stoked demand for electric vehicles (EVs) and energy storage solutions (ESS). Having to provide stimulus to their Covid-19-ravaged economies, governments have funneled money to boost their green agendas. In many countries, this has included generous incentives to buy EVs.

In Europe, automakers have also faced penalties if the average carbon dioxide output from the cars they produced is not below 95g/km. Combined, this has led to a strong rebound in Chinese EV sales and massive growth of the same in Europe (see charts). Sales in the United States have also started to climb strongly, albeit from a low base.

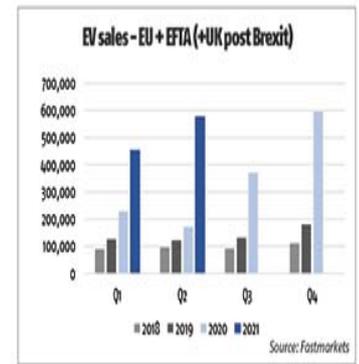
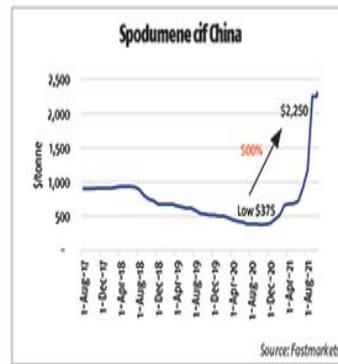
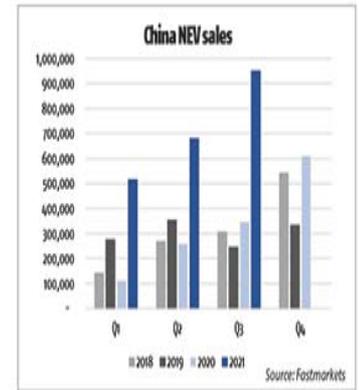
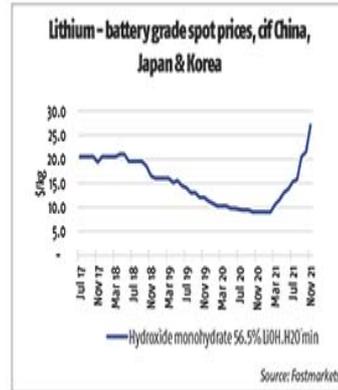
On top of demand for EVs, the need for ESS is growing at a fast pace with the world relying more on renewable energy, which is generated intermittently. In the first nine months of 2021, Chinese EV sales were up by 200%; in the first half of the year, EU EV registrations were 168% higher; sales in the US and Canada rose by around 100% in the first half.

But the extent of the price gains is not just due to strong demand, supply has also been constrained. Despite the run-up in prices, producers' responses have been limited. Idle production has taken longer than expected to restart. Indeed, at some plants, the decision to restart has still not been made because owners want to tie in the restart of mining to the commissioning of new downstream processing facilities. Expansions at existing mines and new capacity have been delayed due to fallout from Covid-19, often because restrictions on the international travel of key personnel, such as engineers, have hampered efforts to complete projects. As a result, supply has become

extremely tight, with spodumene spot prices rising by over 500% to \$2,250 per tonne, from the low price (\$375 per tonne cif China) seen in late 2020 (see graph).

New supply is on the way. Indeed, a lot of new supply is expected to come on stream in 2022, which will help alleviate the tightness.

But, given that the supply chain's stock has been depleted, the time it takes to ramp up new capacity, the qualification process that material from new production lines requires, and that every growing downstream production line will need increasing amounts of working stock, means the market is expected to remain tight next year, but perhaps not as tight as it is now.



Nickel consumption surges

While the amount of nickel consumed by the lithium-ion battery market is relatively small, with about 5% of nickel going into batteries in 2020, it is growing at a fast pace. Fastmarkets expects the EV market to consume at least 17% of nickel supply by 2025.

Like lithium and cobalt producers, nickel miners face a massive challenge if they are going to keep up with demand, especially with demand for EVs continuing to surprise on the upside.

But nickel producers face an even bigger challenge since it remains unclear whether all types of nickel ore will be able to be used by the battery industry, or only the ores that tend to be used to make class 1 nickel products, such as metal and those that feed high-pressure acid leach (HPAL) and heap leach operations. About 45% of nickel ore would be suitable to make class 1 products, with 55% suitable for class 2 products, such as nickel pig iron (NPI) and ferro-nickel. If only the class 1 ores (nickel sulphate and limonite ores) can be used, then supply of nickel to the battery industry is likely to be tight and shortages could occur. But if all types of nickel, including saprolite ore, can be used then there will be less risk of tightness developing.

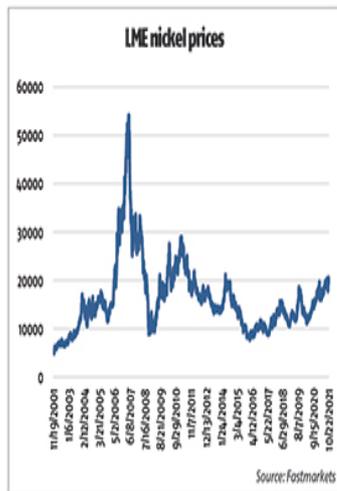
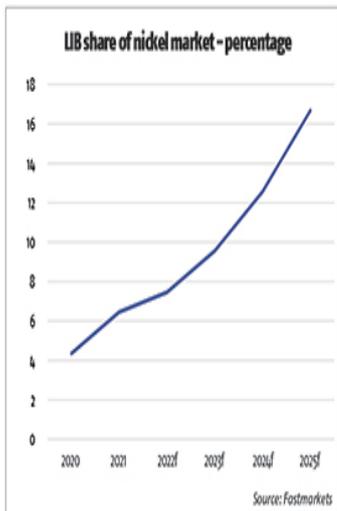
We should get a better understanding of the situation in 2022 once China's CNGR Advanced Materials and Huayou have trialed converting nickel matte, from class 2 ores, into nickel sulfate. When news emerged in late February 2021 that these companies were attempting this, nickel prices fell sharply because the market thought there would be less risk of tightness caused by demand from battery manufacturers. Prices have since recovered and moved past the highs seen in February, but that has been driven by supply



disruptions in New Caledonia, Russia, Finland, Australia and Canada, strong demand from the stainless steel industry – as infrastructure projects start to unfold following last year’s government stimulus packages – and from surprisingly strong EV sales.

But, like cobalt, greater use of lithium iron phosphate (LFP) batteries, especially in China, which contain no nickel, has meant demand from the battery industry has not been as strong as it may have been, although stronger-than-expected growth in EV uptake in Europe and North America will no doubt have offset the weaker growth in China.

Nickel supply, suitable to make nickel sulfate, is expected to recover in 2022, as refined nickel, nickel matte and nickel mixed hydroxide/sulfide precipitate operations recover from this year’s disruptions and as new HPAL operations ramp up. This could be further boosted should China’s CNGR and Huayou also successfully produce sulfate from class 2 ores. While it might prove economically viable to make sulfate from nickel matte, the other consideration is whether it can be done in an acceptable enough, environmentally friendly, way.



Cobalt crosswinds

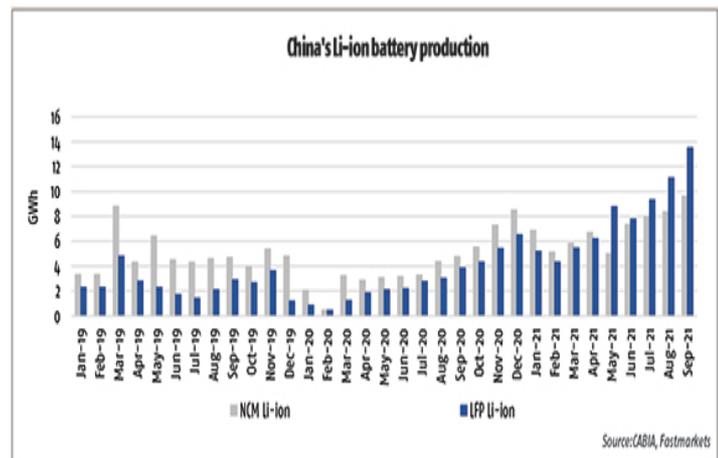
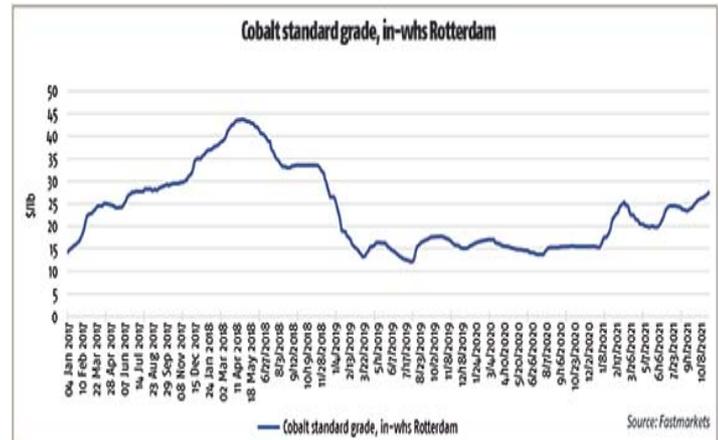
Cobalt prices have rallied strongly this year with the Fastmarkets standard-grade metal price up by 73% at \$26.45 per lb compared with the end of 2020 (see chart), but the market is being buffeted by both head and tail winds. Logistical issues due to Covid-19 precautions have kept the cobalt hydroxide market, one of the main cobalt feed sources for the lithium-ion battery market, tight as transport across land from the Democratic Republic of the Congo to South African ports remains disrupted. Also the sky-high cost of container shipping and the length of time material is in transit are other factors behind the tightness.

Some aspects of demand have become a headwind, notably the greater use of LFP batteries that use neither cobalt nor nickel (see chart). The greater use of such batteries, which is mainly being seen in China, has meant that demand for nickel-cobalt-manganese (NCM) lithium-ion batteries has not been as strong as it would have been had there not been a resurgence in the use of LFP. In addition, those using NCM batteries are tending to use batteries with higher-nickel and lower-cobalt weightings.

While cobalt use in batteries in China might not be growing as fast as was expected, the rapid growth rates in EV uptake in Europe and North America are expected to more than counter the headwind from China. For now, European and North American EVs are predominantly being fitted with NCM and NCA (nickel-cobalt-aluminium) lithium-ion batteries. In time, EVs in Europe may go down the LFP route, but we expect the models being rolled out now were designed to have NCM batteries, so it will take the roll-out of new models in a few years’ time that may be designed with LFP batteries, and these are probably going to be taken up by fleet and light commercial delivery vehicles.

Another present and near-term headwind for cobalt is the state of the consumer electronics (CE) market that has been negatively affected by the semiconductor shortage, which will have an impact on demand for lithium-cobalt-oxide batteries (LCO) that have a 60% cobalt weighting. About 26% of cobalt is used in the CE industry, so the slowdown here will have an impact.

While last year demand from CE ballooned as workforces and schools had to work from home, which boosted demand for laptops and mobile devices, this year was likely to see lower demand anyway. That has been made worse now as the chip shortage constrains manufacturing throughput. For example, Apple has cut its production schedule for the iPhone 13 by as many as 10 million units in 2021 owing to the chip shortage.



Graphite’s dependence on China

After exhibiting relatively stable price performance for much of the year, graphite prices have posted impressive increases in recent weeks, spurred higher by a combination of rising costs and tighter supply in China, shipping issues and higher freight rates, and stronger than expected demand from the EV battery sector this year.

Fastmarkets’ graphite spherical 99.95% C, 15 microns, fob China assessment was \$2,769 per tonne in October, up by 22% from \$2,275 per tonne in the same month last year. We expect graphite prices to remain elevated in the fourth quarter of 2021 and into early 2022 as rising electricity costs and reduced power availability squeeze graphite supply and diminish producers’ ability to stockpile material to sell over the winter months when extremely cold temperatures in northern China prompt graphite capacity closures.

Numerous challenges are ahead for the graphite industry as it develops to meet the needs of the rapidly growing EV sector. While debate persists around cathode chemistries, with LFP cathode gaining ground in China in recent months at the expense of NCM cathode, these various lithium-ion

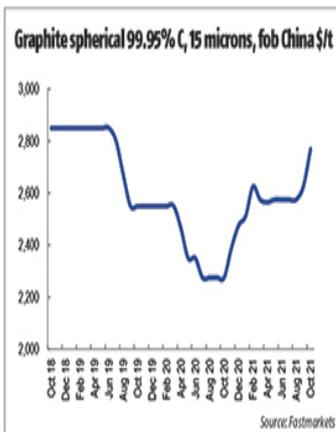
battery chemistries are all utilizing graphite anodes. In the coming years, exponential growth from the EV sector will propel the industry's graphite requirement far above demand from traditional consuming sectors.

Unlike other battery raw material markets, notably lithium, where insufficient near-term supply is propelling prices higher, graphite supply is less of a challenge for the industry, as is reflected in largely stable price movements this year. Instead, the challenges for the graphite sector center on the relative advantages and disadvantages of synthetic graphite versus natural graphite, and the desire for US and European automakers to reduce their dependency on China.

From a performance perspective, EV automakers prefer synthetic graphite, citing its superior fast-charge turnaround as well as battery longevity. The manufactured nature of synthetic graphite also gives the material an advantage in terms of consistency of supply quality relative to natural graphite. Synthetic graphite, however, is costly, power-intensive, and environmentally unfriendly, with supply centered in China.

Natural graphite enjoys a cost advantage relative to synthetic graphite - natural graphite is roughly half the cost of synthetic graphite. Although natural graphite supply is also dominated by China, with approximately 62% of total supply in 2020, new natural graphite projects are more diverse, with numerous projects in Africa helping to diversify the supply base. Natural graphite lags synthetic graphite, however, in the key areas of performance and consistency.

Development of graphite projects outside of China targeting the EV anode sector is progressing, reflecting the desire of the EV and battery sector to diversify supply away from dependence on China and China's dominance in the graphite sector. Although natural and synthetic graphite are produced in numerous countries globally, China produces well over 90% of the world's graphite active anode materials (AAM), controlling the market for coated spherical purified graphite (cSPG). Investment in the AAM sector in North America and Europe and other areas is key to the desired localization of supply in these key regions, but progressing from mining graphite to producing AAM is a lengthy process, with China poised to maintain dominance in this area at least until the post-2025 period.



Quirk boasts Freeport's culture, innovation, AI, embrace of agile way of working

By IM Staff - Thursday 18 November

Kathleen Quirk, the president and chief financial officer of US copper producer Freeport-McMoRan, stresses teamwork and the strength of her colleagues in discussing her career with Andrea Hotter.



It was obvious from an early age that Kathleen Quirk had a business mind. The future president and chief financial officer of US copper producer Freeport-McMoRan demonstrated an entrepreneurial approach as a child, as her family still jokes, when she sold lemonade and candy from a stall she set up in front of their home.

"My family teases me that I used to have sales from a stand in their yard. My dad's favorite story is I would walk down to the drugstore where he had a house account to load up on things to sell, bring them home, set up my stand and sell them," she told Metal Market Magazine. "It was all 100% profit for me!" she laughed.

Quirk was born in Oklahoma but spent her childhood in New Orleans. Her father was an engineer for oil and gas company Conoco, and the family moved around when Quirk was younger. "Several of my siblings were born in different places but my parents, originally from New Orleans, moved back when I was around two years old, and I grew up there," she said.

She was the fourth of six children, comprising five daughters and a son. Quirk was the youngest for some time until her sisters, 11 and 15 years younger respectively, were born. It was, she says, a happy childhood. "We have a close family still today, with lots of the children having grown up in the same

house. I was the youngest for so long I developed a thick skin from all the teasing," she added.

Quirk 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 chief executive officer 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.

"I said, 'I don't think I really want to be an accountant my whole life,' but he encouraged me to do it because there was always a job opportunity for an accountant. He wanted to make sure that whatever I graduated in, there would be an employment opportunity afterwards," she said.

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 – her high school graduating class was just 93 students – 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.

Mobil Oil

When her graduation came around, Quirk started to think about her future career – and was not sure which path to take. Half of her core group of 20 or so friends decided to move to Atlanta, Georgia; the other half, including Quirk, upped sticks and moved to Dallas, Texas. She did not have a job, but there were numerous local opportunities, particularly in the oil and gas sector.

After interviewing with Mobil Oil, she started working in the tax department at the company's Dallas accounting center, located in a downtown high-rise. It was 1985, the year before a surplus of crude oil caused by falling demand sent oil prices from \$27 a barrel to below \$10.

"I can recall being a little bit shell-shocked at Mobil because it was very structured. None of my friends worked in that environment," she recalled. "We had two coffee breaks a day, in the morning and afternoon. Someone would push a coffee cart to the elevator lobby, and they'd ring a cowbell," she said. "People could be on a call with someone, but it didn't matter – the bell would ring, and they would say, 'oh it's break, I'll call you back!'" she laughed.

It was interesting work; Quirk got exposure to the natural resources industry, particularly Mobil's international projects. But after a few years, and missing

New Orleans, she began to look for a role in a corporate headquarters, with the intention of better understanding a company's overall strategy.

She started to put feelers out to see if there was a job in New Orleans, which did not have many large corporations headquartered there at the time. But it did have one: Freeport, which had deep roots with the local community, and was "flying high" at the time, Quirk said.

After trying for a while to get her foot in the door, Quirk was offered a role in Freeport's tax department.



Freeport

It was 1989, the year after Freeport-McMoRan – a mining company with its roots in sulfur and with significant oil and gas operations in the US – had discovered the Grasberg copper and gold deposit in Indonesia, a game-changing asset for the company and soon to be one of the industry's greatest mines.

The company could not have been more different from Mobil, with 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.

It also had two master limited partnerships, which Quirk said were popular in the 1980s and required a lot of administration, which meant working closely with the investor relations group. By contrast, the mining business was relatively small, as Grasberg had just been discovered, and included a small gold property in Nevada.

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 told Metal Market Magazine.

It was a young group that worked hard but had fun too, Quirk said. "It wasn't uncommon in the middle of the day for the group to decide to start playing football in the hall, or there would be a contest of who would roll the tennis ball to land in someone's corner office," she smiled.

The role was also wide-ranging, including financial analysis, modeling, and the evaluation of projects, investments, innovative financings and mergers and acquisitions. It was her favorite role to that point.

Then in 1992, Goodyear became chief development officer of Freeport while 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.

In the mid-1990s, Freeport spun-off its copper business as well as its oil and gas unit, leaving the agricultural minerals business with the parent. Adkerson moved with the former, and Goodyear became CFO of the latter, which was ultimately merged into what is now Mosaic in a transaction that Quirk worked on.

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.

The late 1990s was a tumultuous time for Indonesia, with the three-decades-long President Suharto having stepped down a couple of years earlier and the contagion of the Asian financial crisis had spread, she recalled. At their low, copper prices dropped close to 60 cents per pound.

"Raising capital for Indonesia isn't like it is today, it was much more challenging – nobody argued that we did not have a great asset in Grasberg, but the associated political risk didn't make capital raising easy," she said.

"Suharto stepped down, Indonesia's credit rating dropped below investment grade, and the rating agencies adopted a policy that even though we had strong cash flows, our rating couldn't be higher than the sovereign rating," she added. Stuck with a very low credit rating despite strong financial metrics, Freeport's stock was trading at a discount. It led to some challenging negotiations with its financing banks, Quirk said.

"We had a bank credit facility that was maturing in 2002, but it wasn't like the current facility where we have an enormous facility that we don't have borrowings under. It was a facility we used, and Richard and I had to renegotiate with 30 or more banks to get an extension to it, and also to negotiate covenants," she noted.

Quirk said those challenging experiences taught her some important lessons, including finding common ground with other stakeholders. "What gave us comfort when negotiating was that we might have ups and downs, but we had good, long-term assets, and we always had the ability to pay off debt, even if not all at once," she added.

Phelps Dodge deal

It was a difficult couple of years, but by 2003, things started to improve, particularly as China emerged as a major developing economy. Copper prices started to move higher, gaining over 30 cents per lb through the year.

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'd been through the bank facility issues and we were starting to see the green shoots of the China growth story. 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 told Metal Market Magazine.

The natural bidder seemed to be Rio Tinto, a shareholder in Freeport. But Rio Tinto made a strategic decision to sell its shareholding in Freeport, which it had acquired in the mid-1990s. Freeport raised money in an innovative financing to buy back the stock owned by Rio Tinto in 2004; Rio Tinto maintained its joint venture in Grasberg.

"There were many times Rio Tinto could have acquired Freeport at very low prices, but it didn't. So, at that point we decided to buy the shares owned by Rio Tinto, and I'm glad we did," Quirk said.

Adkerson and Quirk thought the future of Freeport still seemed to lie in a sale. "We still thought someone would come and buy Freeport. There was always talk about one of the larger diversified miners, as we felt Grasberg would be valued more highly in a diversified portfolio," Quirk added.

Grasberg's value was roughly two-thirds copper, and the rest was gold, so it didn't naturally fit with other mining or pure gold companies. Freeport actively considered splitting the copper and gold business, Quirk recalled, and had some advanced conversations with various companies, including US copper producer Phelps Dodge, to contractually split the cash-flow streams.

"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 ironic twist of fate, Phelps Dodge came under pressure from its largest shareholder, an activist hedge fund investor, Atticus Capital. Phelps Dodge's response – a complex three-way transaction in which it would acquire Inco and Falconbridge – failed, with Vale and Xstrata, respectively, pre-empting those deals. Atticus started pushing hard for a Phelps Dodge sale.

While this coincided with a decision by Freeport to focus on copper, neither Quirk nor the Freeport team were expecting what happened next, she said. "Phelps Dodge faced the activist challenge. Nobody called Freeport to see if we'd be interested in a deal; nobody thought Freeport could do it," she added, recalling that Phelps Dodge was an industry major at the time and substantially larger than up-start Freeport.

That is, until Freeport's bankers, JP Morgan and Merrill Lynch, separately approached Freeport and proposed the acquisition of Phelps Dodge. "The banks that just a couple of years earlier had their workout people negotiating our credit facility, were now saying they could provide us an \$18 billion commitment to buy Phelps Dodge," she said.

After getting the green light from the company's board, Adkerson started having conversations about an acquisition with Phelps Dodge CEO Steve Whistler, who he had developed a positive relationship with over the preceding 10 years. It was the largest deal ever done in mining at that point and one that Quirk said transformed Freeport into a more globally diversified company. Freeport's credit rating was also upgraded, despite the debt.

From the outset, there was a focus on integrating the very different corporate cultures of the two companies. Operationally, the companies had the same focus on safety and operational efficiencies. But the corporate offices were very different, Quirk said, which was something she and Adkerson recognized needed to be fixed.

"You read so much about how M&A can destroy value when the cultures aren't cohesive," she noted. "We thought a lot about how we could mold the two company cultures together in a way that brought out the best in both organizations and so people would learn from each other. We wanted to bring across Freeport's non-bureaucratic, team approach to management," she added.

Ultimately, the cultures came together "extraordinarily well," Quirk said, to the extent that she does not think of people as having come from Phelps Dodge because the group is now so unified.

After the euphoria of the Phelps Dodge transaction, Freeport set about paying down debt. With the commodities bull market well under way, high copper prices helped; having initially planned to pay off \$10 billion of debt in four years, it did so in nine months. It also planned expansions at Cerro Verde in Peru, Morenci in the United States and Tenke Fungurume in the Democratic Republic of Congo. "We wanted to have a more aggressive approach around developing the assets and felt there was a lot of opportunity within the expanded portfolio that had not been pursued," Quirk said.



And then along came the global financial crisis of 2008. Copper prices collapsed, plunging from \$4 per lb to \$1.20 per lb by the end of the year. Quirk said that looking back, it was a really timely test of the organization.

"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 added.

The company worked to cut costs, improve productivity, and reduce output, operating its mines in the United States and South America at break-even and using the cash flows from Indonesia to fund debt servicing and its corporate overhead.

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 the following year, which created significant debt.

Challenging times

In a move that surprised investors, at the end of 2012 Freeport acquired Houston-based Plains Exploration & Production Company, as well as McMoRan Exploration Company, for \$20 billion. The acquisition, driven by the board at the time and not by management, was designed to create diversification in the group's portfolio.

Quirk said that unlike the merger with Phelps Dodge, the cultural integration of the oil and gas team was "really tough," with the new business operating under different rules to the mining division.

Things took a turn for the worse when the price of oil, followed by copper, collapsed beginning in 2014. A restructuring was under way when activist shareholder Carl Icahn took an 8.5% stake in Freeport, accelerating changes at the board level which opened the path for Freeport's mining group to again take control of the situation.

"It was tough – not a fun period. We had to really make some hard decisions," she said. That included the sale of Tenke Fungurume to China Molybdenum and the sale of an incremental interest in its North American flagship mine, Morenci, which Freeport would not have done otherwise, Quirk added.

The oil and gas deal also coincided with the beginnings of a bumpy ride in the company's negotiations with Indonesia, which had established a new mining law in 2009 and commenced an effort to apply it to Freeport in 2011. Initially, the company was told its contract with the government of Indonesia was unchanged, but then, Quirk said, the government's position changed.

"We didn't have clarity – we always felt that the mining law changes would not apply, as we had a contract with the government that had the force of law, but that became uncertain," she recalled, adding: "Then Indonesia started restricting exports. That was a major challenge."

Negotiations led by Adkerson continued over the next several years, with a resolution coming tantalizingly close on several occasions. It was, Quirk said, a question of trying to find common ground. She began her personal direct engagement in the Jakarta negotiations in 2017, working with Adkerson in meetings with senior government ministers.

"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.

That included Rio Tinto, which still owned a 40% joint venture stake in Grasberg. The diversified miner proved to be a lynchpin in resolving the protracted situation when it announced its desire to sell its interest. "Rio Tinto was always very supportive, but once it decided to be a willing seller, it opened up the whole opportunity for us," Quirk said. "We immediately started working cooperatively to get Rio Tinto and the state-owned company in Indonesia – which took a very professional approach to the transaction – to reach agreement," she added.

Freeport had already agreed to meet the government's aspirations to own a 51% stake in Grasberg and said that it would build a smelter the government wanted; in return the company would be granted an extension of its

operations through 2041 with legal and fiscal certainty, with any divestments to be at fair market value, and with Freeport continuing to manage the operations.

The icing on the cake was Rio Tinto's stake sale, which meant Freeport would sell a far smaller stake than initially envisaged. "It's sort of a blur, with all hands on deck 24-7, but we finally came to a framework understanding in 2017, reached terms on the divestment in September 2018 and completed the deal by the end of December," Quirk said.

"We had said to Indonesian President Joko Widodo and the other parties, 'let's find a win-win,' and that meant each party would not get everything they wanted. Each had to give up a bit and be uncomfortable a bit. The bigger picture was that it set up a structure where everybody can win in the future," she added.

The negotiations gave Quirk an opportunity to spend more time in the Indonesian capital, Jakarta, as well as at the Grasberg site on the island of New Guinea, where she said the team is more like a family than colleagues. "Grasberg is like nothing else in the world – it's such a gratifying experience to be there and see it," she said.

It had already started to transition to underground from open pit, part of a long-term plan dating back to the 1990s and investments beginning in 2003. The project is now producing significant amounts of copper and gold.

"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.

Highs and lows

Securing the Indonesian agreement was, Quirk said, one of her career highs to date. "If you had seen the exhausted Freeport team on the way home to the United States after we signed the deal with the Indonesian government in December 2018, right before Christmas... It was a really jubilant time," she laughed.

Other highs include the Phelps Dodge transaction, and now rebuilding the company to its current position. "We have an exciting effort around culture, innovation, artificial intelligence, embracing an agile way of working across the organization in a cross-functional, interactive way, and challenging the status quo. We talk about aiming high and so right now, the energy around what we're doing as a company is great," she added.

Admitting she enjoys a challenge because "everyone gets in, rolls up their sleeves and it's fun to solve problems," Quirk said the oil and gas situation was more difficult because all the stakeholders were not aligned, making it a low point in her career.

She said the hardest times, however, have come around staff fatalities or serious worker accidents. "We spend so much time and investment trying to protect people and to have fatalities really gives you a lot of soul searching. These incidents are really hard on everybody," she added.

Quirk is, she said, typically restrained when situations seem to be going well. Now is one of those times: copper prices have been soaring, supply-demand fundamentals point to a continued bullish outlook, plus the company and its operations are operating efficiently across the board, she said.

"I'm always the cautious one thinking, 'When things are like this, what is going to go wrong?' So maybe I don't enjoy the good times as much as I should, but right now, things are really good," she said.



Sustainability

Mining companies are coming under increasing pressure to provide details about how they plan to meet the goals of the Paris Agreement on climate change, adopted in 2015. This includes a commitment by governments to reduce greenhouse gas (GHG) emissions to net-zero by 2050, and a push to produce more sustainably.

To Quirk, sustainability is something Freeport has been doing at all its locations for many years. "In mining, if you aren't producing responsibly and sustainably, you don't have a business. There are always improvements made along the way but the focus on communities, on environmental management, on safety practices, has always been there," she said. "Now we have to be more transparent about it and disclose things in different ways," she added.

But Quirk said the heightened attention on climate is new. "Over the years, we've constantly had initiatives under way to reduce energy costs. From my perspective, it was less about climate and more about, can we be more efficient, develop projects that generate a rate of return, and, by the way, improve the climate," she told Metal Market Magazine.

"Now it's more driven by climate, and we must find economic solutions to achieving the goals of carbon reduction," she added. For its part, Freeport has a goal of net-zero Scope 1 and 2 GHG emissions by 2050 or sooner in line with the goals of the Paris Agreement. Copper benefits from having limited Scope 3 emissions.

Copper is key to decarbonization, Quirk noted, given its use in electric vehicles and their charging stations, along with renewable energy.

But according to Quirk, the flipside to the drive to decarbonize is that copper supply growth will become more difficult to achieve. "If you're having to bring down your footprint, the question arises of how you think about growing at the same time. The resources required for climate issues are significant – there's going to be significant cost," she said. "Those expenditures take away from what is available to build for growth. That's a challenge, and one I know we'll figure out how to navigate," she added.

This could even mean that climate targets become harder to achieve because mining companies cannot produce the copper needed for renewables or electrification, she said. "It begs the question of whether the regulatory framework is set up appropriately to incentivize production, or at least not disincentivize production through all the permitting that is required," Quirk noted.

At the same time, the mining industry needs to work harder to ensure it meets all ESG standards and demonstrates its reputation as being a critical component for the energy transition, she 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, whose leadership style, energy, commitment to team and partnership, and an incredible ability to manage stress and solve complex issues, have been critical in her development, she said.

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 people's shoes," Quirk said. "I'm probably biased, but I believe the culture we have at Freeport and the way people respect each other, work together for the common good of each other, families, stakeholders, is really gratifying," she noted.

Quirk noted that after being driven by the technical side for so long, non-technical skills have become critical in the mining sector. But attracting young blood to mining can be difficult because prior perceptions are slow to change, she said.

"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."

While Adkerson – now Chairman and CEO – has said he has no plans to retire, Quirk's name inevitably arises in discussions among industry participants of who might one day take his place. "That will be something the board decides. I'm really very happy – I love the company and my role, so I don't worry about what's next," she said. "I am personally focused on doing a really good job. Our board will have the opportunity to consider succession at the right time – Richard is very engaged and enthusiastic about the prospects for our company. We complement each other and enjoy working together," she told Metal Market Magazine.

"But we know one day there will be management progression and succession, that's normal, and we are prepared for it. Richard has done a great job in building a world-class and sustainable board of directors for our company's future," she added.

In March next year, 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.

Hobbies & interests

Quirk was one of 25 or so people that made the initial move to Phoenix, Arizona, when Freeport acquired Phelps Dodge. It was a step change from New Orleans, and a relatively unknown state to her at that time.

"It was an adjustment! But I was so excited about the opportunity and the transaction, that I didn't really dwell on the move. I stayed in a hotel for a while because we were so busy, I didn't have time to look for places to live," she said. "I found one, and now I love Phoenix and the outdoor opportunities we have here. The summers are difficult due to the heat, but October through spring is beautiful weather. I live in an area with lots of exercise opportunities, and when I can I go biking and walking." She laughed that she is not a golfer even though she lives right beside a golf course!

With her parents and siblings still living in New Orleans, Quirk visits as much as possible, although far less recently due to the Covid-19 pandemic.

"I didn't realize how much fun New Orleans was until I got older and started going to other places! It's a unique city, a wonderful place with a rich culture – very community and family oriented. It's hard to get people who grew up in New Orleans to leave," she said. "I love going back there – I'm close to my family and have multiple nieces and nephews there too. I love being around family and friends every opportunity I get. And I love the copper business, and its people," she added.

Her roots in New Orleans make her an avid music lover, especially when it's live. "Our holiday parties always include music with karaoke opportunities – I'm the instigator, not the performer, so I try to get people up on stage and have a lot of fun with it!" she smiled.

The pandemic has meant coming up with a different kind of holiday party. Freeport arranged a drive-in where people parked cars and listened to a 'yacht rock band' – "old songs from my college days," she said.

"We have a lot of fun together – I love the people I work with. We have enough challenges, so we try to keep a sense of humor and laugh about ourselves and the habits we have," she added.

Primobius advances technology for lithium-ion battery recycling

By IM Staff - Thursday 18 November

A joint venture between Australia’s Neometals Ltd and Germany’s SMS group, Primobius has completed its demonstration plant in Germany and plans are advancing rapidly to proceed with commercial recycling in 2022, reports Richard Barrett.

Rechargeable lithium-ion batteries have become an essential part of everyday life in mobile phones, laptops, cordless tools and many other items of consumer electronics. Now, with a transition away from fossil-fueled cars to electric vehicles the already large volume of their use is set to surge even more.

Since the number of lithium-ion cells needed for a single electric car is of course orders of magnitude greater than for a mobile phone, their growth in manufacture and use raises many questions about what happens to them at the end of their life.

These include who takes responsibility for them when they eventually wear out or the vehicle powered by them reaches the end of its life; what shape the infrastructure for collecting them should take; and which technologies can best be deployed to recycle them, taking into account that the main driving force behind the transition to EVs is the need to reduce carbon emissions and so every choice made needs to avoid reducing the benefits of electromobility by minimizing the carbon footprints associated with activities elsewhere in the automotive and recycling supply chain.

All these questions have been considered by Primobius, a 50:50 joint venture partnership formed last year between global supplier of metallurgical plant and technology, Germany’s SMS Group, and Neometals Ltd in Australia, a minerals and advanced materials project developer. The joint venture was formed after successful testing of the recycling process now at the heart of the business partnership during a pilot trial in Canada.

Their answers were given in the context of an update for the press at the end of September on the progress the joint venture has made over the past year, and to complement the news that work to build a demonstration plant in Germany is now complete, trials at that plant are now under way and plans are advancing rapidly to proceed with commercial recycling in 2022.

Demonstration plant

The demonstration plant is at Hilchenbach, built within the large and long-standing site of one of SMS group’s major workshops for the manufacture of metallurgical equipment.

Commissioning of the plant began in the third quarter of this year and is designed to show the efficacy of the Primobius process, with recycled products being evaluated with potential spent-battery or production scrap suppliers, product off-takers and partners.

The plant comprises a two-stage recycling system and provides customers the chance to see their batteries being recycled, observe the process, and to take away the end-products for evaluation with their supply-chain partners.

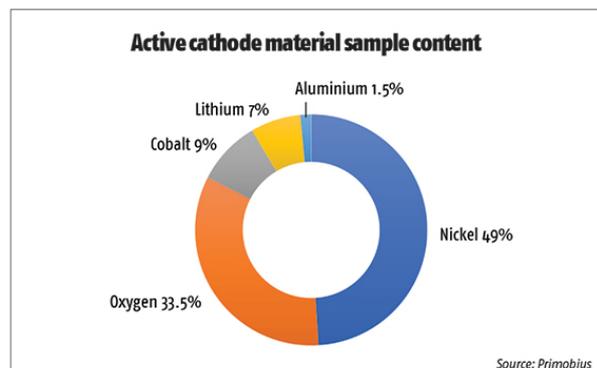
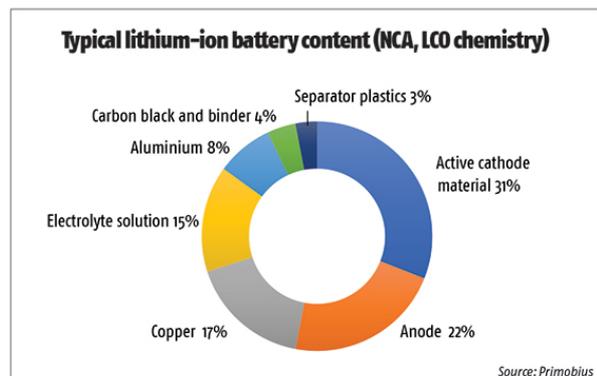
The Primobius recycling concept is said to present a scalable, flexible opportunity for expanding lithium-ion recycling, thus anticipating future increases in supply from end-of-life batteries and demand for the battery raw materials it recovers.

“Our goal, and that of our founding partner, is to provide fast, efficient, highly scalable recycling solutions for industry,” Horst Krenn, joint managing director of Primobius said.

“As demand for electromobility and consumer electronics increases, there is also a growing need on the market for sustainable ways to recover the valuable raw materials used in batteries. And we can supply the technology and systems for this as well as the logistics and operational concepts.”

“Companies don’t need a one-size-fits-all solution, but rather models that they can quickly expand to take advantage of all possible options in a dynamic market,” he added.

“We provide this flexibility – coupled with the security offered by our experience in designing, building and maintaining complex plants all around the world,” he explained.



Scale of the need

Christopher Reed, chief executive officer of Neometals, said that to understand Primobius it is important to be aware of the status quo and the areas in which the new company's technology offers advantages over those used by existing lithium-ion battery recyclers.

"Lithium-ion batteries have shot to prominence quicker than solutions to manage them for production scrap and at the end of life. There is a clear need for a sustainable, scalable lithium-battery recycling process," he said, echoing Krenn.

"They are a mix of materials from all over the world... They are valuable and there is good economics in recycling them, but within the traditional supply chain they have extensive carbon footprints," he added.

He elaborated that while electric vehicles (EVs) are a good means to decarbonize transportation, the carbon footprints of the battery raw materials and cell manufacture also need to be taken into account.

While battery cell-makers are building out massive capacity to supply carmakers, Reed said there is a large volume of production scrap of 10-20% generated by that capacity, including off-specification cathodes and cells that have failed at the QA/QC stage.

"Those volumes need to be handled and need a solution now," he stressed.

Safe handling of combustible raw materials when storing and recycling lithium-ion batteries is a priority.

"So we have to have a process that can safely handle that," said Reed, noting that only a small percentage of lithium-ion batteries are currently being stockpiled for recycling, particularly in the West.



While the level of recycling in China is higher, Reed described existing battery recycling methods as being more akin to traditional base metals refining, since the batteries are often incinerated in a pot or kiln, including the graphite anode, which is about 30% of the mass, the lithium-bearing electrolyte, which is combusted, together with plastic separators and casings, resulting in the recovery of only about 50% of the total battery mass.

Only some of the highest value elements of the batteries are recovered in

that process, whereas the Primobius process tackles all their content aiming to recover in excess of 90% of the materials.

The prospects for growth in electromobility and battery cell production in Europe in particular are strong.

"With almost 200,000 newly approved battery-powered electric cars in the year 2020, Germany is the second most important market in the world," noted Primobius, adding that, by 2030, there are already plans to establish 22 factories for lithium-ion batteries in Europe with an output of over 700 GWh.

Over the same period, the raw material demand for key lithium battery ingredients is forecast to grow dramatically.

A robust process

"We have developed a process that is very robust," said Reed, explaining that the company started looking at consumer electronics batteries, from laptops and phones, recovering primarily lithium and cobalt oxide, but since then it has expanded that process with SMS group in a way that is much more complex, where the technology recovers nickel, manganese, cobalt, lithium and other physical products.

From a commercial recycling perspective, Primobius has also taken into account the evolution of battery chemistries.

"Even as they are thrifting out cobalt and we are moving from NMC111 to NMC622 to NMC811, we have very robust margins," Reed noted. "Our Class 4 Engineering Cost Study operating costs, at a +/-25% accuracy, is about €1,400/tonne (US\$1,560 per tonne). So irrespective of the format or the cathode chemistries, we have a very economic process."

While any business has profitability as a top priority, he also emphasized the strategic value of Primobius technology to prospective clients.

"There is so much more in our process than just making money. For our customers, it is really about having the strategic value of being able to recover those critical materials that go into the batteries. Never before have the carmakers had to worry about the fuel in the car. Now that they are selling an electric car, they have to worry about the battery and the battery chemicals."

In addition to the environmental benefits of recycling, an efficient closed loop for lithium-ion battery recycling also addresses concerns about future materials supply chain security, particularly in regions where suitable virgin raw materials for battery production are scarce, as in Europe.

Reducing carbon footprint

Reed said that the total carbon dioxide emissions generated in manufacturing an EV are typically nearly double the carbon footprint of making a car installed with an internal combustion engine (ICE). He added that most of the additional carbon footprint for EV manufacture is associated with the materials used in the battery.

He also noted that as a consequence, it takes an electric car several years to catch up to CO2 parity with an ICE during the use phase, especially if it has been made from virgin, mined raw materials.

"If we can recover, recycle and refine the battery constituents, we can take that CO2 differential and we can reduce that," he explained.

Primobius noted that in the Hilchenbach demonstration plant the 8-tonne CO2 footprint from the use of virgin raw material can already be reduced to about 1.3 tonnes, and the company thinks they can take the carbon footprint generated by battery production down to about 300 kg per tonne of batteries, which would put EVs at parity with ICEs within the first year or so of the car's operation.

"We can get to parity quicker and that will net reduce the carbon dioxide footprint of the global carmaking fleet," Reed summarized.

Future business models

Primobius identifies its potential customers as battery or battery cell manufacturers, the automotive industry, producers of consumer electronics, stationary energy storage companies and scrap recyclers.

“Producers of lithium-ion batteries are legally obliged to collect and recycle used lithium-ion batteries. To date however, collection targets have been missed and many of the batteries find their way to landfill or inefficient smelting-based recycling operations,” the company stated.

Beyond the demonstration phase, Primobius is planning to use the plant at Hilchenbach commercially, particularly in trial campaigns for customers.

“As electromobility grows, so does the need for battery recycling, and Germany/Europe as a location must now establish extensive, efficient options,” Krenn emphasized. “That’s why we not only developed a concept, built the system, and further developed the process, but we are also acting as owners and operators. This allows us to optimize the system right down to the very last detail and tailor it to meet our customers’ needs.”

He said that in future cells returned under warranty will go back to car dealers and end-of-life cells will be returned to the dealers or certified waste collectors, where they will be aggregated as part of stewardship chains.

While the Primobius demonstration plant encompasses the entire recovery process, the technology’s two main parts can be set up separately from each other to provide a hub-and-spoke concept that the company says will further promote sustainability.

The first stage of shredding and sorting into plastic parts, metal parts and a black mass of mixed battery active materials can be done at the end of a spoke, at a customer’s own location for example. The second stage of hydrometallurgical recovery of materials from the black mass could be performed at a centrally located hub.

“The flexible hub-and-spoke system can reduce energy consumption for transport in the future and increase the safety of transporting and handling scrap and used lithium-ion batteries,” said Primobius.

Future customers will be able to benefit from the technology’s modular construction as well as the business model, noted Hans Ferkel, chief technology officer of SMS group and member of the Primobius Advisory Boards.

“Primobius is consciously taking a flexible approach. Because our customers from industry, battery cell manufacturing, or recycling have very different needs. And we want to be prepared to meet these needs as a plant constructor and project developer or as an operator and partner,” he said.

Reed also highlighted the company’s flexibility for different co-operation models, setting out four of them. For the first, as a principal recycler itself Primobius will take care of spent or scrap batteries to recycle them in a sustainable manner for a fee and would find its own markets for the products, which he noted is the model of incumbent recyclers.

Under a service agreement model, the company would finance and operate plants to provide a recycling service, with Primobius either co-locating a shredder at a client’s site, such as a cell-maker generating production scrap, or the client themselves investing in an additional shredder to create the black mass.

In a joint venture partnership model, the company would share the economic benefits of processing off-specification and end-of-life batteries. For very large contracts, under a licensing model, Primobius could offer a technology license and provide the equipment.

“We want to get into the supply chain... We want to aggressively target volume,” said Reed.

Elaborating on the hub-and-spoke model, he said that ideally the shredders would run on the customer’s production sites, operated either by the

customer themselves or Primobius, while the hydromet hubs would be built at strategic locations as close as possible to the users of their products. Carmakers will want the recycled battery materials back, he stressed.

He estimated that the total addressable market in Europe in 2025 will be about 335,000 tonnes per year of batteries: “The total installed capacity of all lithium battery recyclers in Europe now is about 50,000 tpy.”

Primobius is consequently already looking at building a 20,000 tpy plant, which could take the production scrap from cell makers’ lithium battery manufacturing.

“And we are studying a 200,000 tpy plant to take the end-of-life arisings after 8-10 years or even earlier if there are recalls,” he added.

At the end of the first quarter of 2022, Primobius plans to make an investment decision on a Primobius 50-tpd plant of its own in Germany, with one of two possible sites in mind.

The company already has a memorandum of understanding with Canada’s Stelco, a special, high-quality steelmaker which supplies North American automakers. It is considering a 50:50 joint venture to develop a hub-and-spoke model.

Another memorandum of understanding, with Itochu in Japan, which supplies battery materials and makes stationary energy storage batteries, is also considering a 509-tpd joint venture plant.

Reed concluded with a timeline that sees completion of Primobius’ feasibility study for its own 50-tpd plant in Germany in March next year, with potential commercial-scale operations commencing about a year after that.



A sustainable hydrometallurgical recycling solution

Primobius CEO Horst Krenn described the battery recycling process the company has developed, which comprises two main stages. Both of them are in operation at the company's demonstration plant in Hilchenbach, but the two stages can be located at different sites, depending on the choice of business model and logistics chosen by commercial users.

Krenn said the company has combined engineering and production under one roof at Hilchenbach, where they currently have a dedicated 2,000 sq meter facility for Primobius, with scope to expand there if required. An R&D license currently permits processing of 1 tonne of batteries per day at the plant, but Primobius is looking to increase that to 10 tpd from the first quarter of next year.

Used batteries from consumer electronics, battery production scrap, or battery cells removed from used EV battery packs, for recycling are fed by conveyor belt into a commercial-scale shredder. For safety, wet shredding occurs under a nitrogen atmosphere to manage any possible fire risk. The resulting mixed materials are automatically separated, including solid metals from the casings, copper or aluminium electrode foils, and plastics. Those solid materials are collected in bags for sale to conventional metals and plastic recyclers.

The rest of the battery contents are separated as a mixed, wet black mass, which is held in a collection tank and transferred into drums. The process accepts multiple battery chemistries, formats and types, as well as accepting batteries that are not fully discharged.

The second stage uses leaching with sulphuric acid, purification and precipitation to produce refined chemical products via a hydrometallurgical process facility. That hydromet stage creates high-value products, metal sulfate intermediates (cathode materials, nickel, cobalt and manganese) as well as lithium and graphite.

Krenn explained the steps in the second stage: "The black mass is fed into the leach circuit and dissolves the battery cathode active materials. The leach solution is separated from the carbon solid residue stepwise through solvent extraction. From the leach solution, copper and nickel are recovered as a high-purity copper sulfate and nickel sulfate, and lithium is also recovered as a sulfate, which will allow conversion to lithium hydroxide or lithium carbonate in a next step. Manganese and copper sulfate are saleable to existing refineries or for direct industrial use."

The solid leach residue contains graphite. "This we dry, drum and send away for re-use," said Krenn.

Ammonia is used for impurity removal (Al-Fe-hydroxide) from the black mass before the successive separate extraction steps to recover copper, cobalt, manganese, nickel and lithium.

"In our multi-stage process the final product is a liquid ammonium sulfate, which is saleable to the fertilizer market," Krenn added.

Looking at the process as a whole, Krenn explained that Primobius will replace materials usually supplied by primary refiners by generating the finished cathode intermediates that cell-makers use for their cathode manufacturing process.

He pointed out that Primobius will effectively operate as a refiner and compared the company's output with a mining operation. A mid-sized EV battery supplies a basket of already highly purified material as a feed to the refinery, with copper representing up to about 15.7% per tonne of battery feed, nickel 14.9%, lithium 2.4% and cobalt 1.9%.

A commercial-scale processing plant handling 50 tonnes of batteries per day, which Primobius is studying for future operation in Germany, would generate a suite of low-value products like plastic or the metal casing, plus about 10,000 tonnes per year of nickel sulfate, 3,340 tpy tonnes of lithium sulfate, 1,370 tpy of cobalt sulfate and 1,860 tpy of copper foil.

"We have national phase patents awaiting grant and remain very confident

regarding our freedom to operate and we have the capability to replicate, scale up and construct almost everywhere globally by ourselves. We already know it works and we are achieving excellent results from our test program currently," said Krenn.



Power shortages raise uncertainties in China

By IM Staff - Thursday 18 November

Power shortages in China raise questions about their effects on the energy-intensive parts of the production of battery raw materials and components. Susan Zou and Sybil Pan outline recent trends

The battery raw materials supply chain in China took a breather after a week-long holiday to mark the country's national day in early October, with the removal – partially or otherwise – of extensive power cuts announced in late September in several production hubs. The supply chain is still vulnerable to power restrictions, however, which are likely to persist in winter.

Similarly to those for other commodities such as aluminium and zinc, the battery raw materials supply chain in China – from the production of raw materials upstream to cathode and anode materials downstream – has been affected by power restrictions since September.

Most producers affected by the power cuts resumed their operations to varying degrees after the October 1-7 public holiday. But fresh power restrictions will probably roll out in certain cities soon, sources said, though they do not expect such curbs to be too severe or prolonged for the battery raw materials sector, since it is a crucial segment that feeds into the government-advocated electrification of transportation.

Nevertheless, power restrictions still create uncertainties in both supply and demand, making market participants seeking direction more cautious.

Anode materials production

China's power crunch has affected the production of anode materials more severely than other segments in the battery raw materials supply chain, market participants told Fastmarkets.

Power restrictions in the Inner Mongolia autonomous region threaten to disrupt about 50% of the country's upstream anode materials production, leading to surging prices and new projects shifting away from the region.

Inner Mongolia is a major production hub for synthetic graphite due to its favorable electricity prices. Graphitization capacity in Inner Mongolia accounts for almost 45-50% of the national total; the rest is in the country's southwestern region, where electricity rates are also lower.

"Energy consumption controls [in Inner Mongolia] began at the start of the year, tightening graphitization production for synthetic graphite anode materials. While we saw some operational improvements in the middle of the year, things have been getting worse in recent days with more critical power shortages," a China-based anode materials producer source said.

China produced around 55,000 tonnes of synthetic graphite in October, down by 5% from 58,000 tonnes a month earlier, according to sources. The graphitization process is a major part of synthetic graphite production. It consumes large amounts of energy – around 12,000-16,000kWh – to graphitize one tonne of synthetic graphite, according to sources. This makes up 20-30% of its production cost.

Meanwhile, market participants estimate that graphitization accounts for about 50-60% of the total cost in the production of synthetic anode materials.

"Tightening production capacity coincides with sound demand from the downstream battery manufacturing sector, both at home and abroad," a second anode materials producer source in China said. "As a result, increasing production costs need to be shared with downstream users. The synthetic anode materials price has grown by 15% against the first quarter."

While major producers in the country have sought to integrate graphitization capacity with their operations, the market is still reporting tight supply. About 50% of graphitization is carried out separately from the rest of the synthetic manufacturing process at independent facilities, mostly in Inner Mongolia, sources said. Because of the power woes in Inner Mongolia, producers might look elsewhere to set up the integrated facilities, they added.

"With a power crunch in the short term coupled with China's long-term goal of decarbonization, the expansion of the high energy-consuming graphitization lines will become increasingly difficult, especially in northern China. As such, we might see a growing trend of new operations in provinces such as Sichuan and Yunnan," a third anode materials producer source told Fastmarkets.

Cathode materials, feedstock salts

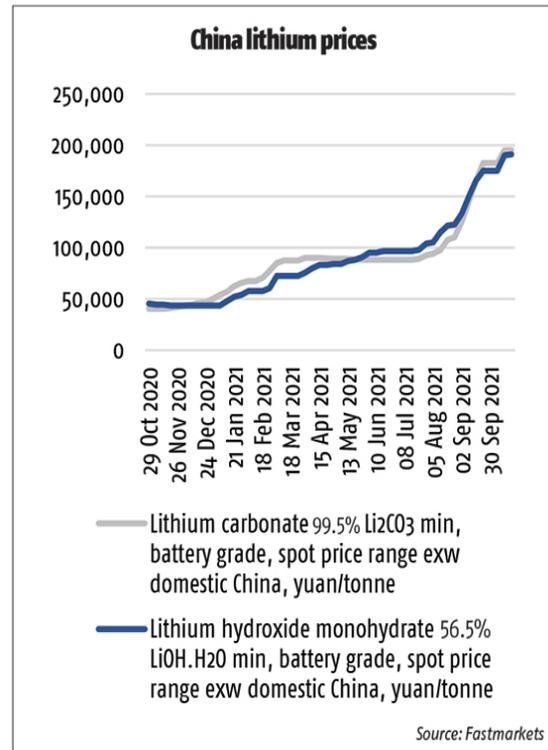
The recent power restrictions have disrupted production of both cathode materials and feedstock salts, including precursor raw materials and lithium salts that are used to produce cathode materials.

Typical precursor raw materials include nickel sulfate, cobalt sulfate and manganese sulfate, which – together with lithium salts such as lithium carbonate or lithium hydroxide – are used to produce nickel-cobalt-manganese (NCM) precursor materials.

The production of cathode materials usually consumes more power than that of their feedstock, according to market participants. The production of NCM 622 (Ni:Co:Mn: 6:2:2) and NCM 811 cathode materials in particular consumes the most power, they said. This is influenced by the fact that the production of nickel-rich NCM cathode materials involves two rounds of sintering, they added.

Some 10,000-12,000kWh of electricity is needed to produce one tonne of nickel-rich NCM cathode materials, according to several cathode materials producers. "Producers of cathode materials will be more cautious moving forward, and prepare for temporary power restrictions from local authorities that are made at short notice," a cathode materials producer source said. The source estimates that any future power restriction would not exceed 10-20% of their typical consumption.

Market participants are finding it hard to gauge whether the effect of power restrictions on cathode materials will exceed that on their feedstock, which results in uncertainties over demand along the value chain.



Demand trends

While market participants are unable to estimate the extent of the disruptions in various segments of the supply chain as a result of unpredictable power restrictions, they have noticed consumers at every level becoming more cautious about building up feedstock inventories. Demand for cathode materials in the second half of the year failed to outperform that in the first half, according to cathode materials producers.

Meanwhile, some market participants have pointed out that a potential shortage of anode materials is likely to damp battery manufacturers' appetite for cathode materials. "If battery manufacturers can't secure enough anode materials, then they can't produce batteries. So there will be less need for them to buy cathode materials," a precursor materials producer source said.

But sources at one leading battery manufacturer and several major cathode materials producers told Fastmarkets that such concerns have yet to materialize in reality. The same battery manufacturer source downplayed the supply bottleneck affecting anode materials for its operations despite

continuing disruptions in the production of such materials due to power cuts. "It is less likely for consumers to have difficulty in sourcing anode materials," the battery manufacturer source said. "The crucial issue is whether they can accept the increasingly higher prices [for anode materials]."

"As long as they keep purchasing anode materials, demand for cathode materials won't be affected. However, it is a fact that all battery raw materials prices have risen too quickly," the manufacturer source added.

Additionally, demand for NCM cathode materials has grown at a slower pace in recent months because of a worldwide shortage of semi-conductors and a preference for lithium iron phosphate batteries among producers of non-luxury electric vehicles in China, according to sources.

Elsewhere in the upstream market, restocking appetite for feedstock salts has waned amid caution among cathode materials producers, resulting in a slower rally of lithium prices in the country after the holiday earlier this month.

Fastmarkets' assessment of the lithium carbonate 99.5% Li₂CO₃ min, battery grade, spot price range, ex-works domestic China, was 190,000-200,000 yuan (\$29,697-31,260) per tonne on Thursday October 21, unchanged from a week earlier. Prior to the holiday, the price had been mostly experiencing weekly double-digit increases in percentage terms in September.

Fastmarkets' assessment of the lithium hydroxide monohydrate, 56.5% LiOH.H₂O min, battery grade, spot price range, exw domestic China, was 177,000-205,000 yuan per tonne on the same day, narrowing upward by 2,000 yuan per tonne from 175,000-205,000 yuan per tonne a week earlier. Prior to the holiday, prices had been rising over several weeks in September at rates of around 10%.

The range widened amid varied purchasing strategies among leading and marginal consumers, and the rate of increases slowed after the National Day

break in comparison with pricing sessions in September.

Auxiliary materials prices

Disruptions in the production of certain chemical products that are essential for the production of cathode materials and the upstream feedstock salts have been more significant, according to market participants. "Production costs for battery raw materials producers have risen sharply with prices for electricity, sulfuric acid and liquid caustic soda surging," a second cathode materials producer source noted.

Spot prices for sulfuric acid and liquid caustic soda have risen by about 50% compared with levels in the first half of the year, according to market participants.

In addition, China will allow its floating electricity prices to fluctuate by as much as 20% of the base price from October 15. The floating price limit of 20% will not apply to industries that consume high amounts of electricity, or if their power demand is met via term contracts negotiated directly between them and the grid corporation, the National Development & Reform Commission (NDRC) said.

These elevated costs have either already contributed to rising prices for salts such as cobalt sulfate and lithium carbonate, or will do so in the future.

Fastmarkets' price assessment of the cobalt sulfate 20.5% Co basis, exw China, was 89,000-93,000 yuan per tonne on Wednesday October 20, up by 9,000-11,000 yuan per tonne (12.35%) from a month earlier.

The processing fee for lithium carbonate has also almost doubled due to soaring prices for liquid caustic soda, a trader told Fastmarkets. The upward momentum for lithium carbonate prices will be sustained, the trader said.

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	16 Nov 2021	170 - 180	0.00%	Oct 2021	183.89 - 196.67
MB-AL-0001	Aluminium P1020A (MJP) quarterly premium, cif Japan, \$/tonne	05 Oct 2021	215 - 220	21.85%	Oct 2021	215 - 220
MB-AL-0344	Aluminium P1020A premium, cif South Korea, \$/tonne	16 Nov 2021	170 - 180	0.00%	Oct 2021	175 - 185
MB-AL-0307	Aluminium P1020A premium, fca South Korea, \$/tonne	16 Nov 2021	185 - 195	0.00%	Oct 2021	190 - 200
MB-AL-0329	Aluminium P1020A premium, cif Taiwan, \$/tonne	16 Nov 2021	180 - 200	-3.80%	Oct 2021	190 - 210
MB-AL-0328	Aluminium P1020A premium, bonded in-whs, Shanghai, \$/tonne	26 Oct 2021	140 - 150	-19.44%	Oct 2021	140 - 150
MB-AL-0345	Aluminium P1020A premium, cif Shanghai, \$/tonne	26 Oct 2021	130 - 140	-28.95%	Oct 2021	130 - 140
MB-AL-0346	Aluminium P1020A premium, in-whs dup Rotterdam, \$/tonne	18 Nov 2021	235 - 250	0.00%	Oct 2021	277.86 - 289.05
MB-AL-0004	Aluminium P1020A premium, in-whs dp Rotterdam, \$/tonne	16 Nov 2021	290 - 310	0.00%	Oct 2021	342.22 - 357.22
MB-AL-0316	Aluminium P1020A premium, fca dp Italy, \$/tonne	16 Nov 2021	365 - 380	0.00%	Oct 2021	410 - 422.5
MB-AL-0319	Aluminium P1020A premium, fca dp Spain, \$/tonne	16 Nov 2021	365 - 375	-3.27%	Oct 2021	427.5 - 437.5
MB-AL-0021	Aluminium P1020A premium, delivered Sao Paulo region, \$/tonne	16 Nov 2021	450 - 480	0.00%	Oct 2021	415 - 445
MB-AL-0022	Aluminium P1020A premium, cif dup Brazilian main ports, \$/tonne	16 Nov 2021	380 - 400	0.00%	Oct 2021	410 - 440
MB-AL-0020	Aluminium P1020A premium, ddp Midwest US, US cents/lb	16 Nov 2021	30 - 32	0.00%	Oct 2021	34.44 - 35.78
MB-AL-0231	Aluminum P1020A all-in price, delivered Midwest US, US cents/lb	18 Nov 2021	147.66 - 149.66	-0.94%	Oct 2021	167.93 - 169.21
MB-AL-0337	Aluminium P1020A premium, cif dup Turkey, \$/tonne	16 Nov 2021	265 - 280	-16.15%	Oct 2021	320 - 330
MB-AL-0381	Aluminium low-carbon differential P1020A, Europe, \$/tonne	05 Nov 2021	0 - 10	42.86%	Oct 2021	0 - 7
MB-AL-0378	Aluminium P1020A premium, in-whs dp Rotterdam, inferred low-carbon midpoint, \$/tonne	16 Nov 2021	305	0.00%	Oct 2021	353.22
MB-AL-0377	Aluminium P1020A premium, in-whs dup Rotterdam, inferred low-carbon midpoint, \$/tonne	18 Nov 2021	247.5	0.00%	Oct 2021	286.95
MB-AL-0333	Aluminium P1020A warrant premium, in-whs Southeast Asia, \$/tonne	17 Nov 2021	50 - 80	0.00%	Oct 2021	46.25 - 95
MB-AL-0334	Aluminium P1020A, warrant premium, in-whs East Asia, \$/tonne	17 Nov 2021	50 - 80	0.00%	Oct 2021	61.25 - 95
MB-AL-0338	Aluminium P1020A warrant premium, in-whs US, \$/tonne	17 Nov 2021	115 - 125	0.00%	Oct 2021	115 - 125
MB-AL-0297	Aluminium 6063 extrusion billet premium, cif Thailand, \$/tonne	22 Oct 2021	465 - 485	0.00%	Oct 2021	465 - 485
MB-AL-0298	Aluminium 6063 extrusion quarterly billet premium, cif MJP, \$/tonne	15 Oct 2021	180 - 200	16.92%	Oct 2021	180 - 200
MB-AL-0302	Aluminium 6063 extrusion billet premium, ddp North Germany (Ruhr region), \$/tonne	12 Nov 2021	1450 - 1500	0.00%	Oct 2021	1410 - 1460
MB-AL-0300	Aluminium 6063 extrusion billet premium, ddp Italy (Brescia region), \$/tonne	12 Nov 2021	1470 - 1540	0.00%	Oct 2021	1410 - 1464
MB-AL-0299	Aluminium 6063 extrusion billet premium, ddp Spain, \$/tonne	05 Nov 2021	1430 - 1500	2.09%	Oct 2021	1400 - 1460
MB-AL-0002	Aluminium 6063 extrusion billet premium, in-whs dp Rotterdam, \$/tonne	12 Nov 2021	1410 - 1460	0.00%	Oct 2021	1370 - 1420
MB-AL-0296	Aluminium 6063 extrusion billet premium, cif Turkey (Marmara region), \$/tonne	05 Nov 2021	700 - 750	0.00%	Oct 2021	700 - 750



Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-AL-0052	Aluminum 6063 extrusion billet premium, delivered Midwest US, US cents/lb	05 Nov 2021	23 - 27	0.00%	Oct 2021	23 - 27
MB-AL-0287	Aluminium 6063 & 6060 extrusion billet premium, cif Brazilian main ports, \$/tonne	05 Nov 2021	680 - 720	0.00%	Oct 2021	665 - 710
MB-AL-0382	Aluminium low-carbon differential value-added product, Europe, \$/tonne	05 Nov 2021	20 - 30	0.00%	Oct 2021	20 - 30
MB-AL-0379	Aluminium 6063 extrusion billet premium, ddp Italy (Brescia region), inferred low-carbon midpoint, \$/tonne	12 Nov 2021	1530	0.00%	Oct 2021	1462
MB-AL-0380	Aluminium 6063 extrusion billet premium, ddp North Germany (Ruhr region), inferred low-carbon midpoint, \$/tonne	12 Nov 2021	1500	0.00%	Oct 2021	1460
MB-AL-0341	Aluminium primary foundry alloy silicon 7 ingot premium, cif dup over P1020A Turkey, \$/tonne	12 Nov 2021	400 - 490	0.00%	Oct 2021	400 - 490
MB-AL-0349	Aluminium primary foundry alloy silicon 7 ingot annual premium, cif MJP, \$/tonne	15 Jan 2021	100 - 120	-15.38%	Oct 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%	Oct 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	12 Nov 2021	11 - 13	0.00%	Oct 2021	11 - 13
MB-AL-0340	Aluminium primary foundry alloy silicon 7 ingot premium, ddp Eastern Europe, \$/tonne	12 Nov 2021	800 - 900	0.00%	Oct 2021	800 - 900
MB-AL-0339	Aluminium primary foundry alloy silicon 7 ingot premium, ddp Germany, \$/tonne	12 Nov 2021	800 - 900	0.00%	Oct 2021	800 - 900
MB-AL-0045	Aluminum 6061 alloyed ingot, US cents/lb	01 Nov 2021	1.81 - 1.87	1.66%	Oct 2021	1.78 - 1.84
MB-AL-0046	Aluminum 6063 alloyed ingot, US cents/lb	01 Nov 2021	1.89 - 1.95	1.59%	Oct 2021	1.86 - 1.92
MB-AL-0277	Aluminum alloy C355.2 ingot, delivered, \$/lb	18 Nov 2021	1.85	6.32%	Oct 2021	1.93
MB-AL-0289	Aluminium import arbitrage, \$/tonne	18 Nov 2021	(248.92)		Oct 2021	(102.38)
MB-AL-0290	Aluminium import arbitrage, yuan/tonne	18 Nov 2021	(1590.72)		Oct 2021	(657)
MB-AL-0256	Aluminium fixing price for LME trade, rand/tonne	18 Nov 2021	40354.45	-1.13%	Oct 2021	43923.93

Metallurgical bauxite & alumina prices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-ALU-0010	Alumina index inferred, fob Brazil, \$/dmt	18 Nov 2021	426.61	-1.55%	Oct 2021	512.98
MB-ALU-0003	Alumina index adjustment to fob Australia index, Brazil, \$/dmt	18 Nov 2021	26.94	-19.17%	Oct 2021	34.85
MB-ALU-0002	Alumina index, fob Australia, \$/tonne	18 Nov 2021	399.67	-0.08%	Oct 2021	478.39
MB-ALU-0001	Alumina metallurgical grade, exw China, yuan/tonne	18 Nov 2021	3300 - 3500	-5.56%	Oct 2021	3850 - 4100
MB-BX-0015	Bauxite, fob Trombetas, Brazil, \$/dmt	18 Nov 2021	32	0.00%	Oct 2021	32
MB-BX-0014	Bauxite, fob Kamsar, Guinea, \$/dmt	18 Nov 2021	27	-6.90%	Oct 2021	29

Copper prices & premiums

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-CU-0412	Copper EQ cathode premium, cif Shanghai, \$/tonne	16 Nov 2021	20 - 35	0.00%	Oct 2021	20 - 37.5
MB-CU-0411	Copper EQ cathode premium, cif Europe, \$/tonne	16 Nov 2021	20 - 45	0.00%	Oct 2021	10 - 30
MB-CU-0369	Copper grade A cathode premium, cif Rotterdam, \$/tonne	16 Nov 2021	50 - 60	0.00%	Oct 2021	45 - 55



Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-CU-0372	Copper grade A cathode premium, delivered Germany, \$/tonne	16 Nov 2021	80 - 100	0.00%	Oct 2021	77.5 - 95
MB-CU-0406	Copper grade A cathode premium, cif Leghorn, \$/tonne	16 Nov 2021	80 - 90	6.25%	Oct 2021	70 - 82.5
MB-CU-0380	Copper grade A cathode ER premium, cif Shanghai, \$/tonne	18 Nov 2021	95 - 108	6.84%	Oct 2021	97.19 - 107.05
MB-CU-0383	Copper grade A cathode ER premium, bonded in-whs Shanghai, \$/tonne	18 Nov 2021	105 - 115	10.00%	Oct 2021	107.38 - 115.71
MB-CU-0403	Copper grade A cathode premium, cif Shanghai, \$/tonne	18 Nov 2021	90 - 108	8.20%	Oct 2021	87.62 - 107.05
MB-CU-0405	Copper grade A cathode premium, in-whs Shanghai, \$/tonne	18 Nov 2021	95 - 115	7.69%	Oct 2021	97.38 - 115.71
MB-CU-0384	Copper grade A cathode SX-EW premium, cif Shanghai, \$/tonne	18 Nov 2021	90 - 95	8.19%	Oct 2021	87.62 - 95.14
MB-CU-0382	Copper grade A cathode SX-EW premium, bonded in-whs Shanghai, \$/tonne	18 Nov 2021	95 - 105	8.11%	Oct 2021	97.38 - 106.67
MB-CU-0399	Copper grade A cathode premium, cif Southeast Asia, \$/tonne	16 Nov 2021	80 - 90	0.00%	Oct 2021	77.5 - 87.5
MB-CU-0386	Copper grade A cathode premium, cif Taiwan, \$/tonne	16 Nov 2021	70 - 85	0.00%	Oct 2021	70 - 82.5
MB-CU-0404	Copper grade A cathode premium, cif South Korea, \$/tonne	16 Nov 2021	75 - 85	0.00%	Oct 2021	75 - 82.5
MB-CU-0310	Copper grade 1 cathode premium, ddp Midwest US, \$/tonne	16 Nov 2021	176.37 - 198.42	0.00%	Oct 2021	
MB-CU-0002	Copper grade 1 cathode premium, ddp Midwest US, US cents/lb	16 Nov 2021	8 - 9	0.00%	Oct 2021	8 - 9
MB-CU-0309	Copper grade 1 cathode all-in price, ddp Midwest US, US cents/lb	18 Nov 2021	439 - 440	0.85%	Oct 2021	453.11 - 454.11
MB-CU-0400	Copper grade A cathode warrant premium, in-whs North Europe, \$/tonne	17 Nov 2021	5 - 10	0.00%	Oct 2021	5 - 10
MB-CU-0401	Copper grade A cathode warrant premium, in-whs South Europe, \$/tonne	17 Nov 2021	15 - 25	0.00%	Oct 2021	15 - 25
MB-CU-0397	Copper grade A cathode warrant premium, in-whs Southeast Asia, \$/tonne	17 Nov 2021	15 - 25	-38.46%	Oct 2021	25 - 40
MB-CU-0398	Copper grade A cathode warrant premium, in-whs East Asia \$/tonne	17 Nov 2021	15 - 25	-38.46%	Oct 2021	25 - 40
MB-CU-0377	Copper grade A cathode warrant premium, in-whs US, \$/tonne	17 Nov 2021	20 - 25	0.00%	Oct 2021	20 - 25
MB-CU-0336	Copper Aurubis grade A cathode annual premium, exw Europe, \$/tonne	16 Jan 2019	96	11.63%	Oct 2021	
MB-CU-0410	Copper rod premium, ddp Midwest US, US cents/lb	04 Nov 2021	21 - 23	0.00%	Oct 2021	21 - 23
MB-CU-0361	Copper import arbitrage, \$/tonne	18 Nov 2021	267.22	86.03%	Oct 2021	67.45
MB-CU-0362	Copper import arbitrage, yuan/tonne	18 Nov 2021	1707.66	85.76%	Oct 2021	432.79
MB-CU-0338	Copper fixing price for LME trade, rand/tonne	18 Nov 2021	146251.04	-0.83%	Oct 2021	145325.7
MB-CU-0321	Copper Republican copper price for Palabora 7.90mm South Africa Rand per tonne	29 Oct 2021	145222.56	7.03%	Oct 2021	

Copper concentrate & copper blister prices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-CU-0287	Copper concentrates TC index, cif Asia Pacific, \$/tonne	12 Nov 2021	57.9	-1.19%	Oct 2021	59.92
MB-CU-0288	Copper concentrates RC index, cif Asia Pacific, US cents/lb	12 Nov 2021	5.79	-1.19%	Oct 2021	5.99
MB-CU-0422	Copper concentrates counterparty spread, \$/tonne	01 Nov 2021	11.8	26.07%	Oct 2021	9.36
MB-CU-0423	Copper Concentrates Co-VIU, \$/tonne	01 Nov 2021	(0.1)		Oct 2021	(0.1)
MB-CU-0508	Copper concentrates TC implied smelters purchase, cif Asia Pacific, \$/tonne	12 Nov 2021	63.8	-1.09%	Oct 2021	64.6
MB-CU-0510	Copper concentrates RC implied smelters purchase, cif Asia Pacific, cents/lb	12 Nov 2021	6.38	-1.09%	Oct 2021	6.46



Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-CU-0509	Copper concentrates TC implied traders purchase, cif Asia Pacific, \$/tonne	12 Nov 2021	52	-1.33%	Oct 2021	55.24
MB-CU-0511	Copper concentrates RC implied traders purchase, cif Asia Pacific, cents/lb	12 Nov 2021	5.2	-1.33%	Oct 2021	5.52
MB-CU-0408	Copper blister 98-99% RC spot, cif China, \$/tonne	29 Oct 2021	150 - 170	0.00%	Oct 2021	150 - 170
MB-CU-0409	Copper blister 98-99% RC annual benchmark, cif China, \$/tonne	22 Jan 2021	140 - 150	12.40%	Oct 2021	140 - 150

Nickel prices & premiums

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-NI-0241	Nickel briquette premium, delivered Midwest US, US cents/lb	16 Nov 2021	65 - 90	0.00%	Oct 2021	46.25 - 56.25
MB-NI-0242	Nickel 4x4 cathode all-in price, delivered Midwest US, US cents/lb	18 Nov 2021	929.83 - 934.83	-1.34%	Oct 2021	926.32 - 936.32
MB-NI-0243	Nickel briquette all-in price, delivered Midwest US, US cents/lb	18 Nov 2021	939.83 - 964.83	-1.32%	Oct 2021	926.32 - 935.85
MB-NI-0240	Nickel 4x4 cathode premium, delivered Midwest US, US cents/lb	16 Nov 2021	55 - 60	0.00%	Oct 2021	46.25 - 56.25
MB-NI-0245	Nickel min 99.8% briquette premium, cif Shanghai, \$/tonne	26 Oct 2021	250 - 300	37.50%	Oct 2021	250 - 300
MB-NI-0142	Nickel min 99.8% full plate premium, cif Shanghai, \$/tonne	16 Nov 2021	320 - 350	-1.47%	Oct 2021	322.5 - 355
MB-NI-0143	Nickel min 99.8% full plate premium, in-whs Shanghai, \$/tonne	16 Nov 2021	340 - 360	0.00%	Oct 2021	332.5 - 355
MB-NI-0001	Nickel 4x4 cathode premium, in-whs Rotterdam, \$/tonne	16 Nov 2021	190 - 250	2.33%	Oct 2021	165 - 220
MB-NI-0002	Nickel briquette premium, in-whs Rotterdam, \$/tonne	16 Nov 2021	150 - 170	0.00%	Oct 2021	130 - 150
MB-NI-0003	Nickel uncut cathode premium, in-whs Rotterdam, \$/tonne	16 Nov 2021	60 - 80	0.00%	Oct 2021	40 - 75
MB-NI-0139	Nickel min 99.8% full plate warrant premium, in-whs East Asia, \$/tonne	17 Nov 2021	30 - 40	0.00%	Oct 2021	30 - 40
MB-NI-0137	Nickel min 99.8% full plate warrant premium, in-whs Southeast Asia, \$/tonne	17 Nov 2021	30 - 45	0.00%	Oct 2021	31.25 - 43.75
MB-NI-0140	Nickel min 99.8% briquette warrant premium, in-whs East Asia, \$/tonne	17 Nov 2021	45 - 50	-9.52%	Oct 2021	37.5 - 50
MB-NI-0138	Nickel min 99.8% briquette warrant premium, in-whs Southeast Asia, \$/tonne	17 Nov 2021	40 - 50	-14.29%	Oct 2021	28.75 - 50
MB-NI-0141	Nickel min 99.8% warrant premium, in-whs North Europe, \$/tonne	17 Nov 2021	50 - 130	-2.70%	Oct 2021	36.25 - 130
MB-NI-0244	Nickel sulfate min 21%, max 22.5%; cobalt 10ppm max, exw China, yuan/tonne	12 Nov 2021	35500 - 36000	0.00%	Oct 2021	35700 - 36300
MB-NI-0246	Nickel sulfate, cif China, Japan and Korea, \$/tonne	01 Nov 2021	4887	-1.25%	Oct 2021	4949
MB-NI-0247	Nickel sulfate premium, cif China, Japan and Korea, \$/tonne	01 Nov 2021	2500	-10.71%	Oct 2021	2800
MB-NI-0107	Nickel import arbitrage, yuan/tonne	18 Nov 2021	(518.63)		Oct 2021	1958.91
MB-NI-0106	Nickel import arbitrage, \$/tonne	18 Nov 2021	(81.16)		Oct 2021	304.38
MB-NI-0093	Nickel fixing price for LME trade, rand/tonne	18 Nov 2021	298615.21	-1.78%	Oct 2021	288625.5

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	12 Nov 2021	118 - 122	0.00%	Oct 2021	116.8 - 121.2
MB-NIO-0002	Laterite ore with 1.5% Ni content, cif China, \$/tonne	12 Nov 2021	81 - 83	0.00%	Oct 2021	88.4 - 91.6

Lead prices & premiums



Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-PB-0108	Lead 99.99% ingot premium, cif Southeast Asia, \$/tonne	09 Nov 2021	125 - 150	1.85%	Oct 2021	125 - 145
MB-PB-0107	Lead 99.97% ingot premium, cif Southeast Asia, \$/tonne	09 Nov 2021	80 - 110	11.76%	Oct 2021	80 - 90
MB-PB-0084	Lead 99.97% ingot premium, cif Taiwan, \$/tonne	16 Nov 2021	100 - 115	0.00%	Oct 2021	100 - 115
MB-PB-0083	Lead 99.99% ingot premium, cif Taiwan, \$/tonne	16 Nov 2021	125 - 135	0.00%	Oct 2021	125 - 135
MB-PB-0087	Lead 99.97% ingot premium, cif India, \$/tonne	09 Nov 2021	70 - 135	7.89%	Oct 2021	60 - 130
MB-PB-0086	Lead 99.99% ingot premium, cif India, \$/tonne	09 Nov 2021	140 - 150	7.41%	Oct 2021	130 - 140
MB-PB-0099	Lead 99.99% ingot premium, delivered Midwest US, US cents/lb	16 Nov 2021	17 - 19	0.00%	Oct 2021	17 - 19
MB-PB-0006	Lead 99.97% ingot premium, ddp Midwest US, US cents/lb	16 Nov 2021	15 - 18	0.00%	Oct 2021	15 - 18
MB-PB-0056	Lead 99.97% ingot all-in price, ddp Midwest US, US cents/lb	18 Nov 2021	116.5 - 119.5	-1.60%	Oct 2021	121.04 - 124.04
MB-PB-0109	Lead 99.97% ingot warrant premium, in-whs North Europe, \$/tonne	17 Nov 2021	10 - 30	0.00%	Oct 2021	10 - 30
MB-PB-0110	Lead 99.97% ingot warrant premium, in-whs South Europe, \$/tonne	17 Nov 2021	20 - 30	0.00%	Oct 2021	20 - 30
MB-PB-0106	Lead min 99.97% ingot warrant premium, in-whs East Asia \$/tonne	17 Nov 2021	5 - 20	0.00%	Oct 2021	5 - 20
MB-PB-0105	Lead min 99.97% ingot warrant premium, in-whs Southeast Asia \$/tonne	17 Nov 2021	5 - 20	0.00%	Oct 2021	5 - 20
MB-PB-0097	Lead 99.97% ingot warrant premium, in-whs US, \$/tonne	17 Nov 2021	20 - 30	0.00%	Oct 2021	20 - 30
MB-PB-0064	Lead fixing price for LME trade, rand/tonne	18 Nov 2021	34651.44	-2.21%	Oct 2021	34772.79

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%	Oct 2021	98
MB-PB-0100	Lead concentrate TC, low silver, annual benchmark, \$/tonne	15 Mar 2018	99	-28.26%	Oct 2021	99
MB-PB-0103	Lead spot concentrate TC, low silver, cif China, \$/tonne	29 Oct 2021	55 - 70	0.00%	Oct 2021	55 - 70
MB-PB-0104	Lead spot concentrate TC, high silver, cif China, \$/tonne	29 Oct 2021	55 - 70	0.00%	Oct 2021	55 - 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	16 Nov 2021	1500 - 2000	0.00%	Oct 2021	1600 - 1800
MB-SN-0002	Tin 99.9% ingot premium, in-whs Rotterdam, \$ per tonne	16 Nov 2021	1100 - 1400	-7.41%	Oct 2021	1200 - 1650
MB-SN-0036	Tin 99.85% ingot premium, in-whs Baltimore, \$/tonne	16 Nov 2021	2000 - 2700	-18.26%	Oct 2021	2400 - 3650
MB-SN-0038	Tin 99.9% ingot premium, cif Taiwan, \$/tonne	16 Nov 2021	300 - 400	-12.50%	Oct 2021	350 - 450
MB-SN-0012	Tin grade A min 99.85% ingot all-in price, ddp Midwest US, \$/tonne	18 Nov 2021	41875 - 42575	1.62%	Oct 2021	40550.95 - 41779.52
MB-SN-0011	Tin grade A min 99.85% ingot premium, ddp Midwest US, \$/tonne	16 Nov 2021	2200 - 2900	-16.39%	Oct 2021	2580 - 3820
MB-SN-0042	Tin min 99.85% ingot warrant premium, in-whs South East Asia, \$/tonne	17 Nov 2021	50 - 150	0.00%	Oct 2021	50 - 150
MB-SN-0005	Tin rand fixing price for LME trade, rand/tonne	18 Nov 2021	614409.11	1.17%	Oct 2021	564282.49

Zinc prices & premiums

Symbol	Description	Date	Price	+/-	Month	Monthly Average
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Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-ZN-0115	Zinc SHG 99.995% ingot premium, fca Malaysia, \$/per tonne	16 Nov 2021	130 - 140	0.00%	Oct 2021	110 - 127.5
MB-ZN-0113	Zinc SHG 99.995% ingot premium, fca Singapore, \$/per tonne	16 Nov 2021	130 - 140	0.00%	Oct 2021	110 - 127.5
MB-ZN-0093	Zinc SHG min 99.995% ingot premium, cif Southeast Asia, \$/tonne	16 Nov 2021	130 - 140	-3.57%	Oct 2021	125 - 135
MB-ZN-0116	Zinc SHG 99.995% ingot premium, cif Taiwan \$/tonne	16 Nov 2021	140 - 150	7.41%	Oct 2021	125 - 135
MB-ZN-0119	Zinc min 99.995% ingot premium, in-whs Shanghai, \$/tonne	16 Nov 2021	70 - 90	0.00%	Oct 2021	87.5 - 107.5
MB-ZN-0106	Zinc SHG min 99.995% ingot premium, cif Shanghai, \$/per tonne	16 Nov 2021	70 - 90	0.00%	Oct 2021	87.5 - 107.5
MB-ZN-0102	Zinc SHG min 99.995% ingot premium, ddp Italy, \$/per tonne	16 Nov 2021	310 - 350	20.00%	Oct 2021	212.5 - 235
MB-ZN-0103	Zinc SHG min 99.995% ingot premium, fca dp Italy, \$/tonne	16 Nov 2021	290 - 310	36.36%	Oct 2021	180 - 195
MB-ZN-0099	Zinc SHG min 99.995% ingot premium, dp fca Antwerp, \$/tonne	16 Nov 2021	230 - 260	2.08%	Oct 2021	170 - 192.5
MB-ZN-0001	Zinc SHG min 99.995% ingot premium, dp fca Rotterdam, \$/tonne	16 Nov 2021	230 - 260	2.08%	Oct 2021	170 - 192.5
MB-ZN-0082	Zinc SHG min 99.995% ingot premium monthly average, delivered UK, £/tonne	01 Nov 2021	2722	13.51%	Oct 2021	2398
MB-ZN-0005	Zinc SHG min 99.995% ingot premium, ddp Midwest US, US cents/lb	16 Nov 2021	14 - 17	19.23%	Oct 2021	11.38 - 13.13
MB-ZN-0061	Zinc SHG min 99.995% ingot all-in price, ddp Midwest US, US cents/lb	18 Nov 2021	159.12 - 162.12	-1.38%	Oct 2021	163.95 - 165.61
MB-ZN-0104	Zinc SHG min 99.995% warrant premium, in-whs US, \$/per tonne	17 Nov 2021	10 - 15	0.00%	Oct 2021	10 - 15
MB-ZN-0117	Zinc SHG min 99.995% warrant premium, in-whs North Europe, \$/tonne	17 Nov 2021	80 - 100	0.00%	Oct 2021	80 - 100
MB-ZN-0123	Zinc SHG min 99.995% warrant premium, in-whs Southeast Asia, \$/tonne	17 Nov 2021	10 - 20	0.00%	Oct 2021	10 - 21.25
MB-ZN-0083	Zinc import arbitrage, \$/tonne	18 Nov 2021	(210.62)		Oct 2021	(211.15)
MB-ZN-0084	Zinc import arbitrage, yuan/tonne	18 Nov 2021	(1345.94)		Oct 2021	(1356.26)
MB-ZN-0072	Zinc rand fixing price for LME trade, rand/tonne	18 Nov 2021	49555.11	-1.83%	Oct 2021	50072.12

Zinc concentrate & zinc alloy prices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-ZN-0121	Zinc concentrate TC spot, delivered South China, yuan/tonne	29 Oct 2021	3900 - 4200	0.00%	Oct 2021	3900 - 4200
MB-ZN-0120	Zinc concentrate TC spot, delivered North China, yuan/tonne	29 Oct 2021	4000 - 4400	-1.18%	Oct 2021	4000 - 4400
MB-ZN-0110	Zinc spot concentrate TC, cif China, \$/per tonne	12 Nov 2021	75 - 88	0.00%	Oct 2021	75 - 88
MB-ZN-0111	Zinc concentrate TC annual benchmark, cif China, \$/per tonne	24 Jul 2019	245	66.67%	Oct 2021	245

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	18 Nov 2021	29.2 - 29.9	0.34%	Oct 2021	26.5 - 27.08
MB-CO-0004	Cobalt alloy grade, in-whs Rotterdam, \$/lb	18 Nov 2021	29.2 - 29.9	0.34%	Oct 2021	26.48 - 27.1
MB-CO-0001	Cobalt 99.8% Co min, ex-works China, yuan/tonne	17 Nov 2021	419000 - 435000	-0.58%	Oct 2021	387444.44 - 404222.22
MB-CO-0017	Cobalt sulfate 20.5% Co basis, exw China, yuan/tonne	17 Nov 2021	90000 - 93000	0.00%	Oct 2021	87333.33 - 90333.33
MB-CO-0012	Cobalt tetroxide 72.6% Co min, delivered China, yuan/tonne	17 Nov 2021	340000 - 345000	0.00%	Oct 2021	311666.67 - 321111.11
MB-CO-0020	Cobalt hydroxide index 30% Co min, cif China, \$/lb	12 Nov 2021	25	2.00%	Oct 2021	23.45
MB-CO-0021	Cobalt hydroxide payable indicator, min 30% Co, cif China, % payable of Fastmarkets' standard-grade cobalt price (low-end)	17 Nov 2021	89 - 91	0.00%	Oct 2021	88.78 - 91

Europe minor metals prices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-CO-0004	Cobalt alloy grade, in-whs Rotterdam, \$/lb	18 Nov 2021	29.2 - 29.9	0.34%	Oct 2021	26.48 - 27.1
MB-CO-0005	Cobalt standard grade, in-whs Rotterdam, \$/lb	18 Nov 2021	29.2 - 29.9	0.34%	Oct 2021	26.5 - 27.08
MB-AS-0001	Arsenic 99% min As, in-whs Rotterdam, \$/lb	05 Nov 2021	1.4 - 1.7	0.00%	Oct 2021	1.4 - 1.7
MB-SB-0002	Antimony MMTA standard grade II, in-whs Rotterdam, \$/tonne	17 Nov 2021	12700 - 13500	-0.57%	Oct 2021	12866.67 - 13277.78
MB-SB-0001	Antimony max 100 ppm Bi, in-whs Rotterdam, \$/tonne	17 Nov 2021	12700 - 13500	-0.76%	Oct 2021	13044.44 - 13500
MB-BI-0001	Bismuth 99.99% Bi min, in-whs Rotterdam, \$/lb	17 Nov 2021	3.95 - 4.2	0.00%	Oct 2021	3.79 - 4.1
MB-CR-0001	Chromium alumino-thermic 99% min, in-whs Rotterdam, \$/tonne	12 Nov 2021	10200 - 11800	1.38%	Oct 2021	10450 - 11130
MB-GA-0001	Gallium 99.99% Ga min, in-whs Rotterdam, \$/kg	17 Nov 2021	390 - 410	5.96%	Oct 2021	323.89 - 351.67
MB-GER-0003	Germanium 99.99% Ge, in-whs Rotterdam, \$/kg	17 Nov 2021	1350 - 1430	0.91%	Oct 2021	1262.22 - 1370
MB-IN-0002	Indium 99.99%, in-whs Rotterdam, \$/kg	17 Nov 2021	265 - 290	0.00%	Oct 2021	257.78 - 283.89
MB-MG-0001	Magnesium 99.9%, in-whs Rotterdam, \$/tonne	12 Nov 2021	7400 - 8500	-0.63%	Oct 2021	15400 - 16400
MB-MN-0001	Manganese 99.7% electrolytic manganese flake, in-whs Rotterdam, \$/tonne	17 Nov 2021	7500 - 8000	0.00%	Oct 2021	7277.78 - 7616.67
MB-RE-0001	Rhenium APR catalytic grade, in-whs dup Rotterdam, \$/kg	05 Nov 2021	890 - 1050	0.00%	Oct 2021	890 - 1050
MB-RE-0002	Rhenium metal pellets 99.9% Re min, in-whs dup, Rotterdam \$/lb	05 Nov 2021	450 - 700	0.00%	Oct 2021	450 - 700
MB-SE-0002	Selenium 99.5% Se min, in-whs Rotterdam, \$/lb	17 Nov 2021	9.7 - 11	0.00%	Oct 2021	9.41 - 11
MB-SI-0004	Silicon grade 5-5-3 98.5% Si min, in-whs Rotterdam, €/tonne	12 Nov 2021	4800 - 7400	0.00%	Oct 2021	7660 - 8290
MB-SI-0001	Silicon grade 4-4-1 99% Si min, in-whs Rotterdam, €/tonne	12 Nov 2021	5000 - 7500	-1.57%	Oct 2021	7700 - 8290
MB-TE-0001	Tellurium 99.9-99.99% Te min, in-whs Rotterdam, \$/kg	17 Nov 2021	63 - 75	0.00%	Oct 2021	65.22 - 75

China minor metals prices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-CO-0001	Cobalt 99.8% Co min, ex-works China, yuan/tonne	17 Nov 2021	419000 - 435000	-0.58%	Oct 2021	387444.44 - 404222.22



Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-CO-0021	Cobalt hydroxide payable indicator, min 30% Co, cif China, % payable of Fastmarkets' standard-grade cobalt price (low-end)	17 Nov 2021	89 - 91	0.00%	Oct 2021	88.78 - 91
MB-CO-0020	Cobalt hydroxide index 30% Co min, cif China, \$/lb	12 Nov 2021	25	2.00%	Oct 2021	23.45
MB-CO-0017	Cobalt sulfate 20.5% Co basis, exw China, yuan/tonne	17 Nov 2021	90000 - 93000	0.00%	Oct 2021	87333.33 - 90333.33
MB-CO-0012	Cobalt tetroxide 72.6% Co min, delivered China, yuan/tonne	17 Nov 2021	340000 - 345000	0.00%	Oct 2021	311666.67 - 321111.11
MB-SB-0003	Antimony MMTA standard grade II, ddp China, yuan/tonne	12 Nov 2021	72000 - 73000	-1.36%	Oct 2021	74300 - 75400
MB-BI-0002	Bismuth 99.99% Bi min, in-whs China, yuan/tonne	12 Nov 2021	46500 - 47500	-1.05%	Oct 2021	47000 - 47800
MB-GA-0002	Gallium 99.99% Ga min, in-whs China, yuan/kg	12 Nov 2021	2400 - 2450	3.19%	Oct 2021	2038 - 2090
MB-GER-0004	Germanium 99.999% Ge min, in-whs China, yuan/kg	12 Nov 2021	9100 - 9450	3.63%	Oct 2021	8820 - 8940
MB-GER-0001	Germanium dioxide, in-whs China, \$/kg	17 Nov 2021	900 - 940	1.10%	Oct 2021	888.89 - 916.67
MB-IN-0003	Indium 99.99%, exw China, yuan/kg	12 Nov 2021	1580 - 1600	-1.55%	Oct 2021	1620 - 1706
MB-MG-0002	Magnesium 99.9% Mg min, fob China main ports, \$/tonne	12 Nov 2021	5400 - 5700	7.77%	Oct 2021	7978 - 8440
MB-MG-0003	Magnesium 99.9%, exw China, yuan/tonne	12 Nov 2021	32000 - 33000	3.17%	Oct 2021	48200 - 50400
MB-MN-0007	Manganese 99.7% electrolytic manganese flake, fob China, \$/tonne	12 Nov 2021	6800 - 7000	-0.72%	Oct 2021	6136 - 6380
MB-SI-0002	Silicon export 98.5% Si min, fob China, \$/tonne	12 Nov 2021	3600 - 4000	4.11%	Oct 2021	6920 - 7600
MB-SE-0003	Selenium 99.9% Se min, in-whs China, yuan/kg	12 Nov 2021	130 - 185	0.00%	Oct 2021	128 - 182
MB-TE-0002	Tellurium 99.99% Te min, in-whs China, yuan/kg	12 Nov 2021	475 - 480	-1.04%	Oct 2021	484 - 500
MB-TA-0001	Tantalite, basis 25% min Ta2O5, cif China, \$ per lb Ta2O5	12 Nov 2021	75 - 79	0.00%	Oct 2021	77.4 - 82.4

US minor metals prices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-CR-0002	Chromium alumino-thermic 99% min ex-US warehouse \$/lb	18 Nov 2021	4.85 - 5	0.00%	Oct 2021	4.85 - 5
MB-SI-0003	Silicon, ddp US, US cents/lb	18 Nov 2021	430 - 485	-4.19%	Oct 2021	356.25 - 448.75
MB-TI-0007	Titanium plate commercially pure, fob shipping point US, \$/lb	12 Oct 2021	11 - 13	0.00%	Oct 2021	11 - 13
MB-TI-0006	Titanium bar alloy AMS 4928, fob shipping point US, \$/lb	12 Oct 2021	24 - 25	0.00%	Oct 2021	24 - 25
MB-TI-0004	Titanium ingot 6Al-4V, fob shipping point US, \$/lb	12 Oct 2021	8 - 8.5	0.00%	Oct 2021	8 - 8.5
MB-TI-0008	Titanium sheet commercially pure, fob shipping point US, \$/lb	12 Oct 2021	13 - 15	0.00%	Oct 2021	13 - 15
MB-TI-0005	Titanium plate alloy AMS 4911, fob shipping point US, \$/lb	12 Oct 2021	27 - 28	0.00%	Oct 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	17 Nov 2021	125 - 135	0.00%	Oct 2021	109.67 - 127
MB-CD-0002	Cadmium 99.99% min, cif global ports, cents/lb	17 Nov 2021	130 - 140	0.00%	Oct 2021	111.89 - 129.22
MB-HF-0001	Hafnium, max 1% Zr, in-whs global locations, \$/kg	05 Nov 2021	875 - 975	0.00%	Oct 2021	862.5 - 962.5

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	15 Nov 2021	60	9.09%	Oct 2021	55
MB-AL-0370	Aluminum scrap old aluminum sheet & cast, dealer buying price, delivered to yard US, US cents/lb	15 Nov 2021	45	0.00%	Oct 2021	45
MB-AL-0371	Aluminum scrap painted aluminum siding, dealer buying price, delivered to yard US, US cents/lb	15 Nov 2021	59	0.00%	Oct 2021	56
MB-AL-0367	Aluminum scrap litho sheets, dealer buying price, delivered to yard US, US cents/lb	15 Nov 2021	80	0.00%	Oct 2021	70
MB-AL-0372	Aluminum scrap segregated low copper clips, dealer buying price, delivered to yard US, US cents/lb	15 Nov 2021	64	0.00%	Oct 2021	60
MB-AL-0037	Aluminum scrap segregated low copper alloy clips 3105, mills specialty consumers' buying price, delivered consumer US, US cents/lb	18 Nov 2021	87 - 89	-2.22%	Oct 2021	92.75 - 94.75
MB-AL-0369	Aluminum scrap mixed low copper clips, dealer buying price, delivered to yard US, US cents/lb	15 Nov 2021	64	0.00%	Oct 2021	60
MB-AL-0366	Aluminum scrap industrial castings, dealer buying price, delivered to yard US, US cents/lb	15 Nov 2021	49	0.00%	Oct 2021	48
MB-AL-0365	Aluminum scrap aluminum borings, turnings, clean & dry, dealer buying price, delivered to yard US, US cents/lb	15 Nov 2021	25	0.00%	Oct 2021	25
MB-AL-0031	Aluminum scrap turnings clean dry high grade buying price, delivered to Midwest secondary smelters, US cents/lb	18 Nov 2021	66 - 70	0.00%	Oct 2021	65.75 - 69.75
MB-AL-0032	Aluminum scrap turnings clean dry mixed grade (max 5% Zn) buying price, delivered to Midwest secondary smelters, US cents/lb	18 Nov 2021	58 - 62	0.00%	Oct 2021	57.75 - 61.75
MB-AL-0033	Aluminum scrap aluminium-copper radiators buying price, delivered to Midwest secondary smelters, US cents/lb	18 Nov 2021	195 - 205	0.00%	Oct 2021	199 - 209
MB-AL-0030	Aluminum scrap old cast buying price, delivered to Midwest secondary smelters, US cents/lb	18 Nov 2021	68 - 72	0.00%	Oct 2021	69.25 - 73.25
MB-AL-0029	Aluminum scrap old sheet buying price, delivered to Midwest secondary smelters, US cents/lb	18 Nov 2021	69 - 72	0.00%	Oct 2021	70.25 - 74.25
MB-AL-0027	Aluminum scrap siding buying price, delivered Midwest secondary smelters, US cents/lb	18 Nov 2021	71 - 74	0.00%	Oct 2021	71.5 - 74.5
MB-AL-0368	Aluminum scrap mixed clips, dealer buying price, delivered to yard US, US cents/lb	15 Nov 2021	64	0.00%	Oct 2021	60
MB-AL-0028	Aluminum scrap mixed clips buying price, delivered to Midwest secondary smelters, US cents/lb	18 Nov 2021	63 - 66	-3.01%	Oct 2021	69 - 72
MB-AL-0024	Aluminum scrap mixed high copper clips, buying price, delivered Midwest secondary smelters, US cents/lb	18 Nov 2021	71 - 75	0.00%	Oct 2021	75.5 - 78.5
MB-AL-0038	Aluminum scrap mixed low copper clips, specialty consumers' buying price, delivered consumer US, US cents/lb	18 Nov 2021	87 - 90	-1.12%	Oct 2021	89.75 - 93.25
MB-AL-0023	Aluminum scrap mixed low copper clips, buying price, delivered Midwest secondary smelters, US cents/lb	18 Nov 2021	76 - 80	0.00%	Oct 2021	79.25 - 82
MB-AL-0025	Aluminum scrap mixed high zinc clips buying price, delivered Midwest secondary smelters, US cents/lb	18 Nov 2021	65 - 69	0.00%	Oct 2021	66.5 - 68.5
MB-AL-0026	Aluminum scrap 1-1-3 sows buying price, delivered Midwest secondary smelters, US cents/lb	18 Nov 2021	73 - 75	0.00%	Oct 2021	72.75 - 74.75



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	18 Nov 2021	126 - 130	-1.54%	Oct 2021	139.25 - 143.25
MB-AL-0039	Aluminum scrap painted siding, specialty consumers' buying price, delivered consumer US, US cents/lb	18 Nov 2021	83 - 88	0.00%	Oct 2021	87.25 - 90.75
MB-AL-0373	Aluminum scrap used beverage cans, clean & dry, dealer buying price, delivered to yard US, US cents/lb	15 Nov 2021	50	11.11%	Oct 2021	45
MB-AL-0035	Aluminum scrap used beverage cans, domestic aluminum producer buying price, fob shipping point US, US cents/lb	18 Nov 2021	83 - 85	0.00%	Oct 2021	85.5 - 89.5
MB-AL-0034	Aluminum scrap non-ferrous auto shred (90% Al) buying price, delivered to Midwest secondary smelters, US cents/lb	18 Nov 2021	75 - 78	-7.27%	Oct 2021	81.5 - 86.5
MB-AL-0375	Zorba 95/3 min, basis delivered US facility, US cents/lb	18 Nov 2021	64 - 66	-2.99%	Oct 2021	66.5 - 68.5
MB-AL-0161	Aluminum scrap 63S aluminum solids, dealer buying price, delivered to yard Toronto, Canadian cents/lb	15 Nov 2021	165	-1.79%	Oct 2021	187.5
MB-AL-0117	Aluminum scrap old aluminum sheet & cast, dealer buying price, delivered to yard Montreal, Canadian cents/lb	15 Nov 2021	43	0.00%	Oct 2021	40
MB-AL-0101	Aluminum scrap borings, turnings, clean & dry, dealer buying price, delivered to yard Montreal, Canadian cents/lb	15 Nov 2021	20	0.00%	Oct 2021	20
MB-AL-0118	Aluminum scrap old aluminum sheet & cast, dealer buying price, delivered to yard Toronto, Canadian cents/lb	15 Nov 2021	67	-6.94%	Oct 2021	75
MB-AL-0102	Aluminum scrap borings, turnings, clean & dry, dealer buying price, delivered to yard Toronto, Canadian cents/lb	15 Nov 2021	50	-5.66%	Oct 2021	53
MB-AL-0160	Aluminum scrap 63S aluminum solids, dealer buying price, delivered to yard Montreal, Canadian cents/lb	15 Nov 2021	75	0.00%	Oct 2021	60
MB-AL-0085	Aluminum scrap mixed clips, dealer buying price, delivered to yard Montreal, Canadian cents/lb	15 Nov 2021	50	0.00%	Oct 2021	50
MB-AL-0054	Aluminum scrap segregated low copper clips, dealer buying price, delivered to yard Toronto, Canadian cents/lb	15 Nov 2021	116	-0.85%	Oct 2021	102
MB-AL-0149	Aluminum scrap industrial castings, dealer buying price, delivered to yard Montreal, Canadian cents/lb	15 Nov 2021	45	0.00%	Oct 2021	40
MB-AL-0150	Aluminum scrap industrial castings, dealer buying price, delivered to yard Toronto, Canadian cents/lb	15 Nov 2021	67	-4.29%	Oct 2021	69.5
MB-AL-0133	Aluminum scrap used beverage cans, clean & dry, dealer buying price, delivered to yard Montreal, Canadian cents/lb	15 Nov 2021	15	0.00%	Oct 2021	15
MB-AL-0134	Aluminum scrap used beverage cans, clean & dry, dealer buying price, delivered to yard Toronto, Canadian cents/lb	15 Nov 2021	88	-3.30%	Oct 2021	98
MB-AL-0203	Aluminum scrap painted aluminum siding, dealer buying price, delivered to yard Montreal, Canadian cents/lb	15 Nov 2021	47	0.00%	Oct 2021	47
MB-AL-0204	Aluminum scrap painted aluminum siding, dealer buying price, delivered to yard Toronto, Canadian cents/lb	15 Nov 2021	87	0.00%	Oct 2021	97
MB-AL-0070	Aluminum scrap mixed low copper clips, dealer buying price, delivered to yard Toronto, Canadian cents/lb	15 Nov 2021	93	0.00%	Oct 2021	103.5
MB-AL-0069	Aluminum scrap mixed low copper clips, dealer buying price, delivered to yard Montreal, Canadian cents/lb	15 Nov 2021	45	0.00%	Oct 2021	53
MB-AL-0053	Aluminum scrap segregated low copper clips, dealer buying price, delivered to yard Montreal, Canadian cents/lb	15 Nov 2021	60	0.00%	Oct 2021	60

Canadian aluminium scrap prices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
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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	15 Nov 2021	165	-1.79%	Oct 2021	187.5
MB-AL-0117	Aluminum scrap old aluminum sheet & cast, dealer buying price, delivered to yard Montreal, Canadian cents/lb	15 Nov 2021	43	0.00%	Oct 2021	40
MB-AL-0101	Aluminum scrap borings, turnings, clean & dry, dealer buying price, delivered to yard Montreal, Canadian cents/lb	15 Nov 2021	20	0.00%	Oct 2021	20
MB-AL-0118	Aluminum scrap old aluminum sheet & cast, dealer buying price, delivered to yard Toronto, Canadian cents/lb	15 Nov 2021	67	-6.94%	Oct 2021	75
MB-AL-0102	Aluminum scrap borings, turnings, clean & dry, dealer buying price, delivered to yard Toronto, Canadian cents/lb	15 Nov 2021	50	-5.66%	Oct 2021	53
MB-AL-0160	Aluminum scrap 63S aluminum solids, dealer buying price, delivered to yard Montreal, Canadian cents/lb	15 Nov 2021	75	0.00%	Oct 2021	60
MB-AL-0085	Aluminum scrap mixed clips, dealer buying price, delivered to yard Montreal, Canadian cents/lb	15 Nov 2021	50	0.00%	Oct 2021	50
MB-AL-0054	Aluminum scrap segregated low copper clips, dealer buying price, delivered to yard Toronto, Canadian cents/lb	15 Nov 2021	116	-0.85%	Oct 2021	102
MB-AL-0149	Aluminum scrap industrial castings, dealer buying price, delivered to yard Montreal, Canadian cents/lb	15 Nov 2021	45	0.00%	Oct 2021	40
MB-AL-0150	Aluminum scrap industrial castings, dealer buying price, delivered to yard Toronto, Canadian cents/lb	15 Nov 2021	67	-4.29%	Oct 2021	69.5
MB-AL-0133	Aluminum scrap used beverage cans, clean & dry, dealer buying price, delivered to yard Montreal, Canadian cents/lb	15 Nov 2021	15	0.00%	Oct 2021	15
MB-AL-0134	Aluminum scrap used beverage cans, clean & dry, dealer buying price, delivered to yard Toronto, Canadian cents/lb	15 Nov 2021	88	-3.30%	Oct 2021	98
MB-AL-0203	Aluminum scrap painted aluminum siding, dealer buying price, delivered to yard Montreal, Canadian cents/lb	15 Nov 2021	47	0.00%	Oct 2021	47
MB-AL-0204	Aluminum scrap painted aluminum siding, dealer buying price, delivered to yard Toronto, Canadian cents/lb	15 Nov 2021	87	0.00%	Oct 2021	97
MB-AL-0070	Aluminum scrap mixed low copper clips, dealer buying price, delivered to yard Toronto, Canadian cents/lb	15 Nov 2021	93	0.00%	Oct 2021	103.5
MB-AL-0069	Aluminum scrap mixed low copper clips, dealer buying price, delivered to yard Montreal, Canadian cents/lb	15 Nov 2021	45	0.00%	Oct 2021	53
MB-AL-0053	Aluminum scrap segregated low copper clips, dealer buying price, delivered to yard Montreal, Canadian cents/lb	15 Nov 2021	60	0.00%	Oct 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	17 Nov 2021	1087 - 1137	1.00%	Oct 2021	1243.75 - 1291.25
MB-AL-0015	Aluminium scrap group 7 turnings, delivered consumer UK, £/tonne	17 Nov 2021	720 - 770	-1.32%	Oct 2021	725 - 772.5
MB-AL-0012	Aluminium scrap commercial turnings, delivered consumer UK, £/tonne	17 Nov 2021	870 - 930	-1.10%	Oct 2021	907.5 - 960
MB-AL-0285	Aluminium scrap commercial turnings, LME discount, delivered consumer UK, £/tonne	17 Nov 2021	927 - 987	1.16%	Oct 2021	1056.25 - 1108.75
MB-AL-0010	Aluminium scrap commercial cast, delivered consumer UK, £/tonne	17 Nov 2021	1180 - 1230	-2.43%	Oct 2021	1217.5 - 1275
MB-AL-0283	Aluminium scrap commercial cast, LME discount, delivered consumer UK, £/tonne	17 Nov 2021	627 - 677	4.99%	Oct 2021	741.25 - 798.75
MB-AL-0011	Aluminium scrap commercial pure cuttings, delivered consumer UK, £/tonne	17 Nov 2021	1190 - 1240	-2.41%	Oct 2021	1293.75 - 1348.75



Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-AL-0279	Aluminium scrap commercial pure cuttings, LME discount, delivered consumer UK, £/tonne	17 Nov 2021	735 - 785	17.10%	Oct 2021	825.75 - 880.75
MB-AL-0017	Aluminium scrap LM6/LM25 gravity diecasting ingot, delivered consumer UK, £/tonne	17 Nov 2021	2400 - 2500	-2.00%	Oct 2021	2387.5 - 2545
MB-AL-0284	Aluminium scrap cast wheels, LME discount, delivered consumer UK, £/tonne	17 Nov 2021	157 - 207	20.53%	Oct 2021	236.25 - 288.75
MB-AL-0007	Aluminium scrap cast wheels, delivered consumer UK, £/tonne	17 Nov 2021	1650 - 1700	-1.76%	Oct 2021	1727.5 - 1780
MB-AL-0008	Aluminium scrap cast, delivered consumer Europe, €/tonne	12 Nov 2021	1550 - 1600	-1.87%	Oct 2021	1532 - 1600
MB-AL-0278	Aluminium scrap group 1 pure 99% & litho, LME discount, delivered consumer UK, £/tonne	17 Nov 2021	95 - 145	207.69%	Oct 2021	179.5 - 252
MB-AL-0014	Aluminium scrap group 1 pure 99% & litho, delivered consumer UK, £/tonne	17 Nov 2021	1830 - 1880	0.00%	Oct 2021	1922.5 - 1995
MB-AL-0281	Aluminium scrap loose old rolled cuttings, LME discount, delivered consumer UK, £/tonne	17 Nov 2021	867 - 907	0.68%	Oct 2021	951.25 - 1001.25
MB-AL-0018	Aluminium scrap loose old rolled cuttings, delivered consumer UK, £/tonne	17 Nov 2021	950 - 990	-0.51%	Oct 2021	1015 - 1065
MB-AL-0282	Aluminium scrap baled old rolled, LME discount, delivered consumer UK, £/tonne	17 Nov 2021	787 - 827	2.67%	Oct 2021	876.25 - 946.25
MB-AL-0006	Aluminium scrap baled old rolled, delivered consumer UK, £/tonne	17 Nov 2021	1030 - 1070	-1.87%	Oct 2021	1070 - 1140
MB-AL-0280	Aluminium scrap clean HE9 extrusions, LME discount, delivered consumer UK, £/tonne	17 Nov 2021	85 - 135	478.95%	Oct 2021	179.5 - 252
MB-AL-0013	Aluminium scrap floated frag, delivered consumer Europe, €/tonne	12 Nov 2021	1600 - 1650	-2.99%	Oct 2021	1654 - 1720
MB-AL-0019	Aluminium scrap mixed turnings, delivered consumer Europe, €/tonne	12 Nov 2021	1350 - 1400	-2.14%	Oct 2021	1352 - 1416
MB-AL-0009	Aluminium scrap clean HE9 extrusions, delivered consumer UK, £/tonne	17 Nov 2021	1840 - 1890	-0.53%	Oct 2021	1922.5 - 1995
MB-AL-0016	Aluminium scrap LM24 pressure diecasting ingot, delivered consumer UK, £/tonne	17 Nov 2021	1980 - 2080	-0.98%	Oct 2021	1992.5 - 2087.5

Secondary aluminium alloy prices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-AL-0005	Aluminium pressure diecasting ingot DIN226/A380, delivered Europe, €/tonne	12 Nov 2021	2450 - 2600	-7.85%	Oct 2021	2616 - 2754
MB-AL-0040	Aluminum alloy A380.1, delivered Midwest, US cents/lb	18 Nov 2021	138 - 142	0.00%	Oct 2021	128.5 - 133.5
MB-AL-0233	Aluminum alloy A380.1, delivered Midwest, \$/lb	18 Nov 2021	1.38 - 1.42	0.00%	Oct 2021	
MB-AL-0041	Aluminum alloy 319.1, delivered Midwest, cents/lb	18 Nov 2021	144 - 148	1.04%	Oct 2021	134.5 - 138.75
MB-AL-0042	Aluminum alloy 356.1, delivered Midwest, cents/lb	18 Nov 2021	167 - 172	-1.74%	Oct 2021	154.75 - 161.25
MB-AL-0043	Aluminum alloy A360.1, delivered Midwest, cents/lb	18 Nov 2021	170 - 175	-0.58%	Oct 2021	156.5 - 162.25
MB-AL-0044	Aluminum alloy A413.1, delivered Midwest, cents/lb	18 Nov 2021	174 - 178	0.00%	Oct 2021	159.25 - 165.75
MB-AL-0292	Aluminium ingot ADC 12 spot (MJP), cfr Japan, \$/tonne	17 Nov 2021	2550 - 2650	-8.77%	Oct 2021	3000 - 3325
MB-AL-0350	Aluminium ingot ADC 12, exw dp China, yuan/tonne	17 Nov 2021	19200 - 19500	-2.03%	Oct 2021	23400 - 23950

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	15 Nov 2021	360	0.00%	Oct 2021	340



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	17 Nov 2021	(27) - (23)		Oct 2021	(26.5) - (23)
MB-CU-0292	Copper scrap No1 copper, discount, buying price, delivered to refiners, US cents/lb	17 Nov 2021	(22) - (18)		Oct 2021	(23) - (18.5)
MB-CU-0291	Copper scrap No1 copper, discount, buying price, delivered to brass mill US, US cents/lb	17 Nov 2021	(15) - (12)		Oct 2021	(14.75) - (12)
MB-CU-0294	Copper scrap No1 bare bright, discount, buying price, delivered to brass ingot makers, US cents/lb	17 Nov 2021	(13) - (11)		Oct 2021	(13) - (11)
MB-CU-0305	Copper scrap No1 bare bright, buying price, delivered to brass ingot makers, US cents/lb	18 Nov 2021	417 - 419	0.72%	Oct 2021	431.33 - 433.33
MB-CU-0306	Copper scrap No1 copper, buying price, delivered to brass ingot makers, US cents/lb	18 Nov 2021	403 - 407	0.75%	Oct 2021	417.95 - 421.33
MB-CU-0302	Copper scrap No1 copper, buying price, delivered to brass mill US, US cents/lb	18 Nov 2021	416.5	0.73%	Oct 2021	430.88
MB-CU-0298	Copper scrap No1 comp solids, buying price, delivered to brass ingot makers, US cents/lb	17 Nov 2021	328 - 332	0.00%	Oct 2021	325.25 - 334
MB-CU-0303	Copper scrap No1 copper, buying price, delivered to refiners, US cents/lb	18 Nov 2021	410	0.74%	Oct 2021	423.76
MB-CU-0010	Copper scrap No1 heavy copper & wire, dealer buying price, delivered to yard Toronto, Canadian cents/lb	15 Nov 2021	480	2.35%	Oct 2021	473.5
MB-CU-0009	Copper scrap No1 heavy copper & wire, dealer buying price, delivered to yard Montreal, Canadian cents/lb	15 Nov 2021	330	0.00%	Oct 2021	331.5
MB-CU-0512	No1 copper material, RCu-2A,1B (candy/berry), cif China, LME/Comex discount, US cents per lb	25 Oct 2021	12 - 15	38.46%	Oct 2021	12 - 15
MB-CU-0360	No2 copper material, RCu-2B (birch/cliff), cif China, LME/Comex discount, US cents per lb	25 Oct 2021	29 - 33	12.73%	Oct 2021	29 - 33
MB-CU-0025	Copper scrap No2 heavy copper & wire, dealer buying price, delivered to yard Montreal, Canadian cents/lb	15 Nov 2021	293	0.00%	Oct 2021	289
MB-CU-0418	Copper scrap No2 heavy copper & wire, dealer buying price, delivered to yard US, US cents/lb	15 Nov 2021	333	1.52%	Oct 2021	316.5
MB-CU-0304	Copper scrap No2 copper, buying price, delivered to refiners, US cents/lb	18 Nov 2021	376.5	0.80%	Oct 2021	390.64
MB-CU-0307	Copper scrap No2 copper, buying price, delivered to brass ingot makers, US cents/lb	18 Nov 2021	373 - 375	0.81%	Oct 2021	387.33 - 389.33
MB-CU-0293	Copper scrap No2 copper, discount, buying price, delivered to refiners, US cents/lb	17 Nov 2021	(55) - (52)		Oct 2021	(55.25) - (52)
MB-CU-0296	Copper scrap No2 copper, discount, buying price, delivered to brass ingot makers, US cents/lb	17 Nov 2021	(57) - (55)		Oct 2021	(57) - (55)
MB-CU-0026	Copper scrap No2 heavy copper & wire, dealer buying price, delivered to yard Toronto, Canadian cents/lb	15 Nov 2021	461	2.22%	Oct 2021	445

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	15 Nov 2021	200	-4.76%	Oct 2021	197.5
MB-CU-0301	Copper scrap yellow brass solids, buying price, delivered to brass ingot makers, US cents/lb	17 Nov 2021	270 - 275	2.44%	Oct 2021	257.25 - 263
MB-CU-0416	Copper scrap mixed yellow brass turnings, borings, dealer buying price, delivered to yard US, US cents/lb	15 Nov 2021	167	0.00%	Oct 2021	167
MB-CU-0414	Copper scrap auto radiators (unsweated), dealer buying price, delivered to yard US, US cents/lb	15 Nov 2021	153	5.52%	Oct 2021	160



Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-CU-0300	Copper scrap radiators, buying price, delivered to brass ingot makers, US cents/lb	17 Nov 2021	253 - 257	0.00%	Oct 2021	252 - 258
MB-CU-0413	Copper scrap 70-30 brass clips, dealer buying price, delivered to yard US, US cents/lb	15 Nov 2021	249	0.00%	Oct 2021	249
MB-CU-0415	Copper scrap light copper, dealer buying price, delivered to yard US, US cents/lb	15 Nov 2021	310	0.00%	Oct 2021	295
MB-CU-0297	Copper scrap light copper, discount, buying price, delivered to brass ingot makers, US cents/lb	17 Nov 2021	(62) - (58)		Oct 2021	(62) - (58)
MB-CU-0308	Copper scrap light copper, buying price, delivered to brass ingot makers, US cents/lb	18 Nov 2021	368 - 372	0.82%	Oct 2021	382.33 - 386.33
MB-CU-0299	Copper scrap comp borings, turnings, buying price, delivered to brass ingot makers, US cents/lb	17 Nov 2021	315 - 320	0.00%	Oct 2021	319.5 - 326
MB-CU-0419	Copper scrap red brass solids, dealer buying price, delivered to yard US, US cents/lb	15 Nov 2021	240	4.35%	Oct 2021	230
MB-CU-0420	Copper scrap red brass turnings, borings, dealer buying price, delivered to yard US, US cents/lb	15 Nov 2021	222	0.00%	Oct 2021	222

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	15 Nov 2021	175	0.00%	Oct 2021	175
MB-CU-0120	Copper scrap yellow brass solids, dealer buying price, delivered to yard Toronto, Canadian cents/lb	15 Nov 2021	314	0.64%	Oct 2021	313
MB-CU-0135	Copper scrap mixed yellow brass turnings, borings, dealer buying price, delivered to yard Montreal, Canadian cents/lb	15 Nov 2021	100	0.00%	Oct 2021	110
MB-CU-0136	Copper scrap mixed yellow brass turnings, borings, dealer buying price, delivered to yard Toronto, Canadian cents/lb	15 Nov 2021	284	0.00%	Oct 2021	284
MB-CU-0196	Copper scrap auto radiators (unsweated), dealer buying price, delivered to yard Montreal, Canadian cents/lb	15 Nov 2021	150	0.00%	Oct 2021	150
MB-CU-0197	Copper scrap auto radiators (unsweated), dealer buying price, delivered to yard Toronto, Canadian cents/lb	15 Nov 2021	289	9.47%	Oct 2021	263
MB-CU-0181	Copper scrap 70-30 brass clips, dealer buying price, delivered to yard Montreal, Canadian cents/lb	15 Nov 2021	180	0.00%	Oct 2021	180
MB-CU-0042	Copper scrap light copper, dealer buying price, delivered to yard Toronto, Canadian cents/lb	15 Nov 2021	478	4.37%	Oct 2021	470.5
MB-CU-0041	Copper scrap light copper, dealer buying price, delivered to yard Montreal, Canadian cents/lb	15 Nov 2021	265	0.00%	Oct 2021	267.5
MB-CU-0058	Copper scrap red brass solids, dealer buying price, delivered to yard Toronto, Canadian cents/lb	15 Nov 2021	385	0.00%	Oct 2021	388.5
MB-CU-0073	Copper scrap red brass turnings, borings, dealer buying price, delivered to yard Montreal, Canadian cents/lb	15 Nov 2021	110	0.00%	Oct 2021	120
MB-CU-0074	Copper scrap red brass turnings, borings, dealer buying price, delivered to yard Toronto, Canadian cents/lb	15 Nov 2021	374	0.00%	Oct 2021	380
MB-CU-0057	Copper scrap red brass solids, dealer buying price, delivered to yard Montreal, Canadian cents/lb	15 Nov 2021	200	0.00%	Oct 2021	210

Chicago nickel scrap prices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
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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	17 Nov 2021	490 - 510	5.60%	Oct 2021	435 - 485
MB-NI-0198	Nickel alloy scrap 309 stainless steel scrap solids, broker buying price, delivered to yard Chicago, US cents/lb	17 Nov 2021	125 - 132	4.05%	Oct 2021	116 - 123.5
MB-NI-0152	Nickel alloy scrap 330 stainless steel scrap solids, dealer buying price, delivered to yard Chicago, US cents/lb	03 Nov 2021	185 - 210	4.77%	Oct 2021	182 - 195
MB-NI-0197	Nickel alloy scrap Inconel 600 scrap, solids, broker buying price, delivered to yard Chicago, US cents/lb	17 Nov 2021	595 - 620	3.67%	Oct 2021	537.5 - 585.5
MB-NI-0154	Nickel alloy scrap Inconel 601 scrap solids, dealer buying price, delivered to yard Chicago, US cents/lb	03 Nov 2021	330 - 350	6.25%	Oct 2021	305 - 335
MB-NI-0151	Nickel alloy scrap 310 stainless steel scrap solids, dealer buying price, delivered to yard Chicago, US cents/lb	03 Nov 2021	125 - 130	4.51%	Oct 2021	119 - 125
MB-NI-0200	Nickel alloy scrap 330 stainless steel scrap solids, broker buying price, delivered to yard Chicago, US cents/lb	17 Nov 2021	280 - 305	2.63%	Oct 2021	260 - 286.5
MB-NI-0199	Nickel alloy scrap 310 stainless steel scrap solids, broker buying price, delivered to yard Chicago, US cents/lb	17 Nov 2021	185 - 195	3.54%	Oct 2021	167.5 - 185
MB-NI-0150	Nickel alloy scrap 309 stainless steel scrap solids, dealer buying price, delivered to yard Chicago, US cents/lb	03 Nov 2021	87 - 88	4.17%	Oct 2021	83 - 85
MB-NI-0149	Nickel alloy scrap Inconel 600 scrap, solids, dealer buying price, delivered to yard Chicago, US cents/lb	03 Nov 2021	400 - 430	7.10%	Oct 2021	375 - 400
MB-NI-0155	Nickel scrap 17-4PH stainless steel scrap solids, dealer buying price, delivered to yard Chicago, US cents/lb	03 Nov 2021	28 - 30	-3.33%	Oct 2021	28 - 32
MB-NI-0201	Nickel scrap Invar scrap solids, clips, broker buying price, delivered to yard Chicago, US cents/lb	17 Nov 2021	285 - 305	3.15%	Oct 2021	247.5 - 290.5
MB-NI-0153	Nickel scrap Invar scrap solids, clips, dealer buying price, delivered to yard Chicago, US cents/lb	03 Nov 2021	180 - 215	11.27%	Oct 2021	170 - 185
MB-NI-0193	Nickel scrap nickel turnings, broker buying price, delivered to yard Chicago, US cents/lb	17 Nov 2021	735 - 810	7.67%	Oct 2021	640 - 780
MB-NI-0145	Nickel scrap nickel turnings, dealer buying price, delivered to yard Chicago, US cents/lb	03 Nov 2021	490 - 560	8.25%	Oct 2021	455 - 515
MB-NI-0192	Nickel scrap solids, broker buying price, delivered to yard Chicago, US cents/lb	17 Nov 2021	770 - 850	7.64%	Oct 2021	675 - 800
MB-NI-0144	Nickel scrap solids, dealer buying price, delivered to yard Chicago, US cents/lb	03 Nov 2021	515 - 580	7.88%	Oct 2021	485 - 530
MB-NI-0196	Nickel-copper scrap Monel K-500 (castings) solids, clips, broker buying price, delivered to yard Chicago, US cents/lb	17 Nov 2021	475 - 530	7.83%	Oct 2021	425 - 452.5
MB-NI-0148	Nickel-copper scrap Monel K-500 (castings) solids, clips, dealer buying price, delivered to yard Chicago, US cents/lb	03 Nov 2021	305 - 330	11.60%	Oct 2021	275 - 294
MB-NI-0194	Nickel-copper scrap Monel R-400 scrap solids, clips, broker buying price, delivered to yard Chicago, US cents/lb	17 Nov 2021	495 - 555	6.92%	Oct 2021	440 - 490
MB-NI-0146	Nickel-copper scrap Monel R-400 scrap solids, clips, dealer buying price, delivered to yard Chicago, US cents/lb	03 Nov 2021	315 - 340	8.26%	Oct 2021	290 - 315
MB-NI-0195	Nickel-copper scrap Monel scrap turnings, broker buying price, delivered to yard Chicago, US cents/lb	17 Nov 2021	300 - 420	2.86%	Oct 2021	300 - 337.5
MB-NI-0147	Nickel-copper scrap Monel scrap turnings, dealer buying price, delivered to yard Chicago, US cents/lb	03 Nov 2021	210 - 240	3.45%	Oct 2021	210 - 225
MB-NI-0203	Nickel scrap 17-4PH stainless steel scrap solids, broker buying price, delivered to yard Chicago, US cents/lb	17 Nov 2021	42 - 50	-3.16%	Oct 2021	37.5 - 49

Detroit nickel scrap prices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
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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	17 Nov 2021	280 - 305	2.63%	Oct 2021	257.5 - 285
MB-NI-0162	Nickel alloy scrap 309 stainless steel scrap solids, dealer buying price, delivered to yard Detroit, US cents/lb	03 Nov 2021	75 - 88	5.16%	Oct 2021	70 - 85
MB-NI-0167	Nickel scrap 17-4PH stainless steel scrap solids, dealer buying price, delivered to yard Detroit, US cents/lb	03 Nov 2021	28 - 33	1.67%	Oct 2021	28 - 32
MB-NI-0214	Nickel alloy scrap Inconel 601 scrap solids, broker buying price, delivered to yard Detroit, US cents/lb	17 Nov 2021	490 - 510	4.71%	Oct 2021	436 - 485
MB-NI-0211	Nickel alloy scrap 310 stainless steel scrap solids, broker buying price, delivered to yard Detroit, US cents/lb	17 Nov 2021	185 - 195	2.15%	Oct 2021	165 - 185
MB-NI-0164	Nickel alloy scrap 330 stainless steel scrap solids, dealer buying price, delivered to yard Detroit, US cents/lb	03 Nov 2021	170 - 210	9.51%	Oct 2021	152 - 195
MB-NI-0161	Nickel alloy scrap Inconel 600 scrap, solids, dealer buying price, delivered to yard Detroit, US cents/lb	03 Nov 2021	347 - 430	9.59%	Oct 2021	309 - 400
MB-NI-0210	Nickel alloy scrap 309 stainless steel scrap solids, broker buying price, delivered to yard Detroit, US cents/lb	17 Nov 2021	130 - 132	4.38%	Oct 2021	117 - 123.5
MB-NI-0209	Nickel alloy scrap Inconel 600 scrap, solids, broker buying price, delivered to yard Detroit, US cents/lb	17 Nov 2021	595 - 620	1.42%	Oct 2021	527.5 - 585
MB-NI-0166	Nickel alloy scrap Inconel 601 scrap solids, dealer buying price, delivered to yard Detroit, US cents/lb	03 Nov 2021	274 - 350	7.59%	Oct 2021	245 - 335
MB-NI-0163	Nickel alloy scrap 310 stainless steel scrap solids, dealer buying price, delivered to yard Detroit, US cents/lb	03 Nov 2021	108 - 130	6.25%	Oct 2021	99 - 125
MB-NI-0213	Nickel scrap Invar scrap solids, clips, broker buying price, delivered to yard Detroit, US cents/lb	17 Nov 2021	285 - 305	1.72%	Oct 2021	247.5 - 282.5
MB-NI-0165	Nickel scrap Invar scrap solids, clips, dealer buying price, delivered to yard Detroit, US cents/lb	03 Nov 2021	165 - 215	14.46%	Oct 2021	147 - 185
MB-NI-0205	Nickel scrap nickel turnings, broker buying price, delivered to yard Detroit, US cents/lb	17 Nov 2021	735 - 810	5.46%	Oct 2021	574 - 780
MB-NI-0157	Nickel scrap nickel turnings, dealer buying price, delivered to yard Detroit, US cents/lb	03 Nov 2021	396 - 560	11.16%	Oct 2021	345 - 515
MB-NI-0204	Nickel scrap solids, broker buying price, delivered to yard Detroit, US cents/lb	17 Nov 2021	770 - 830	4.92%	Oct 2021	615 - 800
MB-NI-0156	Nickel scrap solids, dealer buying price, delivered to yard Detroit, US cents/lb	03 Nov 2021	420 - 575	11.80%	Oct 2021	360 - 530
MB-NI-0208	Nickel-copper scrap Monel K-500 (castings) solids, clips, broker buying price, delivered to yard Detroit, US cents/lb	17 Nov 2021	475 - 530	10.44%	Oct 2021	425 - 442.5
MB-NI-0160	Nickel-copper scrap Monel K-500 (castings) solids, clips, dealer buying price, delivered to yard Detroit, US cents/lb	03 Nov 2021	305 - 330	11.60%	Oct 2021	275 - 294
MB-NI-0206	Nickel-copper scrap Monel R-400 scrap solids, clips, broker buying price, delivered to yard Detroit, US cents/lb	17 Nov 2021	495 - 540	8.95%	Oct 2021	440 - 472.5
MB-NI-0158	Nickel-copper scrap Monel R-400 scrap solids, clips, dealer buying price, delivered to yard Detroit, US cents/lb	03 Nov 2021	300 - 340	11.69%	Oct 2021	258 - 315
MB-NI-0207	Nickel-copper scrap Monel scrap turnings, broker buying price, delivered to yard Detroit, US cents/lb	17 Nov 2021	300 - 350	-7.14%	Oct 2021	300 - 375
MB-NI-0159	Nickel-copper scrap Monel scrap turnings, dealer buying price, delivered to yard Detroit, US cents/lb	03 Nov 2021	210 - 240	3.45%	Oct 2021	210 - 225
MB-NI-0215	Nickel scrap 17-4PH stainless steel scrap solids, broker buying price, delivered to yard Detroit, US cents/lb	17 Nov 2021	42 - 47	-8.25%	Oct 2021	41 - 51.5

Houston nickel scrap prices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
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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	17 Nov 2021	109 - 120	-6.53%	Oct 2021	105 - 122.5
MB-NI-0178	Nickel alloy scrap Inconel 601 scrap solids, dealer buying price, delivered to yard Houston, US cents/lb	03 Nov 2021	399 - 400	11.13%	Oct 2021	359 - 360
MB-NI-0175	Nickel alloy scrap 310 stainless steel scrap solids, dealer buying price, delivered to yard Houston, US cents/lb	03 Nov 2021	120 - 170	3.94%	Oct 2021	139 - 140
MB-NI-0227	Nickel scrap 17-4PH stainless steel scrap solids, broker buying price, delivered to yard Houston, US cents/lb	17 Nov 2021	48 - 50	-8.41%	Oct 2021	44.5 - 49
MB-NI-0174	Nickel alloy scrap 309 stainless steel scrap solids, dealer buying price, delivered to yard Houston, US cents/lb	03 Nov 2021	75 - 82	-1.26%	Oct 2021	79 - 80
MB-NI-0224	Nickel alloy scrap 330 stainless steel scrap solids, broker buying price, delivered to yard Houston, US cents/lb	17 Nov 2021	283 - 290	-0.52%	Oct 2021	271.5 - 290
MB-NI-0221	Nickel alloy scrap Inconel 600 scrap, solids, broker buying price, delivered to yard Houston, US cents/lb	17 Nov 2021	594 - 595	-4.80%	Oct 2021	621.5 - 627.5
MB-NI-0179	Nickel scrap 17-4PH stainless steel scrap solids, dealer buying price, delivered to yard Houston, US cents/lb	03 Nov 2021	22 - 23	21.62%	Oct 2021	18 - 19
MB-NI-0226	Nickel alloy scrap Inconel 601 scrap solids, broker buying price, delivered to yard Houston, US cents/lb	17 Nov 2021	474 - 475	-4.14%	Oct 2021	474.5 - 500.5
MB-NI-0223	Nickel alloy scrap 310 stainless steel scrap solids, broker buying price, delivered to yard Houston, US cents/lb	17 Nov 2021	171 - 185	0.28%	Oct 2021	166 - 180
MB-NI-0176	Nickel alloy scrap 330 stainless steel scrap solids, dealer buying price, delivered to yard Houston, US cents/lb	03 Nov 2021	220 - 275	13.79%	Oct 2021	200 - 235
MB-NI-0173	Nickel alloy scrap Inconel 600 scrap, solids, dealer buying price, delivered to yard Houston, US cents/lb	03 Nov 2021	470 - 500	14.79%	Oct 2021	395 - 450
MB-NI-0225	Nickel scrap Invar scrap solids, clips, broker buying price, delivered to yard Houston, US cents/lb	17 Nov 2021	280 - 290	-1.04%	Oct 2021	269 - 282.5
MB-NI-0177	Nickel scrap Invar scrap solids, clips, dealer buying price, delivered to yard Houston, US cents/lb	03 Nov 2021	200 - 220	-2.33%	Oct 2021	200 - 230
MB-NI-0217	Nickel scrap nickel turnings, broker buying price, delivered to yard Houston, US cents/lb	17 Nov 2021	610 - 750	10.57%	Oct 2021	592 - 665
MB-NI-0169	Nickel scrap nickel turnings, dealer buying price, delivered to yard Houston, US cents/lb	03 Nov 2021	425 - 500	12.94%	Oct 2021	409 - 410
MB-NI-0216	Nickel scrap solids, broker buying price, delivered to yard Houston, US cents/lb	17 Nov 2021	720 - 800	8.19%	Oct 2021	694.5 - 757.5
MB-NI-0168	Nickel scrap solids, dealer buying price, delivered to yard Houston, US cents/lb	03 Nov 2021	549 - 550	6.80%	Oct 2021	514 - 515
MB-NI-0220	Nickel-copper scrap Monel K-500 (castings) solids, clips, broker buying price, delivered to yard Houston, US cents/lb	17 Nov 2021	515 - 575	2.06%	Oct 2021	521 - 550
MB-NI-0172	Nickel-copper scrap Monel K-500 (castings) solids, clips, dealer buying price, delivered to yard Houston, US cents/lb	03 Nov 2021	400 - 485	21.40%	Oct 2021	364 - 365
MB-NI-0218	Nickel-copper scrap Monel R-400 scrap solids, clips, broker buying price, delivered to yard Houston, US cents/lb	17 Nov 2021	550 - 590	1.51%	Oct 2021	541 - 567.5
MB-NI-0170	Nickel-copper scrap Monel R-400 scrap solids, clips, dealer buying price, delivered to yard Houston, US cents/lb	03 Nov 2021	400 - 500	66.98%	Oct 2021	269 - 270
MB-NI-0219	Nickel-copper scrap Monel scrap turnings, broker buying price, delivered to yard Houston, US cents/lb	17 Nov 2021	340 - 435	-0.64%	Oct 2021	340 - 432.5
MB-NI-0171	Nickel-copper scrap Monel scrap turnings, dealer buying price, delivered to yard Houston, US cents/lb	03 Nov 2021	290 - 350	0.16%	Oct 2021	319 - 320

Pittsburgh nickel scrap prices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
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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	17 Nov 2021	490 - 515	2.87%	Oct 2021	427.5 - 490.5
MB-NI-0235	Nickel alloy scrap 310 stainless steel scrap solids, broker buying price, delivered to yard Pittsburgh, US cents/lb	17 Nov 2021	170 - 195	0.83%	Oct 2021	155 - 186.5
MB-NI-0188	Nickel alloy scrap 330 stainless steel scrap solids, dealer buying price, delivered to yard Pittsburgh, US cents/lb	03 Nov 2021	125 - 210	3.08%	Oct 2021	125 - 200
MB-NI-0185	Nickel alloy scrap Inconel 600 scrap, solids, dealer buying price, delivered to yard Pittsburgh, US cents/lb	03 Nov 2021	370 - 450	-2.96%	Oct 2021	370 - 475
MB-NI-0191	Nickel scrap 17-4PH stainless steel scrap solids, dealer buying price, delivered to yard Pittsburgh, US cents/lb	03 Nov 2021	20 - 30	-7.41%	Oct 2021	22 - 32
MB-NI-0187	Nickel alloy scrap 310 stainless steel scrap solids, dealer buying price, delivered to yard Pittsburgh, US cents/lb	03 Nov 2021	75 - 130	2.50%	Oct 2021	75 - 125
MB-NI-0234	Nickel alloy scrap 309 stainless steel scrap solids, broker buying price, delivered to yard Pittsburgh, US cents/lb	17 Nov 2021	125 - 132	5.33%	Oct 2021	107.5 - 123.5
MB-NI-0239	Nickel scrap 17-4PH stainless steel scrap solids, broker buying price, delivered to yard Pittsburgh, US cents/lb	17 Nov 2021	40 - 50	2.27%	Oct 2021	37.5 - 47.5
MB-NI-0236	Nickel alloy scrap 330 stainless steel scrap solids, broker buying price, delivered to yard Pittsburgh, US cents/lb	17 Nov 2021	275 - 305	3.57%	Oct 2021	255 - 289
MB-NI-0233	Nickel alloy scrap Inconel 600 scrap, solids, broker buying price, delivered to yard Pittsburgh, US cents/lb	17 Nov 2021	550 - 620	0.00%	Oct 2021	518.5 - 587.5
MB-NI-0190	Nickel alloy scrap Inconel 601 scrap solids, dealer buying price, delivered to yard Pittsburgh, US cents/lb	03 Nov 2021	330 - 380	4.41%	Oct 2021	305 - 375
MB-NI-0186	Nickel alloy scrap 309 stainless steel scrap solids, dealer buying price, delivered to yard Pittsburgh, US cents/lb	03 Nov 2021	65 - 88	2.00%	Oct 2021	65 - 85
MB-NI-0237	Nickel scrap Invar scrap solids, clips, broker buying price, delivered to yard Pittsburgh, US cents/lb	17 Nov 2021	275 - 310	2.63%	Oct 2021	247.5 - 290.5
MB-NI-0189	Nickel scrap Invar scrap solids, clips, dealer buying price, delivered to yard Pittsburgh, US cents/lb	03 Nov 2021	180 - 215	12.86%	Oct 2021	150 - 200
MB-NI-0229	Nickel scrap nickel turnings, broker buying price, delivered to yard Pittsburgh, US cents/lb	17 Nov 2021	720 - 810	1.66%	Oct 2021	662.5 - 780
MB-NI-0181	Nickel scrap nickel turnings, dealer buying price, delivered to yard Pittsburgh, US cents/lb	03 Nov 2021	490 - 560	13.51%	Oct 2021	400 - 525
MB-NI-0228	Nickel scrap solids, broker buying price, delivered to yard Pittsburgh, US cents/lb	17 Nov 2021	770 - 830	2.56%	Oct 2021	702.5 - 807.5
MB-NI-0180	Nickel scrap solids, dealer buying price, delivered to yard Pittsburgh, US cents/lb	03 Nov 2021	515 - 600	4.21%	Oct 2021	485 - 585
MB-NI-0232	Nickel-copper scrap Monel K-500 (castings) solids, clips, broker buying price, delivered to yard Pittsburgh, US cents/lb	17 Nov 2021	385 - 530	7.02%	Oct 2021	377.5 - 445
MB-NI-0184	Nickel-copper scrap Monel K-500 (castings) solids, clips, dealer buying price, delivered to yard Pittsburgh, US cents/lb	03 Nov 2021	300 - 360	10.00%	Oct 2021	275 - 325
MB-NI-0230	Nickel-copper scrap Monel R-400 scrap solids, clips, broker buying price, delivered to yard Pittsburgh, US cents/lb	17 Nov 2021	440 - 540	-2.87%	Oct 2021	395 - 477.5
MB-NI-0182	Nickel-copper scrap Monel R-400 scrap solids, clips, dealer buying price, delivered to yard Pittsburgh, US cents/lb	03 Nov 2021	315 - 380	8.59%	Oct 2021	290 - 350
MB-NI-0231	Nickel-copper scrap Monel scrap turnings, broker buying price, delivered to yard Pittsburgh, US cents/lb	17 Nov 2021	300 - 350	0.00%	Oct 2021	262.5 - 340
MB-NI-0183	Nickel-copper scrap Monel scrap turnings, dealer buying price, delivered to yard Pittsburgh, US cents/lb	03 Nov 2021	200 - 260	15.00%	Oct 2021	175 - 225

**Lead scrap prices**

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-PB-0004	Lead scrap buying price, delivered smelters US, \$/cwt	16 Nov 2021	80 - 85	0.00%	Oct 2021	80 - 85
MB-PB-0003	Lead scrap remelt buying price, delivered smelters US, \$/cwt	16 Nov 2021	87 - 90	0.00%	Oct 2021	87 - 90
MB-PB-0002	Lead scrap cable buying price, delivered smelters US, \$/cwt	16 Nov 2021	86 - 90	0.00%	Oct 2021	86 - 90
MB-PB-0111	Lead scrap heavy soft lead, dealer buying price, delivered to yard US, US cents/lb	15 Nov 2021	45	0.00%	Oct 2021	45
MB-PB-0112	Lead scrap undrained whole batteries, dealer buying price, delivered to yard US, US cents/lb	15 Nov 2021	16	-5.88%	Oct 2021	18
MB-PB-0005	Lead scrap whole batteries buying price, delivered smelters US, \$/cwt	16 Nov 2021	26 - 28	-6.90%	Oct 2021	28.5 - 31.5
MB-PB-0009	Lead scrap heavy soft lead, dealer buying price, delivered to yard Montreal, Canadian cents/lb	15 Nov 2021	50	0.00%	Oct 2021	50
MB-PB-0010	Lead scrap heavy soft lead, dealer buying price, delivered to yard Toronto, Canadian cents/lb	15 Nov 2021	74	4.23%	Oct 2021	72
MB-PB-0033	Lead scrap undrained whole batteries, dealer buying price, delivered to yard Montreal, Canadian cents/lb	15 Nov 2021	18	0.00%	Oct 2021	18

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	15 Nov 2021	25	0.00%	Oct 2021	30
MB-ZN-0004	Zinc scrap old zinc (clean), buying price, delivered smelters US, US cents/lb	16 Nov 2021	65 - 68	0.00%	Oct 2021	65 - 68
MB-ZN-0003	Zinc scrap new zinc clippings buying price, delivered smelters US, US cents/lb	16 Nov 2021	84 - 87	-3.39%	Oct 2021	85.5 - 88.5
MB-ZN-0002	Zinc scrap galvanizers dross buying price, delivered smelters US, US cents/lb	16 Nov 2021	83 - 87	-3.95%	Oct 2021	86 - 89
MB-ZN-0050	Zinc scrap old zinc, dealer buying price, delivered to yard Montreal, Canadian cents/lb	15 Nov 2021	30	0.00%	Oct 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	17 Nov 2021	1.8 - 1.9	0.00%	Oct 2021	1.8 - 1.9
MB-TI-0001	Titanium scrap turnings, unprocessed type 90/6/4, 0.5% Sn max, cif Europe, \$/lb	17 Nov 2021	1.8 - 2	0.00%	Oct 2021	1.8 - 2

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	16 Nov 2021	280 - 300	0.00%	Oct 2021	285 - 305
MB-CHO-0003	Chrome ore South Africa UG2 concentrates index basis 42%, cif China, \$/tonne	16 Nov 2021	156	0.00%	Oct 2021	159
MB-FEC-0001	Ferro-chrome low phosphorous, min 65% Cr, max 0.015% P, delivered Europe, \$/lb	09 Nov 2021	1.78 - 1.95	1.63%	Oct 2021	1.74 - 1.9
MB-FEC-0002	Ferro-chrome low carbon, 65% Cr, max 0.06% C, delivered Europe, \$/lb Cr	09 Nov 2021	3.84 - 4.13	9.92%	Oct 2021	3.28 - 3.54
MB-FEC-0003	Ferro-chrome 0.10% C, average 65-70% Cr, delivered Europe, \$/lb Cr	09 Nov 2021	3.8 - 4.09	10.03%	Oct 2021	3.24 - 3.5
MB-FEC-0004	Ferro-chrome high carbon 6-8.5% C, basis 60-70% Cr, max 1.5% Si, delivered Europe, \$/lb Cr	16 Nov 2021	1.72 - 1.87	0.56%	Oct 2021	1.66 - 1.82
MB-FEC-0005	Ferro-chrome contract 6-8% C, basis 50% Cr, ddp China, yuan/tonne	16 Nov 2021	10295 - 10495	0.00%	Oct 2021	9765 - 9995
MB-FEC-0006	Ferro-chrome spot 6-8% C, basis 50% Cr, ddp China, yuan/tonne	16 Nov 2021	9600 - 10200	-5.26%	Oct 2021	10875 - 11475
MB-FEC-0007	Ferro-chrome high carbon 6-8% C, basis 60-65% Cr, max 2% Si, in-whs Pittsburgh, US cents/lb	18 Nov 2021	200 - 220	0.00%	Oct 2021	187.25 - 198.25
MB-FEC-0008	Ferro-chrome low carbon 0.05%C, 65% Cr min, in-whs Pittsburgh, US cents/lb	18 Nov 2021	380 - 385	0.00%	Oct 2021	337.5 - 342.5
MB-FEC-0009	Ferro-chrome low carbon 0.10%C, 62% Cr min, in-whs Pittsburgh, US cents/lb	18 Nov 2021	365 - 375	0.68%	Oct 2021	326.25 - 332.5
MB-FEC-0010	Ferro-chrome low carbon 0.15%C, 60% Cr min, in-whs Pittsburgh, US cents/lb	18 Nov 2021	355 - 360	0.00%	Oct 2021	316.25 - 321.25
MB-FEC-0011	Ferro-chrome 50% Cr import, cif main Chinese ports, \$/lb contained Cr	16 Nov 2021	1.3	-0.76%	Oct 2021	1.31
MB-FEC-0012	Ferro-chrome high carbon 6-8% C, basis 60-65% Cr, max 2% Si, in-whs Pittsburgh, \$/lb	18 Nov 2021	2 - 2.2	0.00%	Oct 2021	
MB-FEC-0013	Ferro-chrome low carbon 0.05%C, 65% Cr min, in-whs Pittsburgh, \$/lb	18 Nov 2021	3.8 - 3.85	0.00%	Oct 2021	
MB-FEC-0014	Ferro-chrome low carbon 0.10%C, 62% Cr min, in-whs Pittsburgh, \$/lb	18 Nov 2021	3.65 - 3.75	0.54%	Oct 2021	
MB-FEC-0015	Ferro-chrome low carbon 0.15%C, 60% Cr min, in-whs Pittsburgh, \$/lb	18 Nov 2021	3.55 - 3.6	0.00%	Oct 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 Oct 2021	1.8	15.38%	Oct 2021	1.8
MB-FEC-0017	Ferro-chrome high carbon 57-65% Cr, cif dup Japan, \$/lb	18 Nov 2021	1.29 - 1.32	-2.96%	Oct 2021	1.27 - 1.31
MB-FEC-0018	Ferro-chrome high carbon 57-65% Cr, cif dup South Korea, \$/lb	18 Nov 2021	1.28 - 1.31	-2.26%	Oct 2021	1.26 - 1.3
MB-FEC-0019	Ferro-chrome lumpy Cr benchmark indicator, charge basis 52% (and high carbon), Europe, \$/lb	16 Nov 2021	1.93	0.52%	Oct 2021	1.88
MB-FEC-0020	Ferro-chrome high carbon 6-8.5% C, basis 60-64.9% Cr, max 3% Si, cif Europe, \$/lb Cr	16 Nov 2021	1.48 - 1.54	0.00%	Oct 2021	1.43 - 1.49
MB-FEC-0021	Ferro-chrome high carbon 6-8.5% C, basis 65-70% Cr, max 1.5% Si, delivered Europe, \$/lb Cr	16 Nov 2021	1.72 - 1.87	0.56%	Oct 2021	1.66 - 1.82

Manganese ore and alloy prices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
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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	18 Nov 2021	2600 - 2650	0.00%	Oct 2021	2537.5 - 2587.5
MB-FEM-0002	Ferro-manganese low carbon 80% Mn, max 0.80% C, in-whs Pittsburgh, US cents/lb	18 Nov 2021	315 - 320	0.00%	Oct 2021	295 - 300
MB-FEM-0003	Ferro-manganese medium carbon 80% Mn, max 1.50% C, in-whs Pittsburgh, US cents/lb	18 Nov 2021	225 - 230	0.00%	Oct 2021	195 - 200
MB-FEM-0004	Ferro-manganese medium carbon 80% Mn, max 1.50% C, in-whs Pittsburgh, \$/lb	18 Nov 2021	2.25 - 2.3	0.00%	Oct 2021	
MB-FEM-0006	Ferro-manganese basis 78% Mn max, standard 7.5% C, delivered Europe, €/tonne	12 Nov 2021	1800 - 2000	-5.00%	Oct 2021	1830 - 1985
MB-FEM-0007	Ferro-manganese 65% Mn min, max 7% C, in-whs China, yuan/tonne	12 Nov 2021	8800 - 9000	-7.77%	Oct 2021	10800 - 11280
MB-MNO-0001	Manganese ore 44% Mn, cif Tianjin, \$/dmtu	12 Nov 2021	5.66	-2.41%	Oct 2021	5.47
MB-MNO-0002	Manganese ore 37% Mn, fob Port Elizabeth, \$/dmtu	12 Nov 2021	3.43	-0.58%	Oct 2021	3.06
MB-MNO-0003	Manganese ore index 37% Mn, cif Tianjin, \$/dmtu	12 Nov 2021	4.8	-1.23%	Oct 2021	4.7
MB-MNO-0004	Manganese ore port index, base 37% Mn, range 35-39%, fot Tianjin China, yuan/dmtu	12 Nov 2021	34.7	-2.25%	Oct 2021	35.68
MB-MNO-0005	Manganese ore port index, base 44% Mn, range 42-48%, fot Tianjin China, yuan/dmtu	12 Nov 2021	43.8	-2.67%	Oct 2021	43.72
MB-SIM-0001	Silico-manganese 65% Mn min, max 17% Si, in-whs China, yuan/tonne	12 Nov 2021	8600 - 9200	-6.81%	Oct 2021	11260 - 11760
MB-SIM-0002	Silico-manganese lumpy 65-75% Mn, basis 15-19% Si (scale pro rata), major European destinations €/tonne	12 Nov 2021	1800 - 2000	-5.00%	Oct 2021	1840 - 1970
MB-SIM-0003	Silico-manganese 65% Mn min, min 16% Si, in-whs Pittsburgh, US cents/lb	18 Nov 2021	120 - 125	0.00%	Oct 2021	119 - 121.75
MB-SIM-0005	Silico-manganese 65% Mn min, min 16% Si, in-whs Pittsburgh, \$/lb	18 Nov 2021	1.2 - 1.25	0.00%	Oct 2021	
MB-SIM-0004	Silico-manganese 65% Mn min, min 16% Si, fob India, \$/tonne	12 Nov 2021	1650 - 1750	-8.11%	Oct 2021	1830 - 1900

Ferro-silicon prices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-FES-0001	Ferro-silicon 75% Si min, in-whs China, yuan/tonne	17 Nov 2021	9500 - 10000	-17.02%	Oct 2021	19250 - 21125
MB-FES-0002	Ferro-silicon 75% Si, in-whs Pittsburgh, US cents/lb	18 Nov 2021	330 - 340	0.00%	Oct 2021	306.25 - 320
MB-FES-0003	Ferro-silicon 75% Si, in-whs Pittsburgh, \$/lb	18 Nov 2021	3.3 - 3.4	0.00%	Oct 2021	
MB-FES-0004	Ferro-silicon 75% Si min export, fob China, \$/tonne	17 Nov 2021	2100 - 2300	-24.14%	Oct 2021	4112.5 - 4262.5
MB-FES-0005	Ferro-silicon lumpy basis 75% Si (scale pro rata), delivered Europe, €/tonne	12 Nov 2021	4000 - 4300	-4.60%	Oct 2021	3860 - 4100
MB-FES-0006	Ferro-silicon 75% Si min, cif Japan, \$/tonne	17 Nov 2021	2130 - 2330	-23.89%	Oct 2021	4135 - 4285

Tungsten prices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-FEU-0001	Ferro-tungsten basis 75% W, in-whs dup Rotterdam, \$/kg W	17 Nov 2021	37 - 38.5	1.62%	Oct 2021	37.04 - 38.5
MB-FEU-0003	Ferro-tungsten export, min 75% fob China, \$/kg W	17 Nov 2021	38 - 40	0.00%	Oct 2021	38.63 - 40.18
MB-W-0001	Tungsten APT 88.5% WO3 min cif Rotterdam and Baltimore duty-free, \$/mtu WO3	12 Nov 2021	320 - 325	0.00%	Oct 2021	317 - 322
MB-W-0002	Tungsten concentrate 65% WO3, in-whs China, yuan/tonne	17 Nov 2021	108000 - 111000	-1.79%	Oct 2021	111500 - 113250



Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-W-0003	Tungsten APT 88.5% WO ₃ min, fob main ports China, \$/mtu WO ₃	17 Nov 2021	313 - 319	0.00%	Oct 2021	311 - 317.5

Vanadium & niobium prices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-FEV-0003	Ferro-vanadium 78% V min, fob China, \$/kg V	18 Nov 2021	33.77 - 35.19	5.06%	Oct 2021	31.11 - 31.86
MB-FEV-0001	Ferro-vanadium basis 78% V min, 1st grade, ddp Western Europe, \$/kg V	17 Nov 2021	32 - 33	0.78%	Oct 2021	31.25 - 32.39
MB-FEV-0002	Ferro-vanadium 70-80% V, in-whs Pittsburgh, \$/lb	18 Nov 2021	14.9 - 15.25	1.55%	Oct 2021	14.85 - 15.5
MB-V-0001	Vanadium pentoxide 98% V ₂ O ₅ min, in-whs Rotterdam, \$/lb V ₂ O ₅	12 Nov 2021	7.5 - 8.5	0.00%	Oct 2021	7.46 - 8.5
MB-V-0002	Vanadium pentoxide 98% V ₂ O ₅ min, fob China, \$/lb V ₂ O ₅	18 Nov 2021	8.03 - 8.17	6.16%	Oct 2021	7.1 - 7.25
MB-V-0004	Vanadium pentoxide 98% V ₂ O ₅ min, exw China, yuan/tonne	18 Nov 2021	113000 - 115000	6.05%	Oct 2021	100500 - 102750
MB-V-0003	Vanadium nitrogen, basis 77%V, 16% N, exw China, yuan/tonne	18 Nov 2021	166000 - 173000	4.95%	Oct 2021	153750 - 157500
MB-FN-0001	Ferro-niobium 63-67% delivered consumer works, dp, Europe \$ per kg Nb	17 Nov 2021	44 - 46	0.00%	Oct 2021	44 - 46

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	25 Oct 2021	(300) - 100		Oct 2021	(300) - 100
MB-FET-0001	Ferro-titanium 70% Ti, max 4.5% Al, ddp Europe, \$/kg Ti	17 Nov 2021	7.7 - 8.2	0.00%	Oct 2021	7.7 - 8.18
MB-FET-0002	Ferro-titanium 68-72% Ti, ex-whs US, \$/lb	18 Nov 2021	3.6 - 3.85	0.81%	Oct 2021	3.6 - 3.7

Molybdenum prices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-FEO-0001	Ferro-molybdenum 65% Mo min, in-whs Rotterdam, \$/kg Mo	17 Nov 2021	44 - 45	-0.56%	Oct 2021	44.41 - 45.43
MB-FEO-0002	Ferro-molybdenum 65-70% Mo, in-whs Pittsburgh, \$/lb	18 Nov 2021	21.5 - 22	-2.82%	Oct 2021	21.75 - 22.38
MB-FEO-0003	Molybdenum drummed molybdic oxide 57% Mo min, in-whs Rotterdam, \$/lb Mo	17 Nov 2021	18.9 - 19.2	-0.94%	Oct 2021	19.48 - 19.76
MB-FEO-0004	Molybdenum MB drummed molybdic oxide Mo, in-whs Busan, \$/lb	17 Nov 2021	18.3 - 18.5	-2.13%	Oct 2021	18.7 - 18.96
MB-MO-0001	Molybdenum canned molybdic oxide, in-whs Pittsburgh, \$/lb	18 Nov 2021	18.75 - 19.5	-1.90%	Oct 2021	18.88 - 19.75

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	18 Nov 2021	1001.43	0.39%	Oct 2021	1009.53
MB-STE-0046	Steel hot-rolled coil import, cfr main port Northern Europe, €/tonne	17 Nov 2021	880 - 910	1.13%	Oct 2021	840 - 870
MB-STE-0047	Steel hot-rolled coil import, cfr main port Southern Europe, €/tonne	17 Nov 2021	860 - 885	-0.85%	Oct 2021	807.5 - 855
MB-STE-0532	Steel hot-rolled coil domestic, exw Central Europe, €/tonne	17 Nov 2021	880 - 900	-4.81%	Oct 2021	897.5 - 940
MB-STE-0892	Steel hot-rolled coil index domestic, exw Italy, €/tonne	18 Nov 2021	890	-0.14%	Oct 2021	914.22
MB-STE-0893	Steel hot-rolled coil domestic, exw Spain, €/tonne	17 Nov 2021	950 - 1000	-9.30%	Oct 2021	1050 - 1092.5
MB-STE-0107	Steel hot-rolled coil export, fob main port Turkey, \$/tonne	12 Nov 2021	920 - 940	1.09%	Oct 2021	882.5 - 903.75
MB-STE-0105	Steel hot-rolled coil import, cfr main port Turkey, \$/tonne	12 Nov 2021	820 - 870	-4.52%	Oct 2021	850 - 862.5
MB-STE-0108	Steel hot-rolled coil domestic, exw Turkey, \$/tonne	12 Nov 2021	910 - 930	0.00%	Oct 2021	880 - 905
MB-STE-0014	Steel hot-rolled coil export, fob Black Sea, CIS, \$/tonne	15 Nov 2021	820 - 850	-1.76%	Oct 2021	817.5 - 837.5
MB-STE-0065	Steel hot-rolled sheet domestic, cpt Moscow, Russia, rubles/tonne incl. VAT	15 Nov 2021	76000	0.00%	Oct 2021	68500 - 71750
MB-STE-0468	Steel hot-rolled coil index, fob mill US, \$/short ton	18 Nov 2021	1801.2	-0.67%	Oct 2021	
MB-STE-0184	Steel hot-rolled coil index, fob mill US, \$/cwt	18 Nov 2021	90.06	-0.67%	Oct 2021	96.3
MB-STE-0180	Steel hot-rolled coil, import, ddp Houston, \$/short ton	10 Nov 2021	1440 - 1510	-2.32%	Oct 2021	1480 - 1540
MB-STE-0007	Steel hot-rolled coil domestic monthly, exw Brazil, reais/tonne	12 Nov 2021	5950 - 6135	-15.90%	Oct 2021	6865 - 7505
MB-STE-0133	Steel hot-rolled coil (dry) export, fob main port Latin America, \$/tonne	12 Nov 2021	875 - 900	-0.56%	Oct 2021	918 - 960
MB-STE-0102	Steel hot-rolled coil import, cfr main ports South America, \$/tonne	12 Nov 2021	920 - 960	-2.08%	Oct 2021	1002 - 1075
MB-STE-0444	Steel hot-rolled coil import, cfr main port India, \$/tonne	12 Nov 2021	875 - 940	22.22%	Oct 2021	740 - 745
MB-STE-0445	Steel hot-rolled coil (CR grade) import, cfr main port India, \$/tonne	12 Nov 2021	885 - 895	19.06%	Oct 2021	745 - 750
MB-STE-0442	Steel hot-rolled coil (commodity) export, fob main port India, \$/tonne	12 Nov 2021	800 - 805	-8.29%	Oct 2021	848 - 869
MB-STE-0436	Steel hot-rolled coil domestic, ex-whse India, rupees/tonne	12 Nov 2021	70000 - 71000	0.00%	Oct 2021	66900 - 67920
MB-STE-0158	Steel hot-rolled coil domestic, exw Northern China, yuan/tonne	12 Nov 2021	4900 - 4930	-2.87%	Oct 2021	5587.5 - 5637.5
MB-STE-0144	Steel hot-rolled coil index export, fob main port China, \$/tonne	18 Nov 2021	774.74	-0.24%	Oct 2021	906.79
MB-STE-0154	Steel hot-rolled coil domestic, ex-whs Eastern China, yuan/tonne	18 Nov 2021	4650 - 4700	-0.74%	Oct 2021	5633.13 - 5688.75
MB-STE-0139	Steel hot-rolled coil import, cfr Vietnam, \$/tonne	12 Nov 2021	830 - 850	-1.18%	Oct 2021	874 - 884
MB-STE-0888	Steel hot-rolled coil (Japan, Korea, Taiwan-origin), import, cfr Vietnam, \$/tonne	12 Nov 2021	900	0.00%	Oct 2021	928
MB-STE-0125	Steel hot-rolled coil import, cfr Jebel Ali, UAE, \$/tonne	16 Nov 2021	880 - 955	-0.54%	Oct 2021	925 - 952.5
MB-STE-0113	Steel hot-rolled coil import, cfr Saudi Arabia, \$/tonne	16 Nov 2021	930 - 950	0.00%	Oct 2021	947.5 - 965

Cold-rolled steel prices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0005	Steel cold-rolled coil domestic monthly, exw Brazil, reais/tonne	12 Nov 2021	6730 - 6890	-17.08%	Oct 2021	7915 - 8510



Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0012	Steel cold-rolled coil export, fob Black Sea, CIS, \$/tonne	15 Nov 2021	960 - 970	0.00%	Oct 2021	922.5 - 935
MB-STE-0026	Steel cold-rolled coil domestic, exw Northern Europe, €/tonne	17 Nov 2021	1120 - 1140	-0.44%	Oct 2021	1137.5 - 1172.5
MB-STE-0027	Steel cold-rolled coil domestic, exw Southern Europe, €/tonne	17 Nov 2021	1050 - 1100	-3.15%	Oct 2021	1132.5 - 1152.5
MB-STE-0044	Steel cold-rolled coil import, cfr main port Northern Europe, €/tonne	17 Nov 2021	970 - 1000	-1.99%	Oct 2021	965 - 995
MB-STE-0045	Steel cold-rolled coil import, cfr main port Southern Europe, €/tonne	17 Nov 2021	965 - 1000	-2.72%	Oct 2021	947.5 - 992.5
MB-STE-0064	Steel cold-rolled sheet domestic, cpt Moscow, Russia, rubles/tonne incl. VAT	15 Nov 2021	83000 - 85000	0.00%	Oct 2021	78675 - 80250
MB-STE-0103	Steel cold-rolled coil import, cfr main ports South America, \$/tonne	12 Nov 2021	1020 - 1070	-3.69%	Oct 2021	1107 - 1148
MB-STE-0106	Steel cold-rolled coil import, cfr main port Turkey, \$/tonne	12 Nov 2021	990 - 1000	0.00%	Oct 2021	990 - 1000
MB-STE-0109	Steel cold-rolled coil domestic, exw Turkey, \$/tonne	12 Nov 2021	1090 - 1100	-0.91%	Oct 2021	1032.5 - 1072.5
MB-STE-0124	Steel cold-rolled coil import, cfr Jebel Ali, UAE, \$/tonne	16 Nov 2021	920 - 1000	0.00%	Oct 2021	1030 - 1047.5
MB-STE-0132	Steel cold-rolled coil export, fob main port Latin America, \$/tonne	12 Nov 2021	1000 - 1020	0.00%	Oct 2021	1020 - 1044
MB-STE-0145	Steel cold-rolled coil export, fob China main port, \$/tonne	16 Nov 2021	830 - 865	-5.83%	Oct 2021	1001.67 - 1021.67
MB-STE-0153	Steel cold-rolled coil domestic, delivered Eastern China domestic, yuan/tonne	12 Nov 2021	5700 - 5760	-1.72%	Oct 2021	6367.5 - 6402.5
MB-STE-0181	Steel cold-rolled coil, import, ddp Houston, \$/short ton	10 Nov 2021	1560 - 1640	1.91%	Oct 2021	1530 - 1610
MB-STE-0185	Steel cold-rolled coil, fob mill US, \$/cwt	18 Nov 2021	104	-3.70%	Oct 2021	109
MB-STE-0435	Steel cold-rolled coil domestic, ex-whse India, rupees/tonne	12 Nov 2021	79500 - 81000	0.00%	Oct 2021	76650 - 78200
MB-STE-0443	Steel cold-rolled coil import, cfr main port India, \$/tonne	12 Nov 2021	960 - 970	0.00%	Oct 2021	960 - 970
MB-STE-0469	Steel cold-rolled coil, fob mill US, \$/short ton	18 Nov 2021	2080	-3.70%	Oct 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	18 Nov 2021	104.5	-3.24%	Oct 2021	109.38
MB-STE-0780	Steel hot-dipped galvanized export, fob Turkey, \$/tonne	12 Nov 2021	1250 - 1260	-2.33%	Oct 2021	1198.75 - 1230
MB-STE-0434	Steel hot-dipped galvanized coil domestic, ex-whse India, rupees/tonne	12 Nov 2021	84500 - 86000	0.00%	Oct 2021	81300 - 82500
MB-STE-0470	Steel hot-dipped galvanized (base) steel coil, fob mill US, \$/short ton	18 Nov 2021	2090	-3.24%	Oct 2021	
MB-STE-0031	Steel hot-dipped galvanized coil domestic, exw Southern Europe, €/tonne	17 Nov 2021	1080 - 1120	-2.22%	Oct 2021	1142.5 - 1167.5
MB-STE-0104	Steel hot-dipped galvanized coil import, cfr main ports South America, \$/tonne	12 Nov 2021	1060 - 1130	-3.95%	Oct 2021	1211 - 1251
MB-STE-0091	Steel hot-dipped galvanized coil import, cfr main port Northern Europe, €/tonne	17 Nov 2021	1080 - 1100	0.00%	Oct 2021	1057.5 - 1133.75
MB-STE-0021	Steel hot-dipped galvanized coil domestic, ex-whs Eastern China, yuan/tonne	12 Nov 2021	5900 - 5980	-1.82%	Oct 2021	6622.5 - 6670
MB-STE-0110	Steel hot-dipped galvanized coil domestic, exw Turkey, \$/tonne	12 Nov 2021	1230 - 1250	-2.75%	Oct 2021	1198.75 - 1230
MB-STE-0048	Steel hot-dipped galvanized coil import, cfr main port Southern Europe, €/tonne	17 Nov 2021	1080 - 1100	0.00%	Oct 2021	1030 - 1105
MB-STE-0030	Steel hot-dipped galvanized coil domestic, exw Northern Europe, €/tonne	17 Nov 2021	1120 - 1150	-1.30%	Oct 2021	1160 - 1185
MB-STE-0123	Steel hot-dipped-galvanized coil import, cfr Jebel Ali, UAE, \$/tonne	16 Nov 2021	990 - 1090	-9.57%	Oct 2021	1153.75 - 1193.75
MB-STE-0186	Steel hot-dipped galvanized coil (cold-rolled base), fob mill US, \$/cwt	18 Nov 2021	104.5	-3.24%	Oct 2021	109.5



Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0006	Steel hot-dipped galvanized coil domestic monthly, exw Brazil, reais/tonne	12 Nov 2021	9060 - 9080	-8.15%	Oct 2021	9560 - 10190
MB-STE-0441	Steel hot-dipped galvanized coil export, fob main port India, \$/tonne	12 Nov 2021	1145 - 1170	-0.64%	Oct 2021	1156 - 1178
MB-STE-0182	Steel hot-dipped galvanized 0.012 inch G30, ddp Houston, \$/short ton	10 Nov 2021	1640 - 1730	-2.60%	Oct 2021	1700 - 1760
MB-STE-0212	Steel hot-dipped galvanized coil 0.03-0.13 inch G90 (cold-rolled base), fob mill US, \$/cwt	18 Nov 2021	109	-3.11%	Oct 2021	114.13
MB-STE-0009	Steel galvanized coil 1mm export, fob main port China, \$/tonne	16 Nov 2021	895 - 925	-2.15%	Oct 2021	1046.67 - 1064
MB-STE-0111	Steel prepainted galvanized domestic, exw Turkey, \$/tonne	12 Nov 2021	1370 - 1400	0.91%	Oct 2021	1298.75 - 1322.5
MB-STE-0187	Steel coil Galvalume, fob mill US, \$/cwt	16 Nov 2021	101	-3.81%	Oct 2021	105
MB-STE-0850	Steel coil Galvalume import, cfr main ports South America, \$/tonne	12 Nov 2021	1190 - 1230	-4.16%	Oct 2021	1329 - 1368

Steel plate prices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0013	Steel heavy plate 8-50mm export, fob Black Sea, CIS, \$/tonne	15 Nov 2021	910 - 975	0.00%	Oct 2021	902.5 - 926.25
MB-STE-0034	Steel domestic plate 8-40mm, exw Northern Europe, €/tonne	17 Nov 2021	970 - 1020	0.51%	Oct 2021	935 - 962.5
MB-STE-0035	Steel domestic plate 8-40mm, exw Southern Europe, €/tonne	17 Nov 2021	890 - 910	0.56%	Oct 2021	827.5 - 850
MB-STE-0049	Steel plate (8-40mm) import, cfr main port Northern Europe, €/tonne	17 Nov 2021	870 - 880	0.00%	Oct 2021	825 - 842.5
MB-STE-0050	Steel plate (8-40mm) import, cfr main port Southern Europe, €/tonne	17 Nov 2021	870 - 880	0.00%	Oct 2021	825 - 842.5
MB-STE-0101	Steel plate import, cfr main ports South America, \$/tonne	12 Nov 2021	990 - 1030	-4.72%	Oct 2021	1069 - 1094
MB-STE-0134	Steel heavy plate (thicker than 10mm) export, fob main port Latin America, \$/tonne	12 Nov 2021	990 - 1000	0.00%	Oct 2021	990 - 1004
MB-STE-0146	Steel heavy plate export, fob China main port, \$/tonne	16 Nov 2021	820 - 835	-4.34%	Oct 2021	920 - 933.33
MB-STE-0155	Steel plate domestic, delivered whs Eastern China, yuan/tonne	12 Nov 2021	5190 - 5210	-3.26%	Oct 2021	5667.5 - 5732.5
MB-STE-0172	Steel cut-to-length plate carbon grade, fob mill US, \$/cwt	12 Nov 2021	90	0.00%	Oct 2021	89
MB-STE-0179	Steel medium plate, import, ddp Houston, \$/short ton	10 Nov 2021	1560 - 1620	0.00%	Oct 2021	1560 - 1620
MB-STE-0437	Steel heavy plate domestic, ex-whse India, rupees/tonne	12 Nov 2021	70500 - 72000	0.00%	Oct 2021	65300 - 67600
MB-STE-0439	Steel heavy plate 12-40mm export, fob main port India, \$/tonne	12 Nov 2021	860 - 865	0.00%	Oct 2021	869 - 876
MB-STE-0446	Steel heavy plate 10-40mm import, cfr main port India, \$/tonne	12 Nov 2021	925 - 935	26.96%	Oct 2021	730 - 735
MB-STE-0467	Steel cut-to-length plate carbon grade, fob mill US, \$/short ton	12 Nov 2021	1800	0.00%	Oct 2021	
MB-STE-0514	Steel plate domestic, cpt Moscow, Russia, rubles/tonne incl. VAT	15 Nov 2021	76000	0.00%	Oct 2021	69250 - 70750

Reinforcing bar (rebar) prices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0008	Steel reinforcing bar (rebar) domestic monthly, delivered Brazil, reais/tonne	12 Nov 2021	4700 - 4900	-5.47%	Oct 2021	5055 - 5100
MB-STE-0015	Steel reinforcing bar (rebar) export, fob Black Sea, CIS, \$/tonne	15 Nov 2021	740 - 760	-2.60%	Oct 2021	707.5 - 718.75
MB-STE-0036	Steel reinforcing bar (rebar) domestic, delivered Northern Europe, €/tonne	17 Nov 2021	820 - 840	-0.60%	Oct 2021	787.5 - 808.75
MB-STE-0037	Steel reinforcing bar (rebar) domestic, delivered Southern Europe, €/tonne	17 Nov 2021	770 - 790	-0.32%	Oct 2021	735 - 750
MB-STE-0051	Steel reinforcing bar (rebar) import, cfr main EU port Northern Europe, €/tonne	17 Nov 2021	750 - 770	-1.94%	Oct 2021	732.5 - 755



Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0052	Steel reinforcing bar (rebar) import, cfr main EU port Southern Europe, €/tonne	17 Nov 2021	700 - 720	-1.39%	Oct 2021	677.5 - 703.75
MB-STE-0066	Steel reinforcing bar (rebar) domestic, cpt Moscow, Russia, rubles/tonne incl. VAT	15 Nov 2021	73000 - 75000	-1.99%	Oct 2021	59875 - 64500
MB-STE-0073	Steel reinforcing bar (rebar) export, fob main port Southern Europe, €/tonne	17 Nov 2021	700 - 740	0.00%	Oct 2021	635 - 700
MB-STE-0092	Steel reinforcing bar (rebar) domestic, exw Poland, zloty/tonne	12 Nov 2021	3700 - 3750	0.00%	Oct 2021	3644 - 3734
MB-STE-0112	Steel reinforcing bar (rebar) domestic, exw Egypt, E£/tonne	18 Nov 2021	14900 - 15350	0.00%	Oct 2021	14600 - 14950
MB-STE-0119	Steel reinforcing bar (rebar) export, fob main port Turkey, \$/tonne	18 Nov 2021	720 - 730	-1.36%	Oct 2021	725 - 735
MB-STE-0126	Steel reinforcing bar (rebar) domestic, exw UAE, dirhams/tonne	16 Nov 2021	2405 - 2490	-0.41%	Oct 2021	2372.5 - 2421.5
MB-STE-0127	Steel reinforcing bar (rebar) import, cfr Jebel Ali, UAE, \$/tonne	16 Nov 2021	657 - 667	0.00%	Oct 2021	650.75 - 657.25
MB-STE-0142	Steel reinforcing bar (rebar) import, cfr Singapore, \$/tonne	15 Nov 2021	740 - 745	0.00%	Oct 2021	730 - 738.75
MB-STE-0147	Steel reinforcing bar (rebar) index export, fob China main port, \$/tonne	16 Nov 2021	797.5	-3.19%	Oct 2021	935.6
MB-STE-0152	Steel reinforcing bar (rebar) domestic, ex-whs Eastern China, yuan/tonne	18 Nov 2021	4660 - 4690	0.00%	Oct 2021	5583.75 - 5625
MB-STE-0162	Steel reinforcing bar (rebar) domestic, ex-whs Northern China, yuan/tonne	12 Nov 2021	4520 - 4600	-5.00%	Oct 2021	5447.5 - 5487.5
MB-STE-0170	Steel reinforcing bar (rebar), fob mill US, \$/cwt	17 Nov 2021	50.5	0.50%	Oct 2021	49.25
MB-STE-0171	Steel reinforcing bar (rebar), import, loaded truck Port of Houston for immediate delivery, \$/short ton	17 Nov 2021	980 - 1000	0.00%	Oct 2021	942.5 - 962.5
MB-STE-0438	Steel rebar domestic, exw India, rupees/tonne	12 Nov 2021	47500 - 47700	-4.03%	Oct 2021	51120 - 51300
MB-STE-0465	Steel reinforcing bar (rebar), fob mill US, \$/short ton	17 Nov 2021	1010	0.50%	Oct 2021	
MB-STE-0784	Steel reinforcing bar (rebar) domestic, exw Turkey, lira/tonne	18 Nov 2021	9200 - 9300	7.25%	Oct 2021	7800 - 7925

Wire rod prices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0017	Steel wire rod (mesh quality) export, fob Black Sea, CIS, \$/tonne	15 Nov 2021	800 - 860	-2.35%	Oct 2021	795 - 817.5
MB-STE-0042	Steel wire rod (mesh quality) domestic, delivered Northern Europe, €/tonne	17 Nov 2021	810 - 850	0.00%	Oct 2021	800 - 830
MB-STE-0043	Steel wire rod (mesh quality) domestic, delivered Southern Europe, €/tonne	17 Nov 2021	770 - 810	-0.63%	Oct 2021	755 - 790
MB-STE-0053	Steel wire rod (mesh quality) import, main port Northern Europe, €/tonne	17 Nov 2021	780 - 800	-1.25%	Oct 2021	750 - 790
MB-STE-0054	Steel wire rod (mesh quality) import, main port Southern Europe, €/tonne	17 Nov 2021	760 - 780	-0.65%	Oct 2021	730 - 765
MB-STE-0074	Steel wire rod export, fob main port Southern Europe, €/tonne	17 Nov 2021	770 - 790	-1.89%	Oct 2021	705 - 723.75
MB-STE-0120	Steel wire rod (mesh quality) export, fob main port Turkey, \$/tonne	18 Nov 2021	810 - 820	-1.21%	Oct 2021	805 - 820
MB-STE-0130	Steel wire rod (mesh quality) export, fob main port Latin America, \$/tonne	12 Nov 2021	800 - 820	0.00%	Oct 2021	800 - 820
MB-STE-0143	Steel wire rod (low carbon) import, cfr Southeast Asia, \$/tonne	15 Nov 2021	730	-0.34%	Oct 2021	761.25 - 763.75
MB-STE-0148	Steel wire rod (mesh quality) export, fob China main port, \$/tonne	16 Nov 2021	740 - 750	-10.78%	Oct 2021	913.33 - 923.33
MB-STE-0164	Steel wire rod (mesh quality) domestic, ex-whs Eastern China, yuan/tonne	12 Nov 2021	5030 - 5070	-2.60%	Oct 2021	5670 - 5725
MB-STE-0192	Steel wire rod (low carbon) industrial quality, fob mill US, \$/cwt	16 Nov 2021	63 - 67	6.56%	Oct 2021	59.5 - 62.5



Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0193	Steel wire rod (high carbon), fob mill US, \$/cwt	16 Nov 2021	70	4.87%	Oct 2021	66.75
MB-STE-0194	Steel wire rod cold-heading quality, ddp, \$/cwt	16 Nov 2021	70.5	5.22%	Oct 2021	67
MB-STE-0195	Steel wire rod (low carbon) import, loaded truck Port of Houston for immediate delivery, \$/short ton	16 Nov 2021	1200 - 1280	2.90%	Oct 2021	1160 - 1250
MB-STE-0785	Steel wire rod (mesh quality) domestic, exw Turkey, lira/tonne	18 Nov 2021	10300 - 10400	5.61%	Oct 2021	8855 - 8975
MB-STE-0891	Steel wire rod (drawing quality), domestic, delivered Poland, zloty/tonne	12 Nov 2021	3850 - 3950	0.00%	Oct 2021	3810 - 3910

Steel beams, sections & bar prices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-FE-0001	Steel merchant bar export, fob main port Turkey, \$/tonne	18 Nov 2021	790	-1.25%	Oct 2021	771.25 - 776.25
MB-STE-0020	Steel hollow sections ASTM A500 Grade B domestic, fob mill US, \$/short ton	18 Nov 2021	2400 - 2425	-1.53%	Oct 2021	2425 - 2475
MB-STE-0024	Steel beams domestic, delivered Northern Europe, €/tonne	17 Nov 2021	1020 - 1040	0.00%	Oct 2021	995 - 1025
MB-STE-0025	Steel beams domestic, delivered Southern Europe, €/tonne	17 Nov 2021	1020 - 1030	0.00%	Oct 2021	990 - 1020
MB-STE-0038	Steel sections (medium) domestic, delivered Northern Europe, €/tonne	17 Nov 2021	1130 - 1170	-4.17%	Oct 2021	1252.5 - 1302.5
MB-STE-0039	Steel sections (medium) domestic, delivered Southern Europe, €/tonne	17 Nov 2021	1130 - 1170	-4.17%	Oct 2021	1252.5 - 1302.5
MB-STE-0161	Steel sections domestic, ex-whs Eastern China, yuan/tonne	12 Nov 2021	5000 - 5040	-8.23%	Oct 2021	5667.5 - 5712.5
MB-STE-0199	Steel bar 2 x 2 x 1/4-inch angle merchant products, fob mill US, \$/cwt	29 Oct 2021	58.3	0.00%	Oct 2021	58.3
MB-STE-0200	Steel bar 3 x 3 x 1/4-inch angle merchant products, fob mill US, \$/cwt	29 Oct 2021	58.75	0.00%	Oct 2021	58.75
MB-STE-0201	Steel bar 8 x 11.5-inch channels merchant products, fob mill US, \$/cwt	29 Oct 2021	58	0.00%	Oct 2021	58
MB-STE-0202	Steel bar 1/2 x 4-inch flat merchant products, fob mill US, \$/cwt	29 Oct 2021	58.5	0.00%	Oct 2021	58.5
MB-STE-0203	Steel merchant bar, loaded truck Port of Houston for immediate delivery, \$/short ton	29 Oct 2021	1105 - 1145	0.00%	Oct 2021	1105 - 1145
MB-STE-0204	Steel bar cold-finished 1-inch round 4140 (alloy), fob mill US, \$/cwt	15 Oct 2021	110.5	0.00%	Oct 2021	110.5
MB-STE-0205	Steel bar cold-finished 1-inch round 1018 (carbon), fob mill US, \$/cwt	15 Oct 2021	88.75	-0.56%	Oct 2021	88.75
MB-STE-0206	Steel bar cold-finished 1-inch round 12L14 (carbon), fob mill US, \$/cwt	15 Oct 2021	105.75	0.48%	Oct 2021	105.75
MB-STE-0207	Steel bar hot-rolled special bar quality (SBQ) 1-inch round 4100 series (alloy), fob mill US, \$/cwt	15 Oct 2021	80.75	2.87%	Oct 2021	80.75
MB-STE-0208	Steel bar hot-rolled special bar quality (SBQ) 1-inch round 1000 series (carbon), fob mill US, \$/cwt	15 Oct 2021	69.5	2.21%	Oct 2021	69.5
MB-STE-0209	Steel beams 8 x 8-inch, fob mill US, \$/cwt	28 Oct 2021	68	0.00%	Oct 2021	68
MB-STE-0210	Steel beams medium sections, loaded truck Port of Houston for immediate delivery, \$/short ton	28 Oct 2021	1315 - 1355	0.00%	Oct 2021	1315 - 1355
MB-STE-0851	Steel hollow sections ASTM 500 Grade B import, ddp US port of entry, \$/short ton	26 Oct 2021	1850 - 1900	0.00%	Oct 2021	1850 - 1900

Steel billet prices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0782	Steel billet export, fob ports Iran, \$/tonne	17 Nov 2021	585	-1.68%	Oct 2021	641.25 - 645.63
MB-STE-0558	Steel billet index export, fob Black Sea, CIS, \$/tonne	18 Nov 2021	630	-0.63%	Oct 2021	631.86
MB-STE-0516	Steel billet import, cfr main port Egypt, \$/tonne	18 Nov 2021	655 - 690	1.13%	Oct 2021	650 - 677.5
MB-STE-0433	Steel billet domestic, exw India, rupees/tonne	12 Nov 2021	43200 - 43400	-4.84%	Oct 2021	46860 - 47060



Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0440	Steel billet export, fob main port India, \$/tonne	12 Nov 2021	625 - 630	0.00%	Oct 2021	625 - 630
MB-STE-0141	Steel billet import, cfr Manila, \$/tonne	18 Nov 2021	645 - 660	0.00%	Oct 2021	690.48 - 699.67
MB-STE-0157	Steel billet domestic, exw Tangshan, Northern China, yuan/tonne	18 Nov 2021	4180	0.00%	Oct 2021	5150.63
MB-STE-0890	Steel billet, import, cfr China, \$/tonne	16 Nov 2021	600 - 620	0.00%	Oct 2021	675 - 689.29
MB-STE-0116	Steel billet import, cfr main port Turkey, \$/tonne	18 Nov 2021	640 - 650	-2.27%	Oct 2021	677.5 - 690
MB-STE-0117	Steel billet export, fob main port Turkey, \$/tonne	18 Nov 2021	660 - 695	-2.87%	Oct 2021	695 - 703.75
MB-STE-0115	Steel billet domestic, exw Turkey, \$/tonne	18 Nov 2021	690 - 695	0.00%	Oct 2021	692.5 - 698.75
MB-STE-0128	Steel billet export, fob main port Latin America, \$/tonne	12 Nov 2021	650 - 655	0.00%	Oct 2021	602 - 611
MB-STE-0122	Steel billet import, cfr Jebel Ali, UAE, \$/tonne	16 Nov 2021	640 - 660	0.00%	Oct 2021	632.5 - 641.25

Steel slab prices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0781	Steel slab export, fob ports Iran, \$/tonne	17 Nov 2021	620 - 640	-1.56%	Oct 2021	657.63 - 662
MB-STE-0566	Steel slab export, fob main port Brazil, \$/tonne	12 Nov 2021	730 - 760	1.36%	Oct 2021	746 - 764
MB-STE-0140	Steel slab import, cfr Southeast Asia/East Asia, \$/tonne	15 Nov 2021	690 - 710	-1.06%	Oct 2021	727.5 - 742.5
MB-STE-0016	Steel slab export, fob Black Sea, CIS, \$/tonne	15 Nov 2021	730 - 755	1.02%	Oct 2021	686.25 - 700

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	26 Oct 2021	2300 - 2350	0.00%	Oct 2021	2300 - 2350
MB-STE-0023	Steel ERW standard pipe A53 Grade B, fob mill US, \$/short ton	26 Oct 2021	2400 - 2450	-2.02%	Oct 2021	2400 - 2450
MB-STE-0056	Steel ERW standard pipe A53 Grade A import, cif Houston, \$/short ton	26 Oct 2021	1950 - 2000	0.00%	Oct 2021	1950 - 2000
MB-STE-0057	Steel ERW standard pipe A53 Grade B import, cif Houston, \$/short ton	26 Oct 2021	2000 - 2050	-1.22%	Oct 2021	2000 - 2050
MB-STE-0059	Steel seamless line pipe - API 5LB import, cif Houston, \$/short ton	09 Nov 2021	2525 - 2705	47.32%	Oct 2021	1750 - 1800
MB-STE-0062	Steel seamless OCTG API 5CT - Casing P110, import, cif Houston, \$/short ton	09 Nov 2021	1825 - 1925	0.00%	Oct 2021	1825 - 1925
MB-STE-0063	Steel OCTG API 5CT - Casing J55, fob mill US, \$/short ton	09 Nov 2021	2250 - 2350	0.00%	Oct 2021	2250 - 2350
MB-STE-0071	Steel seamless OCTG API 5CT - Casing P110, fob mill US, \$/short ton	09 Nov 2021	2250 - 2350	4.55%	Oct 2021	2150 - 2250
MB-STE-0090	Steel welded mechanical tubing ASTM A513, fob mill US, \$/short ton	26 Oct 2021	2475 - 2525	0.00%	Oct 2021	2475 - 2525
MB-STE-0166	Steel structural pipe export S235JR grade EN10219 2mm wall thickness, fob main port Turkey, \$/tonne	10 Nov 2021	980 - 990	5.35%	Oct 2021	930 - 940
MB-STE-0545	Steel ERW line pipe (X52), fob mill US, \$/short ton	09 Nov 2021	2475 - 2525	0.00%	Oct 2021	2475 - 2525
MB-STE-0561	Steel ERW line pipe (X65), fob mill US, \$/short ton	09 Nov 2021	2600 - 2650	0.00%	Oct 2021	2600 - 2650
MB-STE-0564	Steel welded OCTG API 5CT - Casing P110, fob mill US, \$/short ton	09 Nov 2021	2125 - 2175	0.00%	Oct 2021	2125 - 2175
MB-STE-0565	Steel welded OCTG API 5CT - Casing P110, import, cif Houston, \$/short ton	09 Nov 2021	1850 - 1900	0.00%	Oct 2021	1850 - 1900
MB-STE-0869	Steel OCTG API 5CT - Casing J55 import South Korean-made, cif Houston, \$/short ton	09 Nov 2021	1725 - 1750	2.21%	Oct 2021	1675 - 1725
MB-STE-0870	Steel OCTG API 5CT - Casing J55 import non-South Korean-made, cif Houston, \$/short ton	09 Nov 2021	1750 - 1800	0.00%	Oct 2021	1750 - 1800
MB-STE-0871	Steel ERW line pipe (X52) import South Korean-made, cif Houston, \$/short ton	09 Nov 2021	1700 - 1800	0.00%	Oct 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	09 Nov 2021	2135 - 2235	1.63%	Oct 2021	2100 - 2200
MB-STE-0873	Steel ERW line pipe (X70), fob mill US, \$/short ton	09 Nov 2021	2650 - 2700	0.00%	Oct 2021	2650 - 2700

Stainless & special steel prices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-ST5-0281	Stainless steel cold-rolled sheet 2mm grade 304 transaction domestic, delivered North Europe, €/tonne	12 Nov 2021	4200 - 4300	0.00%	Oct 2021	4100 - 4200
MB-ST5-0035	Stainless steel 304 cold-rolled sheet, fob mill US, \$/cwt	10 Nov 2021	192	2.13%	Oct 2021	188
MB-ST5-0034	Stainless steel 304L cold-rolled sheet, fob mill US, \$/cwt	10 Nov 2021	196	3.16%	Oct 2021	190
MB-ST5-0037	Stainless steel 316L cold-rolled sheet, fob mill US, \$/cwt	10 Nov 2021	268	4.08%	Oct 2021	257.5
MB-ST5-0005	Stainless steel bright bar grade 304 base price domestic, delivered Europe, €/tonne	12 Nov 2021	1050 - 1100	0.00%	Oct 2021	1050 - 1100
MB-ST5-0004	Stainless steel bright bar grade 304 alloy surcharge domestic, Europe, €/tonne	12 Nov 2021	2778 - 3100	0.00%	Oct 2021	2682 - 2889
MB-ST5-0282	Stainless steel cold-rolled coil 2mm grade 304 export, fob China, \$/tonne	17 Nov 2021	3150 - 3340	0.62%	Oct 2021	3462.5 - 3567.5
MB-ST5-0018	Stainless steel cold-rolled coil, Asia grade 304 (2mm 2B), cif East Asian port, \$/tonne	17 Nov 2021	3100 - 3180	-3.53%	Oct 2021	3427.5 - 3492.5
MB-ST5-0015	Stainless steel cold-rolled coil 2mm grade 304 domestic, ex-whs China, yuan/tonne	17 Nov 2021	18800 - 19000	-2.58%	Oct 2021	20900 - 21133.33
MB-ST5-0016	Stainless steel cold-rolled coil 2mm grade 430 domestic, ex-whs China, yuan/tonne	17 Nov 2021	10400 - 10450	-1.88%	Oct 2021	11100 - 11150
MB-ST5-0283	Stainless steel hot-rolled coil grade 304 export, fob China, \$/tonne	17 Nov 2021	3110 - 3150	-2.34%	Oct 2021	3335 - 3365
MB-ST5-0280	Stainless steel hot-rolled coil Asia grade 304, cif port East Asia, \$/tonne	17 Nov 2021	2980 - 2990	-1.49%	Oct 2021	3022.5 - 3045
MB-ST5-0001	Stainless steel cold-rolled sheet 316 2mm alloy surcharge domestic, Europe, €/tonne	12 Nov 2021	3382 - 3409	0.00%	Oct 2021	3333 - 3426
MB-ST5-0002	Stainless steel cold-rolled sheet base price 316 2mm domestic, delivered Europe, €/tonne	12 Nov 2021	2150 - 2200	0.00%	Oct 2021	2050 - 2150
MB-ST5-0006	Stainless steel cold-rolled sheet 2mm grade 304 alloy surcharge domestic, Europe, €/tonne	12 Nov 2021	2187 - 2239	0.00%	Oct 2021	2120 - 2193
MB-ST5-0007	Stainless steel cold-rolled sheet 2mm grade 304 base price domestic, delivered Northern Europe, €/tonne	12 Nov 2021	1850 - 1900	0.00%	Oct 2021	1800 - 1850

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	05 Nov 2021	450	9.76%	Oct 2021	410
MB-STE-0214	Steel scrap No2 heavy melt, consumer buying price, delivered mill Alabama, \$/gross ton	05 Nov 2021	440	10.00%	Oct 2021	400
MB-STE-0216	Steel scrap No1 busheling, consumer buying price, delivered mill Alabama, \$/gross ton	05 Nov 2021	575	3.60%	Oct 2021	555
MB-STE-0215	Steel scrap No1 bundles, consumer buying price, delivered mill Alabama, \$/gross ton	05 Nov 2021	567	3.66%	Oct 2021	547
MB-STE-0218	Steel scrap machine shop turnings, consumer buying price, delivered mill Alabama, \$/gross ton	05 Nov 2021	375	11.94%	Oct 2021	335
MB-STE-0217	Steel scrap shredded auto scrap, consumer buying price, delivered mill Alabama, \$/gross ton	05 Nov 2021	518	10.68%	Oct 2021	468
MB-STE-0219	Steel scrap cut structural/plate 3ft max, consumer buying price, delivered mill Alabama, \$/gross ton	05 Nov 2021	495	8.79%	Oct 2021	455
MB-STE-0220	Steel scrap cut structural/plate 5ft max, consumer buying price, delivered mill Alabama, \$/gross ton	05 Nov 2021	470	9.30%	Oct 2021	430

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	05 Nov 2021	475	9.20%	Oct 2021	435
MB-STE-0224	Steel scrap No1 busheling, consumer buying price, delivered mill Arkansas/Tenn, \$/gross ton	05 Nov 2021	610	3.39%	Oct 2021	590
MB-STE-0222	Steel scrap No1 bundles, consumer buying price, delivered mill Arkansas/Tenn, \$/gross ton	05 Nov 2021	605	3.42%	Oct 2021	585
MB-STE-0223	Steel scrap No2 bundles, consumer buying price, delivered mill Arkansas/Tenn, \$/gross ton	05 Nov 2021	452	13.85%	Oct 2021	397
MB-STE-0226	Steel scrap machine shop turnings, consumer buying price, delivered mill Arkansas/Tenn, \$/gross ton	05 Nov 2021	370	12.12%	Oct 2021	330
MB-STE-0225	Steel scrap shredded auto scrap, consumer buying price, delivered mill Arkansas/Tenn, \$/gross ton	05 Nov 2021	525	11.70%	Oct 2021	470
MB-STE-0227	Steel scrap cut structural/plate 5ft max, consumer buying price, delivered mill Arkansas/Tenn, \$/gross ton	05 Nov 2021	495	8.79%	Oct 2021	455

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	05 Nov 2021	416	10.64%	Oct 2021	376
MB-STE-0341	Steel scrap No1 busheling, dealer selling price, fob dealer yard Atlanta, \$/gross ton	05 Nov 2021	518	4.02%	Oct 2021	498
MB-STE-0343	Steel scrap machine shop turnings, dealer selling price, fob dealer yard Atlanta, \$/gross ton	05 Nov 2021	270	17.39%	Oct 2021	230



Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0342	Steel scrap shredded auto scrap, dealer selling price, fob dealer yard Atlanta, \$/gross ton	05 Nov 2021	456	12.32%	Oct 2021	406
MB-STE-0344	Steel scrap cut structural/plate 5ft max, dealer selling price, fob dealer yard Atlanta, \$/gross ton	05 Nov 2021	426	10.36%	Oct 2021	386

Bajjo

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0553	Steel scrap No1 heavy melt, consumer buying price, delivered mill Bajjo, \$/tonne	16 Nov 2021	351	8.33%	Oct 2021	349.5
MB-STE-0551	Steel scrap No1 busheling, consumer buying price, delivered mill Bajjo, \$/tonne	16 Nov 2021	549	2.81%	Oct 2021	547
MB-STE-0552	Steel scrap No1 busheling, consumer buying price, delivered mill Bajjo, peso/tonne	16 Nov 2021	11200	1.36%	Oct 2021	11200
MB-STE-0549	Steel scrap machine shop turnings, consumer buying price, delivered mill Bajjo, \$/tonne	16 Nov 2021	316	7.12%	Oct 2021	318
MB-STE-0550	Steel scrap machine shop turnings, consumer buying price, delivered mill Bajjo, peso/tonne	16 Nov 2021	6450	5.74%	Oct 2021	6512.5
MB-STE-0556	Steel scrap shredded auto scrap, consumer buying price, delivered mill Bajjo, peso/tonne	16 Nov 2021	10850	0.00%	Oct 2021	11425
MB-STE-0547	Steel scrap cut structural/plate 3ft max, consumer buying price, delivered mill Bajjo, \$/tonne	16 Nov 2021	387	1.57%	Oct 2021	407.25
MB-STE-0548	Steel scrap cut structural/plate 3ft max, consumer buying price, delivered mill Bajjo, peso/tonne	16 Nov 2021	7900	0.00%	Oct 2021	8337.5
MB-STE-0554	Steel scrap No1 heavy melt, consumer buying price, delivered mill Bajjo, peso/tonne	16 Nov 2021	7150	6.72%	Oct 2021	7162.5
MB-STE-0555	Steel scrap shredded auto scrap, consumer buying price, delivered mill Bajjo, \$/tonne	16 Nov 2021	532	1.53%	Oct 2021	557.75

Birmingham

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0698	Steel scrap No1 heavy melting, broker buying price, fob Birmingham, \$/gross ton	05 Nov 2021	313	14.65%	Oct 2021	273
MB-STE-0699	Steel scrap No2 heavy melting, broker buying price, fob Birmingham, \$/gross ton	05 Nov 2021	303	15.21%	Oct 2021	263
MB-STE-0710	Steel scrap plate and structurals 5ft and under, broker buying price, fob Birmingham \$/gross ton	05 Nov 2021	385	11.59%	Oct 2021	345
MB-STE-0704	Steel scrap machine shop turnings, broker buying price, fob Birmingham \$/gross ton	05 Nov 2021	270	17.39%	Oct 2021	230
MB-STE-0703	Steel scrap shredded scrap, broker buying price, fob Birmingham \$/gross ton	05 Nov 2021	480	11.63%	Oct 2021	430
MB-STE-0702	Steel scrap No1 busheling, broker buying price, fob Birmingham \$/gross ton	05 Nov 2021	475	4.40%	Oct 2021	455
MB-STE-0700	Steel scrap No1 dealer bundles, broker buying price, fob Birmingham, \$/gross ton	05 Nov 2021	505	4.12%	Oct 2021	485

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	15 Nov 2021	370	1.37%	Oct 2021	337.5
MB-STE-0367	Steel scrap No2 bundles, export yard buying price, delivered to yard Boston, \$/gross ton	15 Nov 2021	290	1.75%	Oct 2021	257.5



Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0370	Steel scrap auto bodies, export yard buying price, delivered to yard Boston, \$/gross ton	15 Nov 2021	280	1.82%	Oct 2021	233.75
MB-STE-0369	Steel scrap unstripped motor blocks, export yard buying price, delivered to yard Boston, \$/gross ton	15 Nov 2021	370	1.37%	Oct 2021	337.5
MB-STE-0368	Steel scrap mixed cast, export yard buying price, delivered to yard Boston, \$/gross ton	15 Nov 2021	355	1.43%	Oct 2021	322.5
MB-STE-0371	Steel scrap cut structural/plate 5ft max, export yard buying price, delivered to yard Boston, \$/gross ton	15 Nov 2021	380	1.33%	Oct 2021	347.5

Chicago

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0228	Steel scrap No1 heavy melt, consumer buying price, delivered mill Chicago, \$/gross ton	04 Nov 2021	480	11.63%	Oct 2021	430
MB-STE-0232	Steel scrap No1 busheling, consumer buying price, delivered mill Chicago, \$/gross ton	04 Nov 2021	580	3.57%	Oct 2021	560
MB-STE-0230	Steel scrap No1 bundles, consumer buying price, delivered mill Chicago, \$/gross ton	04 Nov 2021	585	3.54%	Oct 2021	565
MB-STE-0248	Steel scrap steel (tin) can bundles, consumer buying price, delivered mill Chicago, \$/gross ton	04 Nov 2021	480	14.29%	Oct 2021	420
MB-STE-0231	Steel scrap No2 bundles, consumer buying price, delivered mill Chicago, \$/gross ton	04 Nov 2021	355	12.70%	Oct 2021	315
MB-STE-0234	Steel scrap machine shop turnings, consumer buying price, delivered mill Chicago, \$/gross ton	04 Nov 2021	330	13.79%	Oct 2021	290
MB-STE-0233	Steel scrap shredded auto scrap, consumer buying price, delivered mill Chicago, \$/gross ton	04 Nov 2021	540	12.50%	Oct 2021	480
MB-STE-0578	Steel scrap low-residual, ductile-quality shredded clips, consumer buying price, delivered mill Chicago, \$/gross ton	08 Nov 2021	742	2.77%	Oct 2021	722
MB-STE-0241	Steel scrap unstripped motor blocks, consumer buying price, delivered mill Chicago, \$/gross ton	04 Nov 2021	554	9.92%	Oct 2021	504
MB-STE-0235	Steel scrap cast iron borings, consumer buying price, delivered mill Chicago, \$/gross ton	04 Nov 2021	370	15.63%	Oct 2021	320
MB-STE-0239	Steel scrap cupola cast, consumer buying price, delivered mill Chicago, \$/gross ton	04 Nov 2021	609	8.94%	Oct 2021	559
MB-STE-0240	Steel scrap clean auto cast, consumer buying price, delivered mill Chicago, \$/gross ton	04 Nov 2021	672	8.04%	Oct 2021	622
MB-STE-0242	Steel scrap heavy breakable cast, consumer buying price, delivered mill Chicago, \$/gross ton	04 Nov 2021	552	9.96%	Oct 2021	502
MB-STE-0243	Steel scrap drop broken machinery cast, consumer buying price, delivered mill Chicago, \$/gross ton	04 Nov 2021	587	9.31%	Oct 2021	537
MB-STE-0238	Steel scrap foundry steel 2ft max, consumer buying price, delivered mill Chicago, \$/gross ton	04 Nov 2021	544	10.12%	Oct 2021	494
MB-STE-0244	Steel scrap rail crops 2ft max, consumer buying price, delivered mill Chicago, \$/gross ton	04 Nov 2021	603	9.04%	Oct 2021	553
MB-STE-0246	Steel scrap steel car wheels, consumer buying price, delivered mill Chicago, \$/gross ton	04 Nov 2021	545	10.10%	Oct 2021	495
MB-STE-0577	Steel scrap low-residual, black foundry busheling, consumer buying price, delivered mill Chicago, \$/gross ton	08 Nov 2021	742	2.77%	Oct 2021	722
MB-STE-0236	Steel scrap cut structural/plate 2ft max, consumer buying price, delivered mill Chicago, \$/gross ton	04 Nov 2021	634	8.56%	Oct 2021	584
MB-STE-0237	Steel scrap cut structural/plate 5ft max, consumer buying price, delivered mill Chicago, \$/gross ton	04 Nov 2021	505	8.60%	Oct 2021	465



Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0579	Steel scrap low-alloy punchings, consumer buying price, delivered mill Chicago, \$/gross ton	08 Nov 2021	762	2.70%	Oct 2021	742
MB-STE-0229	Steel scrap No2 heavy melt, consumer buying price, delivered mill Chicago, \$/gross ton	04 Nov 2021	465	12.05%	Oct 2021	415

Cincinnati

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0249	Steel scrap No1 heavy melt, consumer buying price, delivered mill Cincinnati, \$/gross ton	04 Nov 2021	460	12.20%	Oct 2021	410
MB-STE-0251	Steel scrap No1 busheling, consumer buying price, delivered mill Cincinnati, \$/gross ton	04 Nov 2021	575	3.60%	Oct 2021	555
MB-STE-0250	Steel scrap No1 bundles, consumer buying price, delivered mill Cincinnati, \$/gross ton	04 Nov 2021	575	3.60%	Oct 2021	555
MB-STE-0253	Steel scrap machine shop turnings, consumer buying price, delivered mill Cincinnati, \$/gross ton	04 Nov 2021	287	16.19%	Oct 2021	247
MB-STE-0252	Steel scrap shredded auto scrap, consumer buying price, delivered mill Cincinnati, \$/gross ton	04 Nov 2021	505	17.44%	Oct 2021	430
MB-STE-0254	Steel scrap cut structural/plate 5ft max, consumer buying price, delivered mill Cincinnati, \$/gross ton	04 Nov 2021	485	11.49%	Oct 2021	435

Cleveland

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0255	Steel scrap No1 heavy melt, consumer buying price, delivered mill Cleveland, \$/gross ton	08 Nov 2021	480	12.94%	Oct 2021	425
MB-STE-0257	Steel scrap No1 busheling, consumer buying price, delivered mill Cleveland, \$/gross ton	08 Nov 2021	640	3.23%	Oct 2021	620
MB-STE-0256	Steel scrap No1 bundles, consumer buying price, delivered mill Cleveland, \$/gross ton	08 Nov 2021	640	3.23%	Oct 2021	620
MB-STE-0269	Steel scrap steel (tin) can bundles, consumer buying price, delivered mill Cleveland, \$/gross ton	08 Nov 2021	470	14.63%	Oct 2021	410
MB-STE-0259	Steel scrap machine shop turnings, consumer buying price, delivered mill Cleveland, \$/gross ton	08 Nov 2021	305	24.49%	Oct 2021	245
MB-STE-0258	Steel scrap shredded auto scrap, consumer buying price, delivered mill Cleveland, \$/gross ton	08 Nov 2021	530	15.22%	Oct 2021	460
MB-STE-0260	Steel scrap cut structural/plate 5ft max, consumer buying price, delivered mill Cleveland, \$/gross ton	08 Nov 2021	500	13.64%	Oct 2021	440
MB-STE-0653	Steel scrap punchings and plate, broker buying price, fob Cleveland, \$/gross ton	08 Nov 2021	780	5.41%	Oct 2021	740

Detroit

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0272	Steel scrap No1 busheling, consumer buying price, delivered mill Detroit, \$/gross ton	04 Nov 2021	555	3.74%	Oct 2021	535
MB-STE-0271	Steel scrap No1 bundles, consumer buying price, delivered mill Detroit, \$/gross ton	04 Nov 2021	545	3.81%	Oct 2021	525
MB-STE-0634	Steel scrap No1 dealer bundles, broker buying price, fob Detroit, \$/gross ton	08 Nov 2021	390	5.41%	Oct 2021	370
MB-STE-0279	Steel scrap steel (tin) can bundles, consumer buying price, delivered mill Detroit, \$/gross ton	04 Nov 2021	430	10.26%	Oct 2021	390



Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0274	Steel scrap machine shop turnings, consumer buying price, delivered mill Detroit, \$/gross ton	04 Nov 2021	205	24.24%	Oct 2021	165
MB-STE-0273	Steel scrap shredded auto scrap, consumer buying price, delivered mill Detroit, \$/gross ton	04 Nov 2021	520	16.85%	Oct 2021	445
MB-STE-0636	Steel scrap shredded scrap, broker buying price, fob Detroit, \$/gross ton	08 Nov 2021	393	23.58%	Oct 2021	318
MB-STE-0277	Steel scrap cupola cast, consumer buying price, delivered mill Detroit, \$/gross ton	04 Nov 2021	455	9.64%	Oct 2021	415
MB-STE-0278	Steel scrap clean auto cast, consumer buying price, delivered mill Detroit, \$/gross ton	04 Nov 2021	495	8.79%	Oct 2021	455
MB-STE-0276	Steel scrap foundry steel 2ft max, consumer buying price, delivered mill Detroit, \$/gross ton	04 Nov 2021	470	9.30%	Oct 2021	430
MB-STE-0640	Steel scrap cast iron borings, broker buying price, fob Detroit, \$/gross ton	08 Nov 2021	115	53.33%	Oct 2021	75
MB-STE-0275	Steel scrap cut structural/plate 5ft max, consumer buying price, delivered mill Detroit, \$/gross ton	04 Nov 2021	480	14.29%	Oct 2021	420
MB-STE-0637	Steel scrap plate and structurals 5ft and under, broker buying price, fob Detroit, \$/gross ton	08 Nov 2021	356	20.27%	Oct 2021	296
MB-STE-0633	Steel scrap No1 heavy melting, broker buying price, fob Detroit, \$/gross ton	08 Nov 2021	325	20.37%	Oct 2021	270
MB-STE-0635	Steel scrap No1 busheling, broker buying price, fob Detroit, \$/gross ton	08 Nov 2021	438	4.78%	Oct 2021	418
MB-STE-0638	Steel scrap machine shop turnings, broker buying price, fob Detroit, \$/gross ton	08 Nov 2021	85	88.89%	Oct 2021	45
MB-STE-0270	Steel scrap No1 heavy melt, consumer buying price, delivered mill Detroit, \$/gross ton	04 Nov 2021	465	13.41%	Oct 2021	410

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	05 Nov 2021	399	14.33%	Oct 2021	349
MB-STE-0772	Steel scrap No1 heavy melting, broker buying price, fob Hamilton, Canadian \$/net ton	08 Nov 2021	344	17.01%	Oct 2021	294
MB-STE-0335	Steel scrap No1 busheling, consumer buying price, delivered mill Hamilton, Canadian \$/net ton	05 Nov 2021	586	2.45%	Oct 2021	572
MB-STE-0774	Steel scrap No1 busheling, broker buying price, fob Hamilton, Canadian \$/net ton	08 Nov 2021	485	2.97%	Oct 2021	471
MB-STE-0334	Steel scrap No1 bundles, consumer buying price, delivered mill Hamilton, Canadian \$/net ton	05 Nov 2021	600	2.39%	Oct 2021	586
MB-STE-0773	Steel scrap No1 dealer bundles, broker buying price, fob Hamilton, Canadian \$/net ton	08 Nov 2021	590	2.43%	Oct 2021	576
MB-STE-0777	Steel scrap machine shop turnings, broker buying price, fob Hamilton, Canadian \$/ net ton	08 Nov 2021	236	26.88%	Oct 2021	186
MB-STE-0336	Steel scrap shredded auto scrap, consumer buying price, delivered mill Hamilton, Canadian \$/net ton	05 Nov 2021	603	13.13%	Oct 2021	533
MB-STE-0776	Steel scrap shredded scrap, broker buying price, fob Hamilton, Canadian \$/ net ton	08 Nov 2021	325	27.45%	Oct 2021	255
MB-STE-0337	Steel scrap cut structural/plate 5ft max, consumer buying price, delivered mill Hamilton, Canadian \$/net ton	05 Nov 2021	422	13.44%	Oct 2021	372

Houston

Symbol	Description	Date	Price	+/-	Month	Monthly Average
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Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0350	Steel scrap No1 heavy melt, dealer selling price, fob dealer yard Houston, \$/gross ton	08 Nov 2021	285	9.62%	Oct 2021	260
MB-STE-0765	Steel scrap No1 heavy melting, broker buying price, fob Houston \$/gross ton	08 Nov 2021	280	9.80%	Oct 2021	255
MB-STE-0766	Steel scrap No2 heavy melting, broker buying price, fob Houston \$/gross ton	08 Nov 2021	270	10.20%	Oct 2021	245
MB-STE-0351	Steel scrap No1 busheling, dealer selling price, fob dealer yard Houston, \$/gross ton	08 Nov 2021	402	5.24%	Oct 2021	382
MB-STE-0405	Steel scrap No1 busheling, consumer buying price trend, delivered mill Houston, \$/gross ton	08 Nov 2021	20		Oct 2021	(20)
MB-STE-0767	Steel scrap No1 busheling, broker buying price, fob Houston \$/gross ton	08 Nov 2021	430	4.88%	Oct 2021	410
MB-STE-0353	Steel scrap machine shop turnings, dealer selling price, fob dealer yard Houston, \$/gross ton	08 Nov 2021	205	10.81%	Oct 2021	185
MB-STE-0769	Steel scrap machine shop turnings, broker buying price, fob Houston \$/gross ton	08 Nov 2021	200	14.29%	Oct 2021	175
MB-STE-0352	Steel scrap shredded auto scrap, dealer selling price, fob dealer yard Houston, \$/gross ton	08 Nov 2021	335	17.54%	Oct 2021	285
MB-STE-0768	Steel scrap shredded scrap, broker buying price, fob Houston \$/gross ton	08 Nov 2021	325	18.18%	Oct 2021	275
MB-STE-0354	Steel scrap cut structural/plate 5ft max, dealer selling price, fob dealer yard Houston, \$/gross ton	08 Nov 2021	320	10.34%	Oct 2021	290
MB-STE-0408	Steel scrap cut structural/plate 5ft max, consumer buying price trend, delivered mill Houston, \$/gross ton	08 Nov 2021	30		Oct 2021	0
MB-STE-0770	Steel scrap plate and structurals 5ft and under, broker buying price, fob Houston \$/gross ton	08 Nov 2021	305	8.93%	Oct 2021	280
MB-STE-0404	Steel scrap No1 heavy melt, consumer buying price trend, delivered mill Houston, \$/gross ton	08 Nov 2021	25		Oct 2021	0
MB-STE-0407	Steel scrap machine shop turnings, consumer buying price trend, delivered mill Houston, \$/gross ton	08 Nov 2021	20		Oct 2021	0
MB-STE-0406	Steel scrap shredded auto scrap, consumer buying price trend, delivered mill Houston, \$/gross ton	08 Nov 2021	50		Oct 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	15 Nov 2021	265	-3.64%	Oct 2021	260
MB-STE-0425	Steel scrap HMS 1&2 (80:20), export index, fob Los Angeles, \$/tonne	17 Nov 2021	485	0.00%	Oct 2021	442.5
MB-STE-0374	Steel scrap No1 busheling, export yard buying price, delivered to yard Los Angeles, \$/gross ton	15 Nov 2021	275	-3.51%	Oct 2021	270
MB-STE-0373	Steel scrap No2 bundles, export yard buying price, delivered to yard Los Angeles, \$/gross ton	15 Nov 2021	165	-5.71%	Oct 2021	160
MB-STE-0375	Steel scrap machine shop turnings, export yard buying price, delivered to yard Los Angeles, \$/gross ton	15 Nov 2021	60	-7.69%	Oct 2021	57.5
MB-STE-0378	Steel scrap cut structural/plate 5ft max, export yard buying price, delivered to yard Los Angeles, \$/gross ton	15 Nov 2021	275	-3.51%	Oct 2021	270

Midwest

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0424	Steel scrap No1 heavy melt, index, delivered Midwest mill, \$/gross ton	10 Nov 2021	479.22	9.88%	Oct 2021	436.15
MB-STE-0882	Steel scrap No1 busheling, indicator, delivered Midwest mill, \$/gross ton	18 Nov 2021	600	0.00%	Oct 2021	586.43



Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0422	Steel scrap No1 busheling, index, delivered Midwest mill, \$/gross ton	10 Nov 2021	602.02	3.19%	Oct 2021	583.43
MB-STE-0423	Steel scrap shredded, index, delivered Midwest mill, \$/gross ton	10 Nov 2021	539.73	11.17%	Oct 2021	485.52
MB-STE-0787	Steel scrap shredder feed, fob Midwest, \$/gross ton	15 Nov 2021	220.87	2.41%	Oct 2021	192.89

Monterrey

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0533	Steel scrap No1 heavy melt, consumer buying price, delivered mill Monterrey, \$/tonne	16 Nov 2021	333	1.52%	Oct 2021	367.25
MB-STE-0534	Steel scrap No1 heavy melt, consumer buying price, delivered mill Monterrey, peso/tonne	16 Nov 2021	6800	0.00%	Oct 2021	7525
MB-STE-0539	Steel scrap No1 busheling, consumer buying price, delivered mill Monterrey, \$/tonne	16 Nov 2021	532	1.53%	Oct 2021	533.75
MB-STE-0540	Steel scrap No1 busheling, consumer buying price, delivered mill Monterrey, peso/tonne	16 Nov 2021	10850	0.00%	Oct 2021	10937.5
MB-STE-0541	Steel scrap machine shop turnings, consumer buying price, delivered mill Monterrey, \$/tonne	16 Nov 2021	324	-1.22%	Oct 2021	366.25
MB-STE-0542	Steel scrap machine shop turnings, consumer buying price, delivered mill Monterrey, peso/tonne	16 Nov 2021	6600	-2.94%	Oct 2021	7500
MB-STE-0535	Steel scrap shredded auto scrap, consumer buying price, delivered mill Monterrey, \$/tonne	16 Nov 2021	530	1.73%	Oct 2021	543.25
MB-STE-0536	Steel scrap shredded auto scrap, consumer buying price, delivered mill Monterrey, peso/tonne	16 Nov 2021	10800	0.00%	Oct 2021	11125
MB-STE-0537	Steel scrap cut structural/plate 3ft max, consumer buying price, delivered mill Monterrey, \$/tonne	16 Nov 2021	441	1.38%	Oct 2021	470
MB-STE-0538	Steel scrap cut structural/plate 3ft max, consumer buying price, delivered mill Monterrey, peso/tonne	16 Nov 2021	9000	0.00%	Oct 2021	9625

Montreal

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0789	Steel scrap No1 heavy melting, consumer buying price, fob Montreal, Canadian \$/net ton	11 Nov 2021	435	12.99%	Oct 2021	385
MB-STE-0790	Steel scrap No1 busheling, consumer buying price, fob Montreal, Canadian \$/net ton	11 Nov 2021	557	3.15%	Oct 2021	540
MB-STE-0848	Steel scrap No2 bundles, consumer buying price, fob Montreal, Canadian \$/net ton	11 Nov 2021	345	16.95%	Oct 2021	295
MB-STE-0792	Steel scrap machine shop turnings, consumer buying price, fob Montreal, Canadian \$/net ton	11 Nov 2021	365	15.87%	Oct 2021	315
MB-STE-0793	Steel scrap cut structural/plate 5ft max, consumer buying price, fob Montreal, Canadian \$/net ton	11 Nov 2021	475	11.76%	Oct 2021	425

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	15 Nov 2021	390	0.00%	Oct 2021	342.5
MB-STE-0418	Steel scrap HMS 1&2 (80:20), export index, fob New York, \$/tonne	17 Nov 2021	453.5	1.91%	Oct 2021	425.66



Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0380	Steel scrap No2 bundles, export yard buying price, delivered to yard New York, \$/gross ton	15 Nov 2021	340	0.00%	Oct 2021	292.5
MB-STE-0381	Steel scrap machine shop turnings, export yard buying price, delivered to yard New York, \$/gross ton	15 Nov 2021	285	0.00%	Oct 2021	237.5
MB-STE-0419	Steel scrap shredded scrap, export index, fob New York, \$/tonne	17 Nov 2021	473.5	1.83%	Oct 2021	445.25
MB-STE-0384	Steel scrap auto bodies, export yard buying price, delivered to yard New York, \$/gross ton	15 Nov 2021	370	0.00%	Oct 2021	322.5
MB-STE-0383	Steel scrap unstripped motor blocks, export yard buying price, delivered to yard New York, \$/gross ton	15 Nov 2021	405	0.00%	Oct 2021	357.5
MB-STE-0382	Steel scrap mixed cast, export yard buying price, delivered to yard New York, \$/gross ton	15 Nov 2021	385	0.00%	Oct 2021	337.5
MB-STE-0385	Steel scrap cut structural/plate 5ft max, export yard buying price, delivered to yard New York, \$/gross ton	15 Nov 2021	400	0.00%	Oct 2021	352.5

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	05 Nov 2021	460	9.52%	Oct 2021	420
MB-STE-0281	Steel scrap No1 busheling, consumer buying price, delivered mill North Carolina/Virginia, \$/gross ton	05 Nov 2021	550	3.77%	Oct 2021	530
MB-STE-0283	Steel scrap machine shop turnings, consumer buying price, delivered mill North Carolina/Virginia, \$/gross ton	05 Nov 2021	375	11.94%	Oct 2021	335
MB-STE-0282	Steel scrap, shredded auto scrap, consumer buying price, delivered mill North Carolina/Virginia, \$/gross ton	05 Nov 2021	490	11.36%	Oct 2021	440
MB-STE-0284	Steel scrap cut structural/plate 5ft max, consumer buying price, delivered mill North Carolina/Virginia, \$/gross ton	05 Nov 2021	470	9.30%	Oct 2021	430

Philadelphia

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0285	Steel scrap No1 heavy melt, consumer buying price, delivered mill Philadelphia, \$/gross ton	05 Nov 2021	440	10.00%	Oct 2021	400
MB-STE-0386	Steel scrap No1 heavy melt, export yard buying price, delivered to yard Philadelphia, \$/gross ton	15 Nov 2021	390	0.00%	Oct 2021	342.5
MB-STE-0288	Steel scrap No1 busheling, consumer buying price, delivered mill Philadelphia, \$/gross ton	05 Nov 2021	550	3.77%	Oct 2021	530
MB-STE-0286	Steel scrap No1 bundles, consumer buying price, delivered mill Philadelphia, \$/gross ton	05 Nov 2021	550	3.77%	Oct 2021	530
MB-STE-0287	Steel scrap No2 bundles, consumer buying price, delivered mill Philadelphia, \$/gross ton	05 Nov 2021	390	16.42%	Oct 2021	335
MB-STE-0387	Steel scrap No2 bundles, export yard buying price, delivered to yard Philadelphia, \$/gross ton	15 Nov 2021	315	0.00%	Oct 2021	267.5
MB-STE-0290	Steel scrap machine shop turnings, consumer buying price, delivered mill Philadelphia, \$/gross ton	05 Nov 2021	335	6.35%	Oct 2021	315
MB-STE-0289	Steel scrap shredded auto scrap, consumer buying price, delivered mill Philadelphia, \$/gross ton	05 Nov 2021	505	12.22%	Oct 2021	450
MB-STE-0390	Steel scrap auto bodies, export yard buying price, delivered to yard Philadelphia, \$/gross ton	15 Nov 2021	355	0.00%	Oct 2021	307.5



Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0297	Steel scrap unstripped motor blocks, consumer buying price, delivered mill Philadelphia, \$/gross ton	05 Nov 2021	460	9.52%	Oct 2021	420
MB-STE-0389	Steel scrap unstripped motor blocks, export yard buying price, delivered to yard Philadelphia, \$/gross ton	15 Nov 2021	385	0.00%	Oct 2021	337.5
MB-STE-0295	Steel scrap cupola cast, consumer buying price, delivered mill Philadelphia, \$/gross ton	05 Nov 2021	455	9.64%	Oct 2021	415
MB-STE-0296	Steel scrap clean auto cast, consumer buying price, delivered mill Philadelphia, \$/gross ton	05 Nov 2021	450	9.76%	Oct 2021	410
MB-STE-0298	Steel scrap heavy breakable cast, consumer buying price, delivered mill Philadelphia, \$/gross ton	05 Nov 2021	406	10.93%	Oct 2021	366
MB-STE-0299	Steel scrap drop broken machinery, consumer buying price, delivered mill Philadelphia, \$/gross ton	05 Nov 2021	511	8.49%	Oct 2021	471
MB-STE-0300	Steel scrap rail crops 2ft max, consumer buying price, delivered mill Philadelphia, \$/gross ton	05 Nov 2021	575	7.48%	Oct 2021	535
MB-STE-0301	Steel scrap random rails, consumer buying price, delivered mill Philadelphia, \$/gross ton	05 Nov 2021	450	9.76%	Oct 2021	410
MB-STE-0291	Steel scrap cut structural/plate 2ft max, consumer buying price, delivered mill Philadelphia, \$/gross ton	05 Nov 2021	565	7.62%	Oct 2021	525
MB-STE-0292	Steel scrap cut structural/plate 3ft max, consumer buying price, delivered mill Philadelphia, \$/gross ton	05 Nov 2021	460	9.52%	Oct 2021	420
MB-STE-0293	Steel scrap cut structural/plate 5ft max, consumer buying price, delivered mill Philadelphia, \$/gross ton	05 Nov 2021	450	9.76%	Oct 2021	410
MB-STE-0391	Steel scrap cut structural/plate 5ft max, export yard buying price, delivered to yard Philadelphia, \$/gross ton	15 Nov 2021	400	0.00%	Oct 2021	352.5

Pittsburgh

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0303	Steel scrap No1 heavy melt, consumer buying price, delivered mill Pittsburgh, \$/gross ton	04 Nov 2021	475	13.10%	Oct 2021	420
MB-STE-0306	Steel scrap No1 busheling, consumer buying price, delivered mill Pittsburgh, \$/gross ton	04 Nov 2021	610	3.39%	Oct 2021	590
MB-STE-0304	Steel scrap No1 bundles, consumer buying price, delivered mill Pittsburgh, \$/gross ton	04 Nov 2021	591	3.50%	Oct 2021	571
MB-STE-0305	Steel scrap No2 bundles, consumer buying price, delivered mill Pittsburgh, \$/gross ton	04 Nov 2021	389	18.24%	Oct 2021	329
MB-STE-0307	Steel scrap No1 industrial bundles, consumer buying price, delivered mill Pittsburgh, \$/gross ton	04 Nov 2021	617	3.35%	Oct 2021	597
MB-STE-0321	Steel scrap steel (tin) can bundles, consumer buying price, delivered mill Pittsburgh, \$/gross ton	04 Nov 2021	380	11.76%	Oct 2021	340
MB-STE-0309	Steel scrap machine shop turnings, consumer buying price, delivered mill Pittsburgh, \$/gross ton	04 Nov 2021	375	11.94%	Oct 2021	335
MB-STE-0308	Steel scrap shredded auto scrap, consumer buying price, delivered mill Pittsburgh, \$/gross ton	04 Nov 2021	530	12.77%	Oct 2021	470
MB-STE-0310	Steel scrap cast iron borings, consumer buying price, delivered mill Pittsburgh, \$/gross ton	04 Nov 2021	330	13.79%	Oct 2021	290
MB-STE-0388	Steel scrap mixed cast, export yard buying price, delivered to yard Philadelphia, \$/gross ton	15 Nov 2021	390	0.00%	Oct 2021	342.5
MB-STE-0311	Steel scrap cut structural/plate 3ft max, consumer buying price, delivered mill Pittsburgh, \$/gross ton	04 Nov 2021	525	10.53%	Oct 2021	475



Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0312	Steel scrap cut structural/plate 5ft max, consumer buying price, delivered mill Pittsburgh, \$/gross ton	04 Nov 2021	505	10.99%	Oct 2021	455
MB-STE-0598	Steel scrap punchings and plate, consumer buying price, delivered mill Pittsburgh, \$/gross ton	08 Nov 2021	832	5.05%	Oct 2021	792

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	05 Nov 2021	45	650.00%	Oct 2021	6
MB-STE-0411	Steel scrap machine shop turnings, consumer buying price trend, delivered mill Seattle/Portland, \$/gross ton	05 Nov 2021	45	650.00%	Oct 2021	6
MB-STE-0410	Steel scrap shredded auto scrap, consumer buying price trend, delivered mill Seattle/Portland, \$/gross ton	05 Nov 2021	45	650.00%	Oct 2021	6
MB-STE-0412	Steel scrap cut structural/plate 5ft max, consumer buying price trend, delivered mill Seattle/Portland, \$/gross ton	05 Nov 2021	45	650.00%	Oct 2021	6

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	05 Nov 2021	460	9.52%	Oct 2021	420
MB-STE-0323	Steel scrap No1 busheling, consumer buying price, delivered mill South Carolina, \$/gross ton	05 Nov 2021	550	3.77%	Oct 2021	530
MB-STE-0324	Steel scrap shredded auto scrap, consumer buying price, delivered mill South Carolina, \$/gross ton	05 Nov 2021	490	11.36%	Oct 2021	440
MB-STE-0326	Steel scrap cut structural/plate 5ft max, consumer buying price, delivered mill South Carolina, \$/gross ton	05 Nov 2021	470	9.30%	Oct 2021	430
MB-STE-0325	Steel scrap machine shop turnings, consumer buying price, delivered mill South Carolina, \$/gross ton	05 Nov 2021	375	11.94%	Oct 2021	335

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	05 Nov 2021	398	12.75%	Oct 2021	353
MB-STE-0621	Steel scrap No1 heavy melting, broker buying price, fob St Louis, \$/gross ton	08 Nov 2021	425	10.39%	Oct 2021	385
MB-STE-0622	Steel scrap No2 heavy melting, broker buying price, fob St Louis, \$/gross ton	08 Nov 2021	415	10.67%	Oct 2021	375
MB-STE-0357	Steel scrap No1 busheling, dealer selling price, fob dealer yard St Louis, \$/gross ton	05 Nov 2021	548	3.79%	Oct 2021	528
MB-STE-0623	Steel scrap No1 busheling, broker buying price, fob St Louis, \$/gross ton	08 Nov 2021	565	3.67%	Oct 2021	545
MB-STE-0356	Steel scrap No1 bundles, dealer selling price, fob dealer yard St Louis, \$/gross ton	05 Nov 2021	548	3.79%	Oct 2021	528
MB-STE-0624	Steel scrap No1 dealer bundles, broker buying price, fob St Louis, \$/gross ton	08 Nov 2021	560	3.70%	Oct 2021	540
MB-STE-0359	Steel scrap machine shop turnings, dealer selling price, fob dealer yard St Louis, \$/gross ton	05 Nov 2021	265	17.78%	Oct 2021	225
MB-STE-0627	Steel scrap machine shop turnings, broker buying price, fob St Louis, \$/gross ton	08 Nov 2021	270	17.39%	Oct 2021	230
MB-STE-0358	Steel scrap shredded auto scrap, dealer selling price, fob dealer yard St Louis, \$/gross ton	05 Nov 2021	461	16.41%	Oct 2021	396



Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0360	Steel scrap cut structural/plate 5ft max, dealer selling price, fob dealer yard St Louis, \$/gross ton	05 Nov 2021	413	10.72%	Oct 2021	373
MB-STE-0631	Steel scrap plate and structurals 5ft and under, broker buying price, fob St Louis, \$/gross ton	08 Nov 2021	440	10.00%	Oct 2021	400
MB-STE-0626	Steel scrap shredded scrap, broker buying price, fob St Louis, \$/gross ton	08 Nov 2021	465	13.41%	Oct 2021	410

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	12 Nov 2021	480	6.67%	Oct 2021	
MB-STE-0529	Steel scrap No1 heavy melt, consumer buying price, delivered mill Philadelphia, \$/gross ton, weekly composite	12 Nov 2021	440	7.84%	Oct 2021	
MB-STE-0530	Steel scrap No1 heavy melt, consumer buying price, delivered mill Pittsburgh, \$/gross ton, weekly composite	12 Nov 2021	475	7.47%	Oct 2021	
MB-STE-0531	Steel scrap No1 heavy melt, consumer buying price, delivered mill, \$/gross ton, weekly composite	12 Nov 2021	465	7.31%	Oct 2021	
MB-STE-0524	Steel scrap No1 busheling, consumer buying price, delivered mill Chicago, \$/gross ton, weekly composite	12 Nov 2021	580	2.11%	Oct 2021	
MB-STE-0525	Steel scrap No1 busheling, consumer buying price, delivered mill Cleveland, \$/gross ton, weekly composite	12 Nov 2021	640	3.23%	Oct 2021	
MB-STE-0526	Steel scrap No1 busheling, consumer buying price, delivered mill Pittsburgh, \$/gross ton, weekly composite	12 Nov 2021	610	2.01%	Oct 2021	
MB-STE-0527	Steel scrap No1 busheling, consumer buying price, delivered mill, \$/gross ton, weekly composite	12 Nov 2021	610	2.46%	Oct 2021	
MB-STE-0427	Steel scrap Shredded auto, daily composite, delivered mill US, \$/gross ton	18 Nov 2021	523.25	0.00%	Oct 2021	465.93
MB-STE-0519	Steel scrap shredded auto scrap, consumer buying price, delivered mill Alabama, \$/gross ton, weekly composite	12 Nov 2021	518	8.37%	Oct 2021	
MB-STE-0520	Steel scrap shredded auto scrap, consumer buying price, delivered mill Chicago, \$/gross ton, weekly composite	12 Nov 2021	540	7.14%	Oct 2021	
MB-STE-0521	Steel scrap shredded auto scrap, consumer buying price, delivered mill Philadelphia, \$/gross ton, weekly composite	12 Nov 2021	505	9.54%	Oct 2021	
MB-STE-0522	Steel scrap shredded auto scrap, consumer buying price, delivered mill Pittsburgh, \$/gross ton, weekly composite	12 Nov 2021	530	7.29%	Oct 2021	
MB-STE-0523	Steel scrap shredded auto scrap, consumer buying price, delivered mill, \$/gross ton, weekly composite	12 Nov 2021	523.25	8.05%	Oct 2021	
MB-STE-0426	Steel scrap No1 heavy melt, daily composite, delivered mill US, \$/gross ton	18 Nov 2021	465	0.00%	Oct 2021	415.87
MB-STE-0428	Steel scrap No1 busheling, daily composite, delivered mill US, \$/gross ton	18 Nov 2021	610	0.00%	Oct 2021	591.27

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	15 Nov 2021	229.71	1.79%	Oct 2021	201.16
MB-STE-0787	Steel scrap shredder feed, fob Midwest, \$/gross ton	15 Nov 2021	220.87	2.41%	Oct 2021	192.89
MB-STE-0788	Steel scrap shredder feed, fob Southeast, \$/gross ton	15 Nov 2021	187.35	3.08%	Oct 2021	173.86

Boston stainless steel scrap



Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-ST5-0178	Stainless steel scrap 430 bundles, solids, export yard buying price, delivered to yard Boston, US cents/lb	16 Nov 2021	32 - 33	0.00%	Oct 2021	21 - 22
MB-ST5-0056	Stainless steel scrap 430 bundles, export yard buying price, delivered to yard Boston, \$/gross ton	16 Nov 2021	717 - 739	0.00%	Oct 2021	470 - 493

Chicago stainless steel scrap

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-ST5-0185	Stainless steel scrap 304 turnings, dealer buying price, delivered to yard Chicago, \$/gross ton	02 Nov 2021	1210 - 1478	8.13%	Oct 2021	1232 - 1254
MB-ST5-0063	Stainless steel scrap 304 turnings, dealer buying price, delivered to yard Chicago, US cents/lb	02 Nov 2021	54 - 66	8.11%	Oct 2021	55 - 56
MB-ST5-0190	Stainless steel scrap 304 turnings, broker buying price, delivered to processor Chicago, US cents/lb	16 Nov 2021	86 - 89	0.57%	Oct 2021	81.75 - 85.5
MB-ST5-0068	Stainless steel scrap 304 turnings, broker buying price, delivered to processor Chicago, \$/gross ton	16 Nov 2021	1926 - 1994	0.56%	Oct 2021	1831.25 - 1915.25
MB-ST5-0186	Stainless steel scrap 304 new clips, dealer buying price, delivered to yard Chicago, \$/gross ton	02 Nov 2021	1344 - 1725	9.61%	Oct 2021	1344 - 1456
MB-ST5-0064	Stainless steel scrap 304 new clips, dealer buying price, delivered to yard Chicago, US cents/lb	02 Nov 2021	60 - 77	9.60%	Oct 2021	60 - 65
MB-ST5-0189	Stainless steel scrap 304 solids, clips, broker buying price, delivered to processor Chicago, US cents/lb	16 Nov 2021	93 - 94	0.54%	Oct 2021	87.75 - 90.5
MB-ST5-0067	Stainless steel scrap 304 solids, clips, broker buying price, delivered to processor Chicago, \$/gross ton	16 Nov 2021	2083 - 2106	0.53%	Oct 2021	1965.5 - 2027.25
MB-ST5-0184	Stainless steel scrap 304 solids, clips, dealer buying price, delivered to yard Chicago, \$/gross ton	02 Nov 2021	1389 - 1725	11.21%	Oct 2021	1344 - 1456
MB-ST5-0062	Stainless steel scrap 304 solids, clips, dealer buying price, delivered to yard Chicago, US cents/lb	02 Nov 2021	62 - 77	11.20%	Oct 2021	60 - 65
MB-ST5-0191	Stainless steel scrap 430 bundles, solids, broker buying price, delivered to processor Chicago, US cents/lb	16 Nov 2021	34 - 39	2.82%	Oct 2021	34.75 - 36.5
MB-ST5-0069	Stainless steel scrap 430 bundles, solids, broker buying price, delivered to processor Chicago, \$/gross ton	16 Nov 2021	762 - 874	2.83%	Oct 2021	778.5 - 817.5
MB-ST5-0187	Stainless steel scrap 430 new clips, dealer buying price, delivered to yard Chicago, \$/gross ton	02 Nov 2021	538 - 627	2.01%	Oct 2021	515 - 627
MB-ST5-0065	Stainless steel scrap 430 new clips, dealer buying price, delivered to yard Chicago, US cents/lb	02 Nov 2021	24 - 28	1.96%	Oct 2021	23 - 28
MB-ST5-0192	Stainless steel scrap 430 turnings, broker buying price, delivered to processor Chicago, US cents/lb	16 Nov 2021	28 - 34	3.33%	Oct 2021	28 - 31.25
MB-ST5-0070	Stainless steel scrap 430 turnings, broker buying price, delivered to processor Chicago, \$/gross ton	16 Nov 2021	627 - 762	3.35%	Oct 2021	627 - 700
MB-ST5-0194	Stainless steel scrap 409 turnings, broker buying price, delivered to processor Chicago, US cents/lb	16 Nov 2021	25 - 30	3.77%	Oct 2021	24 - 26.5
MB-ST5-0072	Stainless steel scrap 409 turnings, broker buying price, delivered to processor Chicago, \$/gross ton	16 Nov 2021	560 - 672	3.79%	Oct 2021	537.75 - 593.5
MB-ST5-0193	Stainless steel scrap 409 bundles, solids, broker buying price, delivered to processor Chicago, US cents/lb	16 Nov 2021	31 - 35	3.13%	Oct 2021	28.75 - 31.5
MB-ST5-0071	Stainless steel scrap 409 bundles, broker buying price, delivered to processor Chicago, \$/gross ton	16 Nov 2021	694 - 784	3.14%	Oct 2021	644 - 705.5
MB-ST5-0183	Stainless steel scrap 316 solids, clips, dealer buying price, delivered to yard Chicago, \$/gross ton	02 Nov 2021	1904 - 2352	6.75%	Oct 2021	1859 - 2128



Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-ST5-0061	Stainless steel scrap 316 solids, dealer buying price, delivered to yard Chicago, US cents/lb	02 Nov 2021	85 - 105	6.74%	Oct 2021	83 - 95
MB-ST5-0066	Stainless steel scrap 316 solids, broker buying price, delivered to processor Chicago, \$/gross ton	16 Nov 2021	2778 - 2912	0.00%	Oct 2021	2665.5 - 2738.25
MB-ST5-0188	Stainless steel scrap 316 solids, clips, broker buying price, delivered to processor Chicago, US cents/lb	16 Nov 2021	124 - 130	0.00%	Oct 2021	119 - 122.25

Cleveland stainless steel scrap

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-ST5-0197	Stainless steel scrap 304 turnings, dealer buying price, delivered to yard Cleveland, \$/gross	02 Nov 2021	896 - 1344	2.05%	Oct 2021	896 - 1299
MB-ST5-0202	Stainless steel scrap 304 turnings, broker buying price, delivered to processor Cleveland, US cents/lb	16 Nov 2021	85 - 89	0.00%	Oct 2021	82 - 85.25
MB-ST5-0201	Stainless steel scrap 304 solids, clips, broker buying price, delivered to processor Cleveland, US cents/lb	16 Nov 2021	90 - 94	-1.08%	Oct 2021	87 - 90.25
MB-ST5-0079	Stainless steel scrap 304 solids, clips, broker buying price, delivered to processor Cleveland, \$/gross ton	16 Nov 2021	2016 - 2106	-1.08%	Oct 2021	1948.5 - 2021.5
MB-ST5-0196	Stainless steel scrap 304 solids, clips, dealer buying price, delivered to yard Cleveland, \$/gross	02 Nov 2021	1120 - 1456	0.00%	Oct 2021	1120 - 1456
MB-ST5-0074	Stainless steel scrap 304 solids, clips, dealer buying price, delivered to yard Cleveland, US cents/lb	02 Nov 2021	50 - 65	0.00%	Oct 2021	50 - 65
MB-ST5-0075	Stainless steel scrap 304 turnings, dealer buying price, delivered to yard Cleveland, US cents/lb	02 Nov 2021	40 - 60	2.04%	Oct 2021	40 - 58
MB-ST5-0080	Stainless steel scrap 304 turnings, broker buying price, delivered to processor Cleveland, \$/gross ton	16 Nov 2021	1904 - 1994	0.00%	Oct 2021	1836.75 - 1909.5
MB-ST5-0198	Stainless steel scrap 304 new clips, dealer buying price, delivered to yard Cleveland, \$/gross	02 Nov 2021	1120 - 1456	0.00%	Oct 2021	1120 - 1456
MB-ST5-0076	Stainless steel scrap 304 new clips, dealer buying price, delivered to yard Cleveland, US cents/lb	02 Nov 2021	50 - 65	0.00%	Oct 2021	50 - 65
MB-ST5-0199	Stainless steel scrap 430 new clips, dealer buying price, delivered to yard Cleveland, \$/gross	02 Nov 2021	336 - 560	0.00%	Oct 2021	336 - 560
MB-ST5-0077	Stainless steel scrap 430 new clips, dealer buying price, delivered to yard Cleveland, US cents/lb	02 Nov 2021	15 - 25	0.00%	Oct 2021	15 - 25
MB-ST5-0195	Stainless steel scrap 316 solids, clips, dealer buying price, delivered to yard Cleveland, \$/gross	02 Nov 2021	1344 - 1904	0.00%	Oct 2021	1344 - 1904
MB-ST5-0200	Stainless steel scrap 316 solids, clips, broker buying price, delivered to processor Cleveland, US cents/lb	16 Nov 2021	124 - 130	0.00%	Oct 2021	117.5 - 122.5
MB-ST5-0078	Stainless steel scrap 316 solids, clips, broker buying price, delivered to processor Cleveland, \$/gross ton	16 Nov 2021	2778 - 2912	0.00%	Oct 2021	2632 - 2743.75
MB-ST5-0073	Stainless steel scrap 316 solids, clips, dealer buying price, delivered to yard Cleveland, US cents/lb	02 Nov 2021	60 - 85	0.00%	Oct 2021	60 - 85

Detroit stainless steel scrap

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-ST5-0205	Stainless steel scrap 304 turnings, dealer buying price, delivered to yard Detroit, \$/gross ton	02 Nov 2021	1053 - 1210	-1.91%	Oct 2021	1053 - 1254
MB-ST5-0083	Stainless steel scrap 304 turnings, dealer buying price, delivered to yard Detroit, US cents/lb	02 Nov 2021	47 - 54	-1.94%	Oct 2021	47 - 56



Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-ST5-0210	Stainless steel scrap 304 turnings, broker buying price, delivered to processor Detroit, US cents/lb	16 Nov 2021	86 - 89	0.57%	Oct 2021	81.75 - 85.25
MB-ST5-0088	Stainless steel scrap 304 turnings, broker buying price, delivered to processor Detroit, \$/gross ton	16 Nov 2021	1926 - 1994	0.56%	Oct 2021	1831.25 - 1909.5
MB-ST5-0206	Stainless steel scrap 304 new clips, dealer buying price, delivered to yard Detroit, \$/gross ton	02 Nov 2021	1142 - 1344	0.00%	Oct 2021	1142 - 1344
MB-ST5-0084	Stainless steel scrap 304 new clips, dealer buying price, delivered to yard Detroit, US cents/lb	02 Nov 2021	51 - 60	0.00%	Oct 2021	51 - 60
MB-ST5-0209	Stainless steel scrap 304 solids, clips, broker buying price, delivered to processor Detroit, US cents/lb	16 Nov 2021	93 - 94	0.54%	Oct 2021	87.75 - 90
MB-ST5-0087	Stainless steel scrap 304 solids, clips, broker buying price, delivered to processor Detroit, \$/gross ton	16 Nov 2021	2083 - 2106	0.53%	Oct 2021	1965.5 - 2016
MB-ST5-0204	Stainless steel scrap 304 solids, clips, dealer buying price, delivered to yard Detroit, \$/gross ton	02 Nov 2021	1142 - 1344	0.00%	Oct 2021	1142 - 1344
MB-ST5-0082	Stainless steel scrap 304 solids, clips, dealer buying price, delivered to yard Detroit, US cents/lb	02 Nov 2021	51 - 60	0.00%	Oct 2021	51 - 60
MB-ST5-0207	Stainless steel scrap 430 new clips, dealer buying price, delivered to yard Detroit, \$/gross ton	02 Nov 2021	493 - 560	0.00%	Oct 2021	493 - 560
MB-ST5-0085	Stainless steel scrap 430 new clips, dealer buying price, delivered to yard Detroit, US cents/lb	02 Nov 2021	22 - 25	0.00%	Oct 2021	22 - 25
MB-ST5-0211	Stainless steel scrap 430 bundles, solids, broker buying price, delivered to processor Detroit, US cents/lb	16 Nov 2021	36 - 39	4.17%	Oct 2021	35.25 - 36.5
MB-ST5-0089	Stainless steel scrap 430 bundles, solids, broker buying price, delivered to processor Detroit, \$/gross ton	16 Nov 2021	806 - 874	4.15%	Oct 2021	789.5 - 817.5
MB-ST5-0212	Stainless steel scrap 409 bundles, solids, broker buying price, delivered to processor Detroit, US cents/lb	16 Nov 2021	31 - 35	6.45%	Oct 2021	28.75 - 31.5
MB-ST5-0213	Stainless steel scrap 409 turnings, broker buying price, delivered to processor Detroit, US cents/lb	16 Nov 2021	26 - 30	3.70%	Oct 2021	24 - 26.5
MB-ST5-0091	Stainless steel scrap 409 turnings, broker buying price, delivered to processor Detroit, \$/gross ton	16 Nov 2021	582 - 672	3.72%	Oct 2021	537.75 - 593.5
MB-ST5-0090	Stainless steel scrap 409 bundles, solids, broker buying price, delivered to processor Detroit, \$/gross ton	16 Nov 2021	694 - 784	6.41%	Oct 2021	644 - 705.5
MB-ST5-0208	Stainless steel scrap 316 solids, clips, broker buying price, delivered to processor Detroit, US cents/lb	16 Nov 2021	124 - 130	0.00%	Oct 2021	119 - 122.5
MB-ST5-0086	Stainless steel scrap 316 solids, clips, broker buying price, delivered to processor Detroit, \$/gross ton	16 Nov 2021	2778 - 2912	0.00%	Oct 2021	2665.5 - 2743.75
MB-ST5-0203	Stainless steel scrap 316 solids, clips, dealer buying price, delivered to yard Detroit, \$/gross ton	02 Nov 2021	1568 - 1904	1.31%	Oct 2021	1568 - 1859
MB-ST5-0081	Stainless steel scrap 316 solids, dealer buying price, delivered to yard Detroit, US cents/lb	02 Nov 2021	70 - 85	1.31%	Oct 2021	70 - 83

East Coast stainless steel scrap

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-ST5-0297	Stainless steel scrap 304 new clips, dealer buying price, delivered to yard East Coast, \$/gross ton	02 Nov 2021	1434 - 1635	3.02%	Oct 2021	1344 - 1635
MB-ST5-0287	Stainless steel scrap 304 new clips, dealer buying price, delivered to yard East Coast, US cents/lb	02 Nov 2021	64 - 73	3.01%	Oct 2021	60 - 73
MB-ST5-0295	Stainless steel scrap 304 solids, clips, dealer buying price, delivered to yard East Coast, \$/gross ton	02 Nov 2021	1344 - 1635	0.00%	Oct 2021	1344 - 1635



Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-ST5-0285	Stainless steel scrap 304 solids, clips, dealer buying price, delivered to yard East Coast, US cents/lb	02 Nov 2021	60 - 73	0.00%	Oct 2021	60 - 73
MB-ST5-0286	Stainless steel scrap 304 turnings, dealer buying price, delivered to yard East Coast, US cents/lb	02 Nov 2021	58 - 63	-3.20%	Oct 2021	62 - 63
MB-ST5-0296	Stainless steel scrap 304 turnings, dealer buying price, delivered to yard East Coast, \$/gross ton	02 Nov 2021	1299 - 1411	-3.21%	Oct 2021	1389 - 1411
MB-ST5-0298	Stainless steel scrap 430 new clips, dealer buying price, delivered to yard East Coast, \$/gross ton	02 Nov 2021	582 - 627	0.00%	Oct 2021	582 - 627
MB-ST5-0288	Stainless steel scrap 430 new clips, dealer buying price, delivered to yard East Coast, US cents/lb	02 Nov 2021	26 - 28	0.00%	Oct 2021	26 - 28
MB-ST5-0294	Stainless steel scrap 316 solids, clips, dealer buying price, delivered to yard East Coast, \$/gross ton	02 Nov 2021	1904 - 2150	1.66%	Oct 2021	1882 - 2106
MB-ST5-0284	Stainless steel scrap 316 solids, clips, dealer buying price, delivered to yard East Coast, US cents/lb	02 Nov 2021	85 - 96	1.69%	Oct 2021	84 - 94

Houston stainless steel scrap

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-ST5-0218	Stainless steel scrap 304 solids, clips, broker buying price, delivered to processor Houston, US cents/lb	16 Nov 2021	93 - 94	0.54%	Oct 2021	87 - 88.5
MB-ST5-0096	Stainless steel scrap 304 solids, clips, broker buying price, delivered to processor Houston, \$/gross ton	16 Nov 2021	2083 - 2106	0.53%	Oct 2021	1949 - 1982.25
MB-ST5-0215	Stainless steel scrap 304 solids, clips, dealer buying price, delivered to yard Houston, \$/gross ton	02 Nov 2021	1389 - 1680	12.29%	Oct 2021	1344 - 1389
MB-ST5-0093	Stainless steel scrap 304 solids, clips, dealer buying price, delivered to yard Houston, US cents/lb	02 Nov 2021	62 - 75	12.30%	Oct 2021	60 - 62
MB-ST5-0219	Stainless steel scrap 304 turnings, broker buying price, delivered to processor Houston, US cents/lb	16 Nov 2021	86 - 88	0.00%	Oct 2021	81.75 - 83.5
MB-ST5-0097	Stainless steel scrap 304 turnings, broker buying price, delivered to processor Houston, \$/gross ton	16 Nov 2021	1926 - 1971	0.00%	Oct 2021	1831.25 - 1870.25
MB-ST5-0216	Stainless steel scrap 304 turnings, dealer buying price, delivered to yard Houston, \$/gross ton	02 Nov 2021	1277 - 1568	42.68%	Oct 2021	986 - 1008
MB-ST5-0094	Stainless steel scrap 304 turnings, dealer buying price, delivered to yard Houston, US cents/lb	02 Nov 2021	57 - 70	42.70%	Oct 2021	44 - 45
MB-ST5-0220	Stainless steel scrap 430 bundles, solids, broker buying price, delivered to processor Houston, US cents/lb	16 Nov 2021	27 - 28	-6.78%	Oct 2021	28.5 - 29.5
MB-ST5-0098	Stainless steel scrap 430 bundles, solids, broker buying price, delivered to processor Houston, \$/gross ton	16 Nov 2021	605 - 627	-6.81%	Oct 2021	638.5 - 661
MB-ST5-0221	Stainless steel scrap 409 bundles, solids, broker buying price, delivered to processor Houston, US cents/lb	16 Nov 2021	21 - 22	-4.44%	Oct 2021	22 - 23
MB-ST5-0099	Stainless steel scrap 409 bundles, solids, broker buying price, delivered to processor Houston, \$/gross ton	16 Nov 2021	470 - 493	-4.46%	Oct 2021	493 - 515
MB-ST5-0214	Stainless steel scrap 316 solids, clips, dealer buying price, delivered to yard Houston, \$/gross ton	02 Nov 2021	2016 - 2173	10.64%	Oct 2021	1792 - 1994
MB-ST5-0092	Stainless steel scrap 316 solids, clips, dealer buying price, delivered to yard Houston, US cents/lb	02 Nov 2021	90 - 97	10.65%	Oct 2021	80 - 89
MB-ST5-0217	Stainless steel scrap 316 solids, clips, broker buying price, delivered to processor Houston, US cents/lb	16 Nov 2021	127 - 130	2.39%	Oct 2021	119 - 120.5
MB-ST5-0095	Stainless steel scrap 316 solids, clips, broker buying price, delivered to processor Houston, \$/gross ton	16 Nov 2021	2845 - 2912	2.40%	Oct 2021	2665.25 - 2699.25

**Los Angeles stainless steel scrap**

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-ST5-0227	Stainless steel scrap 304 turnings, export yard buying price, delivered to yard Los Angeles, US cents/lb	16 Nov 2021	49.11 - 51.34	0.00%	Oct 2021	48.83 - 51.06
MB-ST5-0105	Stainless steel scrap 304 turnings, export yard buying price, delivered to yard Los Angeles, \$/gross ton	16 Nov 2021	1100 - 1150	0.00%	Oct 2021	1093.75 - 1143.75
MB-ST5-0226	Stainless steel scrap 304 solids, clips, export yard buying price, delivered to yard Los Angeles, US cents/lb	16 Nov 2021	70.31 - 71.43	0.00%	Oct 2021	70.04 - 71.15
MB-ST5-0104	Stainless steel scrap 304 solids, clips, export yard buying price, delivered to yard Los Angeles, \$/gross ton	16 Nov 2021	1575 - 1600	0.00%	Oct 2021	1568.75 - 1593.75
MB-ST5-0228	Stainless steel scrap 430 bundles, solids, export yard buying price, delivered to yard Los Angeles, US cents/lb	16 Nov 2021	14.73 - 15.63	0.00%	Oct 2021	14.17 - 15.07
MB-ST5-0106	Stainless steel scrap 430 bundles, solids, export yard buying price, delivered to yard Los Angeles, \$/gross ton	16 Nov 2021	330 - 350	0.00%	Oct 2021	317.5 - 337.5

Montreal stainless steel scrap

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-ST5-0252	Stainless steel scrap 304 turnings, dealer buying price, delivered to yard Montreal, Canadian \$/gross ton	02 Nov 2021	1725 - 2240	15.70%	Oct 2021	1702 - 1725
MB-ST5-0253	Stainless steel scrap 304 new clips, dealer buying price, delivered to yard Montreal, Canadian \$/gross ton	02 Nov 2021	2173 - 2509	7.19%	Oct 2021	2173 - 2195
MB-ST5-0131	Stainless steel scrap 304 new clips, dealer buying price, delivered to yard Montreal, Canadian cents/lb	02 Nov 2021	97 - 112	7.18%	Oct 2021	97 - 98
MB-ST5-0130	Stainless steel scrap 304 turnings, dealer buying price, delivered to yard Montreal, Canadian cents/lb	02 Nov 2021	77 - 100	15.69%	Oct 2021	76 - 77
MB-ST5-0129	Stainless steel scrap 304 solids, clips, dealer buying price, delivered to yard Montreal, Canadian cents/lb	02 Nov 2021	97 - 112	7.18%	Oct 2021	97 - 98
MB-ST5-0251	Stainless steel scrap 304 solids, clips, dealer buying price, delivered to yard Montreal, Canadian \$/gross ton	02 Nov 2021	2173 - 2509	7.19%	Oct 2021	2173 - 2195
MB-ST5-0128	Stainless steel scrap 316 solids, clips, dealer buying price, delivered to yard Montreal, Canadian cents/lb	02 Nov 2021	135 - 150	5.17%	Oct 2021	135 - 136
MB-ST5-0250	Stainless steel scrap 316 solids, clips, dealer buying price, delivered to yard Montreal, Canadian \$/gross ton	02 Nov 2021	3024 - 3360	5.17%	Oct 2021	3024 - 3046

New York stainless steel scrap

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-ST5-0236	Stainless steel scrap 304 turnings, broker buying price, delivered to processor New York, US cents/lb	16 Nov 2021	86 - 89	0.57%	Oct 2021	82 - 85.25
MB-ST5-0114	Stainless steel scrap 304 turnings, broker buying price, delivered to processor New York, \$/gross ton	16 Nov 2021	1926 - 1994	0.56%	Oct 2021	1836.75 - 1909.5
MB-ST5-0116	Stainless steel scrap 304 turnings, export yard buying price, delivered to yard New York, \$/gross ton	16 Nov 2021	1882 - 1904	0.00%	Oct 2021	1299 - 1322
MB-ST5-0238	Stainless steel scrap 304 turnings, export yard buying price, delivered to yard New York, US cents/lb	16 Nov 2021	84 - 85	0.00%	Oct 2021	58 - 59
MB-ST5-0235	Stainless steel scrap 304 solids, clips, broker buying price, delivered to processor New York, US cents/lb	16 Nov 2021	93 - 95	1.08%	Oct 2021	88 - 90.5



Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-ST5-0113	Stainless steel scrap 304 solids, clips, broker buying price, delivered to processor New York, \$/gross ton	16 Nov 2021	2083 - 2128	1.06%	Oct 2021	1971 - 2027.25
MB-ST5-0237	Stainless steel scrap 304 solids, clips, export yard buying price, delivered to yard New York, US cents/lb	16 Nov 2021	95 - 96	0.00%	Oct 2021	92 - 94.75
MB-ST5-0115	Stainless steel scrap 304 solids, clips, export yard buying price, delivered to yard New York, \$/gross ton	16 Nov 2021	2128 - 2150	0.00%	Oct 2021	2060.75 - 2122.25
MB-ST5-0239	Stainless steel scrap 430 bundles, solids, export yard buying price, delivered to yard New York, US cents/lb	16 Nov 2021	32 - 33	0.00%	Oct 2021	21 - 22
MB-ST5-0117	Stainless steel scrap 430 bundles, solids, export yard buying price, delivered to yard New York, \$/gross ton	16 Nov 2021	717 - 739	0.00%	Oct 2021	470 - 493
MB-ST5-0234	Stainless steel scrap 316 solids, clips, broker buying price, delivered to processor New York, US cents/lb	16 Nov 2021	124 - 130	0.00%	Oct 2021	119 - 122.25
MB-ST5-0112	Stainless steel scrap 316 solids, clips, broker buying price, delivered to processor New York, \$/gross ton	16 Nov 2021	2778 - 2912	0.00%	Oct 2021	2665.5 - 2738.25

Philadelphia stainless steel scrap

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-ST5-0241	Stainless steel scrap 304 turnings, export yard buying price, delivered to yard Philadelphia, US cents/lb	16 Nov 2021	84 - 85	0.00%	Oct 2021	58 - 59
MB-ST5-0119	Stainless steel scrap 304 turnings, export yard buying price, delivered to yard Philadelphia, \$/gross ton	16 Nov 2021	1882 - 1904	0.00%	Oct 2021	1299 - 1322
MB-ST5-0240	Stainless steel scrap 304 solids, clips, export yard buying price, delivered to yard Philadelphia, US cents/lb	16 Nov 2021	95 - 96	0.00%	Oct 2021	92 - 94.75
MB-ST5-0118	Stainless steel scrap 304 solids, clips, export yard buying price, delivered to yard Philadelphia, \$/gross ton	16 Nov 2021	2128 - 2150	0.00%	Oct 2021	2060.75 - 2122.25
MB-ST5-0242	Stainless steel scrap 430 bundles, solids, export yard buying price, delivered to yard Philadelphia, US cents/lb	16 Nov 2021	32 - 33	0.00%	Oct 2021	21 - 22
MB-ST5-0120	Stainless steel scrap 430 bundles, solids, export yard buying price, delivered to yard Philadelphia, \$/gross ton	16 Nov 2021	717 - 739	0.00%	Oct 2021	470 - 493

Pittsburgh stainless steel scrap

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-ST5-0042	Stainless steel scrap 304 turnings, dealer buying price, delivered to yard Pittsburgh, US cents/lb	02 Nov 2021	45 - 54	-1.98%	Oct 2021	45 - 56
MB-ST5-0164	Stainless steel scrap 304 turnings, dealer buying price, delivered to yard Pittsburgh, \$/gross ton	02 Nov 2021	1008 - 1210	-1.95%	Oct 2021	1008 - 1254
MB-ST5-0169	Stainless steel scrap 304 turnings, broker buying price, delivered to processor Pittsburgh, US cents/lb	16 Nov 2021	85 - 89	0.00%	Oct 2021	80.75 - 85.25
MB-ST5-0047	Stainless steel scrap 304 turnings, broker buying price, delivered to processor Pittsburgh, \$/gross ton	16 Nov 2021	1904 - 1994	0.00%	Oct 2021	1808.75 - 1909.5
MB-ST5-0256	Stainless steel scrap 304 turnings, consumer buying price, delivered mill Pittsburgh, US cents/lb	10 Nov 2021	83 - 84	5.70%	Oct 2021	78 - 80
MB-ST5-0134	Stainless steel scrap 304 turnings, consumer buying price, delivered mill Pittsburgh, \$/gross ton	10 Nov 2021	1859 - 1882	5.71%	Oct 2021	1747 - 1792
MB-ST5-0168	Stainless steel scrap 304 solids, clips, broker buying price, delivered to processor Pittsburgh, US cents/lb	16 Nov 2021	90 - 94	-1.08%	Oct 2021	86.5 - 90.25
MB-ST5-0255	Stainless steel scrap 304 solids, clips, consumer buying price, delivered mill Pittsburgh, US cents/lb	10 Nov 2021	92 - 93	5.11%	Oct 2021	87 - 89

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-ST5-0163	Stainless steel scrap 304 solids, clips, dealer buying price, delivered to yard Pittsburgh, \$/gross ton	02 Nov 2021	1232 - 1344	9.52%	Oct 2021	1008 - 1344
MB-ST5-0041	Stainless steel scrap 304 solids, clips, dealer buying price, delivered to yard Pittsburgh, US cents/lb	02 Nov 2021	55 - 60	9.52%	Oct 2021	45 - 60
MB-ST5-0046	Stainless steel scrap 304 solids, clips, broker buying price, delivered to processor Pittsburgh, \$/gross ton	16 Nov 2021	2016 - 2106	-1.08%	Oct 2021	1937.25 - 2021.5
MB-ST5-0133	Stainless steel scrap 304 solids, clips, consumer buying price, delivered mill Pittsburgh, \$/gross ton	10 Nov 2021	2061 - 2083	5.10%	Oct 2021	1949 - 1994
MB-ST5-0165	Stainless steel scrap 304 new clips, dealer buying price, delivered to yard Pittsburgh, \$/gross ton	02 Nov 2021	1232 - 1344	9.52%	Oct 2021	1008 - 1344
MB-ST5-0043	Stainless steel scrap 304 new clips, dealer buying price, delivered to yard Pittsburgh, US cents/lb	02 Nov 2021	55 - 60	9.52%	Oct 2021	45 - 60
MB-ST5-0171	Stainless steel scrap 430 turnings, broker buying price, delivered to processor Pittsburgh, US cents/lb	16 Nov 2021	30 - 34	3.23%	Oct 2021	30 - 31.5
MB-ST5-0049	Stainless steel scrap 430 turnings, broker buying price, delivered to processor Pittsburgh, \$/gross ton	16 Nov 2021	672 - 762	3.24%	Oct 2021	672 - 705.5
MB-ST5-0257	Stainless steel scrap 430 bundles, solids, consumer buying price, delivered mill Pittsburgh, US cents/lb	10 Nov 2021	33.71 - 34.6	2.71%	Oct 2021	32.81 - 33.71
MB-ST5-0170	Stainless steel scrap 430 bundles, solids, broker buying price, delivered to processor Pittsburgh, US cents/lb	16 Nov 2021	35 - 39	2.78%	Oct 2021	33.5 - 36.25
MB-ST5-0048	Stainless steel scrap 430 bundles, solids, broker buying price, delivered to processor Pittsburgh, \$/gross ton	16 Nov 2021	784 - 874	2.79%	Oct 2021	750.5 - 812
MB-ST5-0135	Stainless steel scrap 430 bundles, solids, consumer buying price, delivered mill Pittsburgh, \$/gross ton	10 Nov 2021	755 - 775	2.68%	Oct 2021	735 - 755
MB-ST5-0166	Stainless steel scrap 430 new clips, dealer buying price, delivered to yard Pittsburgh, \$/gross ton	02 Nov 2021	336 - 538	-2.46%	Oct 2021	336 - 560
MB-ST5-0044	Stainless steel scrap 430 new clips, dealer buying price, delivered to yard Pittsburgh, US cents/lb	02 Nov 2021	15 - 24	-2.50%	Oct 2021	15 - 25
MB-ST5-0172	Stainless steel scrap 409 bundles, solids, broker buying price, delivered to processor Pittsburgh, US cents/lb	16 Nov 2021	31 - 35	6.45%	Oct 2021	28.75 - 31.5
MB-ST5-0258	Stainless steel scrap 409 bundles, solids, consumer buying price, delivered mill Pittsburgh, US cents/lb	10 Nov 2021	29.24 - 29.46	3.13%	Oct 2021	28.35 - 28.57
MB-ST5-0136	Stainless steel scrap 409 bundles, solids, consumer buying price, delivered mill Pittsburgh, \$/gross ton	10 Nov 2021	655 - 660	3.14%	Oct 2021	635 - 640
MB-ST5-0173	Stainless steel scrap 409 turnings, broker buying price, delivered to processor Pittsburgh, US cents/lb	16 Nov 2021	25 - 30	3.77%	Oct 2021	24 - 26.5
MB-ST5-0050	Stainless steel scrap 409 bundles, broker buying price, delivered to processor Pittsburgh, \$/gross ton	16 Nov 2021	694 - 784	6.41%	Oct 2021	644 - 705.5
MB-ST5-0051	Stainless steel scrap 409 turnings, broker buying price, delivered to processor Pittsburgh, \$/gross ton	16 Nov 2021	560 - 672	3.79%	Oct 2021	537.75 - 593.5
MB-ST5-0167	Stainless steel scrap 316 solids, clips, broker buying price, delivered to processor Pittsburgh, US cents/lb	16 Nov 2021	124 - 130	0.00%	Oct 2021	117.5 - 122.5
MB-ST5-0254	Stainless steel scrap 316 solids, clips, consumer buying price, delivered mill Pittsburgh, US cents/lb	10 Nov 2021	134 - 136	4.65%	Oct 2021	128 - 130
MB-ST5-0162	Stainless steel scrap 316 solids, clips, dealer buying price, delivered to yard Pittsburgh, \$/gross ton	02 Nov 2021	1568 - 1904	-1.89%	Oct 2021	1680 - 1859
MB-ST5-0040	Stainless steel scrap 316 solids, clips, dealer buying price, delivered to yard Pittsburgh, US cents/lb	02 Nov 2021	70 - 85	-1.90%	Oct 2021	75 - 83
MB-ST5-0132	Stainless steel scrap 316 solids, clips, consumer buying price, delivered mill Pittsburgh, \$/gross ton	10 Nov 2021	3002 - 3046	4.65%	Oct 2021	2867 - 2912



Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-ST5-0045	Stainless steel scrap 316 solids, broker buying price, delivered to processor Pittsburgh, \$/gross ton	16 Nov 2021	2778 - 2912	0.00%	Oct 2021	2632 - 2743.75

San Francisco stainless steel scrap

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-ST5-0248	Stainless steel scrap 304 turnings, export yard buying price, delivered to yard San Francisco, US cents/lb	16 Nov 2021	49.11 - 51.34	0.00%	Oct 2021	48.83 - 51.06
MB-ST5-0126	Stainless steel scrap 304 turnings, export yard buying price, delivered to yard San Francisco, \$/gross ton	16 Nov 2021	1100 - 1150	0.00%	Oct 2021	1093.75 - 1143.75
MB-ST5-0247	Stainless steel scrap 304 solids, clips, export yard buying price, delivered to yard San Francisco, US cents/lb	16 Nov 2021	70.31 - 71.43	0.00%	Oct 2021	70.04 - 71.15
MB-ST5-0125	Stainless steel scrap 304 solids, clips, export yard buying price, delivered to yard San Francisco, \$/gross ton	16 Nov 2021	1575 - 1600	0.00%	Oct 2021	1568.75 - 1593.75
MB-ST5-0249	Stainless steel scrap 430 bundles, solids, export yard buying price, delivered to yard San Francisco, US cents/lb	16 Nov 2021	14.73 - 15.63	0.00%	Oct 2021	14.17 - 15.07
MB-ST5-0127	Stainless steel scrap 430 bundles, solids, export yard buying price, delivered to yard San Francisco, \$/gross ton	16 Nov 2021	330 - 350	0.00%	Oct 2021	317.5 - 337.5

Southeast US stainless steel scrap

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-ST5-0151	Stainless steel scrap 304 turnings, broker buying price, delivered to processor Southeast US, US cents/lb	16 Nov 2021	86 - 89	0.57%	Oct 2021	82 - 85.25
MB-ST5-0139	Stainless steel scrap 304 turnings, broker buying price, delivered to processor Southeast US, \$/gross ton	16 Nov 2021	1926 - 1994	0.56%	Oct 2021	1836.75 - 1909.5
MB-ST5-0147	Stainless steel scrap 304 turnings, dealer buying price, delivered to yard Southeast US, US cents/lb	02 Nov 2021	38 - 60	4.26%	Oct 2021	38 - 56
MB-ST5-0159	Stainless steel scrap 304 turnings, dealer buying price, delivered to yard Southeast US, \$/gross ton	02 Nov 2021	851 - 1344	4.28%	Oct 2021	851 - 1254
MB-ST5-0138	Stainless steel scrap 304 solids, clips, broker buying price, delivered to processor Southeast US, \$/gross ton	16 Nov 2021	2083 - 2106	0.53%	Oct 2021	1965.5 - 2016
MB-ST5-0150	Stainless steel scrap 304 solids, clips, broker buying price, delivered to processor Southeast US, US cents/lb	16 Nov 2021	93 - 94	0.54%	Oct 2021	87.75 - 90
MB-ST5-0158	Stainless steel scrap 304 solids, clips, dealer buying price, delivered to yard Southeast US, \$/gross ton	02 Nov 2021	1120 - 1456	4.55%	Oct 2021	1120 - 1344
MB-ST5-0146	Stainless steel scrap 304 solids, clips, dealer buying price, delivered to yard Southeast US, US cents/lb	02 Nov 2021	50 - 65	4.55%	Oct 2021	50 - 60
MB-ST5-0145	Stainless steel scrap 304 new clips, dealer buying price, delivered to yard Southeast US, US cents/lb	02 Nov 2021	50 - 65	4.55%	Oct 2021	50 - 60
MB-ST5-0157	Stainless steel scrap 304 new clips, dealer buying price, delivered to yard Southeast US, \$/gross ton	02 Nov 2021	1120 - 1456	4.55%	Oct 2021	1120 - 1344
MB-ST5-0161	Stainless steel scrap 430 new clips, dealer buying price, delivered to yard Southeast US, \$/gross ton	02 Nov 2021	224 - 538	-20.87%	Oct 2021	403 - 560
MB-ST5-0155	Stainless steel scrap 430 bundles, solids, broker buying price, delivered to processor Southeast US, US cents/lb	16 Nov 2021	35 - 39	5.71%	Oct 2021	32.5 - 36.25
MB-ST5-0143	Stainless steel scrap 430 bundles, solids, broker buying price, delivered to processor Southeast US, \$/gross ton	16 Nov 2021	784 - 874	5.74%	Oct 2021	728 - 812
MB-ST5-0144	Stainless steel scrap 430 turnings, broker buying price, delivered to processor Southeast US, \$/gross ton	16 Nov 2021	694 - 762	14.02%	Oct 2021	672 - 705.5



Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-ST5-0156	Stainless steel scrap 430 turnings, broker buying price, delivered to processor Southeast US, US cents/lb	16 Nov 2021	31 - 34	14.04%	Oct 2021	30 - 31.5
MB-ST5-0149	Stainless steel scrap 430 new clips, dealer buying price, delivered to yard Southeast US, US cents/lb	02 Nov 2021	10 - 24	-20.93%	Oct 2021	18 - 25
MB-ST5-0154	Stainless steel scrap 409 turnings, broker buying price, delivered to processor Southeast US, US cents/lb	16 Nov 2021	25 - 30	5.77%	Oct 2021	24 - 26.5
MB-ST5-0142	Stainless steel scrap 409 turnings, broker buying price, delivered to processor Southeast US, \$/gross ton	16 Nov 2021	560 - 672	5.75%	Oct 2021	537.75 - 593.5
MB-ST5-0141	Stainless steel scrap 409 bundles, solids, broker buying price, delivered to processor Southeast US, \$/gross ton	16 Nov 2021	672 - 784	4.82%	Oct 2021	638.5 - 705.5
MB-ST5-0153	Stainless steel scrap 409 bundles, solids, broker buying price, delivered to processor Southeast US, US cents/lb	16 Nov 2021	30 - 35	4.84%	Oct 2021	28.5 - 31.5
MB-ST5-0160	Stainless steel scrap 316 solids, clips, dealer buying price, delivered to yard Southeast US, \$/gross ton	02 Nov 2021	1568 - 2016	3.88%	Oct 2021	1568 - 1882
MB-ST5-0148	Stainless steel scrap 316 solids, clips, dealer buying price, delivered to yard Southeast US, US cents/lb	02 Nov 2021	70 - 90	3.90%	Oct 2021	70 - 84
MB-ST5-0152	Stainless steel scrap 316 solids, clips, broker buying price, delivered to processor Southeast US, US cents/lb	16 Nov 2021	124 - 130	0.00%	Oct 2021	119 - 122.25
MB-ST5-0140	Stainless steel scrap 316 solids, clips, broker buying price, delivered to processor Southeast US, \$/gross ton	16 Nov 2021	2778 - 2912	0.00%	Oct 2021	2665.5 - 2738.25

West Coast stainless steel scrap

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-ST5-0301	Stainless steel scrap 304 turnings, dealer buying price, delivered to yard West Coast, \$/gross ton	02 Nov 2021	739 - 784	9.65%	Oct 2021	672 - 717
MB-ST5-0291	Stainless steel scrap 304 turnings, dealer buying price, delivered to yard West Coast, US cents/lb	02 Nov 2021	33 - 35	9.68%	Oct 2021	30 - 32
MB-ST5-0302	Stainless steel scrap 304 new clips, dealer buying price, delivered to yard West Coast, \$/gross ton	02 Nov 2021	1098 - 1165	6.34%	Oct 2021	1030 - 1098
MB-ST5-0292	Stainless steel scrap 304 new clips, dealer buying price, delivered to yard West Coast, US cents/lb	02 Nov 2021	49 - 52	6.32%	Oct 2021	46 - 49
MB-ST5-0300	Stainless steel scrap 304 solids, clips, dealer buying price, delivered to yard West Coast, \$/gross ton	02 Nov 2021	1098 - 1165	6.34%	Oct 2021	1030 - 1098
MB-ST5-0290	Stainless steel scrap 304 solids, clips, dealer buying price, delivered to yard West Coast, US cents/lb	02 Nov 2021	49 - 52	6.32%	Oct 2021	46 - 49
MB-ST5-0299	Stainless steel scrap 316 solids, clips, dealer buying price, delivered to yard West Coast, \$/gross ton	02 Nov 2021	1434 - 1478	3.15%	Oct 2021	1389 - 1434
MB-ST5-0289	Stainless steel scrap 316 solids, clips, dealer buying price, delivered to yard West Coast, US cents/lb	02 Nov 2021	64 - 66	3.17%	Oct 2021	62 - 64

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	12 Nov 2021	295 - 310	9.01%	Oct 2021	270 - 285
MB-STE-0432	Steel scrap 12 A/C new production heavy steel domestic, delivered consumer UK, £/tonne	12 Nov 2021	290 - 305	9.17%	Oct 2021	265 - 280
MB-STE-0430	Steel scrap 7B heavy steel turnings inter-merchant, delivered to export dock UK, £/tonne	12 Nov 2021	210 - 225	10.13%	Oct 2021	190 - 205



Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0081	Steel scrap 4C new steel bales domestic, delivered consumer UK, £/tonne	12 Nov 2021	285 - 300	9.35%	Oct 2021	260 - 275
MB-STE-0087	Steel scrap OA plate and structural domestic, delivered consumer UK, £/tonne	12 Nov 2021	250 - 265	8.42%	Oct 2021	230 - 245
MB-STE-0080	Steel scrap 4A new steel bales domestic, delivered consumer UK, £/tonne	12 Nov 2021	295 - 310	9.01%	Oct 2021	270 - 285
MB-STE-0084	Steel scrap 8B new loose light cuttings domestic, delivered consumer UK, £/tonne	12 Nov 2021	270 - 285	9.90%	Oct 2021	245 - 260
MB-STE-0085	Steel scrap 9A/10 heavy and light cast iron domestic, delivered consumer UK, £/tonne	12 Nov 2021	240 - 255	8.79%	Oct 2021	220 - 235
MB-STE-0078	Steel scrap 11A cast iron borings (low P) domestic, delivered consumer UK, £/tonne	12 Nov 2021	200 - 210	10.81%	Oct 2021	180 - 190
MB-STE-0086	Steel scrap 9B/C cylinder block scrap domestic, delivered consumer UK, £/tonne	12 Nov 2021	260 - 275	8.08%	Oct 2021	240 - 255
MB-STE-0083	Steel scrap 8A new loose light cuttings domestic, delivered consumer UK, £/tonne	12 Nov 2021	285 - 300	9.35%	Oct 2021	260 - 275
MB-STE-0077	Steel scrap 1&2 old steel domestic, delivered consumer UK, £/tonne	12 Nov 2021	230 - 245	9.20%	Oct 2021	210 - 225
MB-STS-0012	Steel scrap 5C loose old light domestic, delivered inter-merchant UK, £/tonne	12 Nov 2021	185 - 195	0.00%	Oct 2021	174 - 192
MB-STE-0167	Steel scrap No E3 (old thick scrap) domestic, delivered mill Italy, €/tonne	16 Nov 2021	380 - 420	1.27%	Oct 2021	380 - 410
MB-STE-0169	Steel scrap No E3 (old thick steel scrap) domestic, delivered mill Germany, €/tonne	16 Nov 2021	410 - 430	6.33%	Oct 2021	390 - 400
MB-STE-0093	Steel scrap auto bundle scrap domestic, delivered Turkey, lira/tonne	15 Nov 2021	4440 - 5130	2.13%	Oct 2021	3937.5 - 4531.25
MB-STE-0415	Steel scrap E8 thin new production steel domestic, delivered consumer Germany, €/tonne	16 Nov 2021	480 - 495	5.98%	Oct 2021	450 - 470
MB-STE-0168	Steel scrap No E8 (thin new production steel scrap) domestic, delivered mill Italy, €/tonne	16 Nov 2021	460 - 480	2.17%	Oct 2021	450 - 470
MB-STE-0414	Steel scrap E40 shredded domestic, delivered consumer Germany, €/tonne	16 Nov 2021	430 - 435	8.13%	Oct 2021	390 - 410
MB-STE-0849	Steel scrap E40 shredded, delivered to mill Italy, €/tonne	16 Nov 2021	450 - 460	2.25%	Oct 2021	440 - 450

Europe export

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0095	Steel scrap shredded import, cfr delivered Turkish port, \$/tonne	12 Nov 2021	510 - 520	0.00%	Oct 2021	482 - 497.2
MB-STE-0096	Steel scrap HMS 1&2 (75:25 mix) import, cfr delivered Turkish port, \$/tonne	12 Nov 2021	482 - 485	0.73%	Oct 2021	463.2 - 467.4
MB-STE-0097	Steel scrap HMS 1&2 (75:25 mix) export, fob Rotterdam, \$/tonne	12 Nov 2021	437 - 440	1.50%	Oct 2021	423.2 - 427.4
MB-STE-0098	Steel scrap shredded export, fob Rotterdam, \$/tonne	12 Nov 2021	464 - 466	0.65%	Oct 2021	445.2 - 449.2
MB-STE-0099	Steel scrap shredded export, fob main port UK, \$/tonne	12 Nov 2021	469 - 472	0.97%	Oct 2021	444.6 - 454.8
MB-STE-0100	Steel scrap HMS 1&2 (80:20 mix) export, fob main port UK, \$/tonne	12 Nov 2021	449 - 452	1.01%	Oct 2021	426.4 - 436
MB-STE-0416	Steel scrap HMS 1&2 (80:20 mix) North Europe origin, cfr Turkey, \$/tonne	18 Nov 2021	484.01	-1.07%	Oct 2021	473.64
MB-STE-0894	Steel scrap, HMS 1&2 (80:20 mix), month-to-date deal-weighted average, North Europe origin, cfr Turkey, \$/tonne	18 Nov 2021	491.7	-0.15%	Oct 2021	443.67
MB-STE-0417	Steel scrap HMS 1&2 (80:20 mix) US origin, cfr Turkey, \$/tonne	18 Nov 2021	491.98	-1.05%	Oct 2021	480.32
MB-STE-0420	Steel scrap HMS 1&2 (80:20 mix), fob Rotterdam, \$/tonne	12 Nov 2021	450.81	1.70%	Oct 2021	426.28

European stainless steel scrap



Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-ST5-0008	Stainless steel scrap 18/8 solids import, cif main European port, €/tonne	12 Nov 2021	1720 - 1750	-0.29%	Oct 2021	1676 - 1706
MB-ST5-0011	Stainless steel scrap 18/8 turnings domestic, delivered merchants UK, £/tonne	12 Nov 2021	1220 - 1285	3.94%	Oct 2021	1161 - 1225
MB-ST5-0010	Stainless steel scrap 18/8 solids domestic, delivered merchants UK, £/tonne	12 Nov 2021	1400 - 1480	3.97%	Oct 2021	1334 - 1398
MB-ST5-0009	Stainless steel scrap 18/8 turnings import, cif main European port, €/tonne	12 Nov 2021	1550 - 1575	-0.16%	Oct 2021	1508 - 1536
MB-ST5-0013	Stainless steel scrap 12-13% Cr solids domestic, delivered merchants UK, £/tonne	12 Nov 2021	350 - 370	0.00%	Oct 2021	350 - 370
MB-ST5-0014	Stainless steel scrap 16-17% Cr solids domestic, delivered merchants UK, £/tonne	12 Nov 2021	390 - 410	0.00%	Oct 2021	390 - 410
MB-ST5-0261	Stainless steel scrap 316 solids import, cif main port Europe, €/tonne	12 Nov 2021	2530	0.00%	Oct 2021	2422 - 2466
MB-ST5-0262	Stainless steel scrap 316 turnings import, cif main port Europe, €/tonne	12 Nov 2021	2275	0.00%	Oct 2021	2180 - 2221
MB-ST5-0260	Stainless steel scrap 316 turnings domestic, delivered merchants UK, £/tonne	12 Nov 2021	1765 - 1825	1.41%	Oct 2021	1713 - 1801
MB-ST5-0259	Stainless steel scrap 316 solids domestic, delivered merchants UK, £/tonne	12 Nov 2021	2030 - 2100	1.47%	Oct 2021	1990 - 2042

Asia domestic and export

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0149	Steel scrap heavy scrap domestic, delivered mill China, yuan/tonne	12 Nov 2021	3370 - 3550	-2.95%	Oct 2021	3692.5 - 3795
MB-STE-0889	Steel scrap, index, heavy recycled steel materials, cfr east China, \$/tonne	18 Nov 2021	460	0.00%	Oct 2021	521.94
MB-STE-0895	Steel scrap, index, heavy recycled steel materials, cfr north China, \$/tonne	18 Nov 2021	470	0.00%	Oct 2021	531.94
MB-STE-0464	Steel scrap HMS 1&2 (80:20 mix) US material import, cfr main port Taiwan, \$/tonne	18 Nov 2021	445 - 452	-0.77%	Oct 2021	473.71 - 475.81
MB-STE-0874	Steel scrap H2 export, fob main port Japan, ¥/tonne	17 Nov 2021	49500 - 51500	-2.42%	Oct 2021	51875 - 53750
MB-STE-0875	Steel scrap shredded export, fob main port Japan, ¥/tonne	17 Nov 2021	57000	-3.39%	Oct 2021	60000 - 61550
MB-STE-0876	Steel scrap Shindachi bara export, fob main port Japan, ¥/tonne	17 Nov 2021	63500 - 64000	-3.04%	Oct 2021	65750 - 66250
MB-STE-0877	Steel scrap heavy scrap (HS) export, fob main port Japan, ¥/tonne	17 Nov 2021	61500	-1.99%	Oct 2021	62375 - 63875
MB-STE-0878	Steel scrap H2 Japan-origin import, cfr Vietnam, \$/tonne	12 Nov 2021	510 - 520	-2.37%	Oct 2021	524.6 - 529
MB-STE-0783	Steel scrap HMS 1&2 (80:20), cfr Vietnam, \$/tonne	12 Nov 2021	535 - 540	-1.83%	Oct 2021	537.2 - 542.6
MB-STE-0879	Steel scrap H2 Japan origin import, cfr main port South Korea, ¥/tonne	12 Nov 2021	55500 - 56000	-1.76%	Oct 2021	56500 - 57700
MB-STE-0880	Steel scrap HMS 1&2 (80:20) deep-sea origin import, cfr South Korea, \$/tonne	12 Nov 2021	520 - 530	-0.47%	Oct 2021	
MB-STE-0421	Steel scrap shredded, index, import, cfr Nhava Sheva, India \$/tonne	16 Nov 2021	550.72	1.50%	Oct 2021	536.32
MB-STE-0413	Steel scrap HMS 1&2 (80:20 mix) import, cfr Nhava Sheva, India, \$/tonne	12 Nov 2021	475 - 490	-1.53%	Oct 2021	471 - 494
MB-STE-0881	Steel scrap HMS 1&2 (80:20) deep-sea origin import, cfr Bangladesh, \$/tonne	18 Nov 2021	540 - 560	-3.51%	Oct 2021	557 - 563.25
MB-STE-0884	Steel scrap HMS 1&2 (80:20) containerized import, cfr Bangladesh, \$/tonne	18 Nov 2021	540 - 550	-1.36%	Oct 2021	526.25 - 546.25
MB-STE-0885	Steel scrap shredded containerized import, cfr Bangladesh, \$/tonne	18 Nov 2021	570 - 580	0.00%	Oct 2021	563.75 - 570
MB-STE-0886	Steel scrap shredded deep-sea origin import, cfr Bangladesh, \$/tonne	18 Nov 2021	560 - 570	-1.74%	Oct 2021	567 - 573.25
MB-STE-0887	Steel scrap shredded, index, import, cfr Port Qasim, Pakistan \$/tonne	12 Nov 2021	564.21	1.13%	Oct 2021	542.24

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	18 Nov 2021	87.27	-4.18%	Oct 2021	120.76
MB-IRO-0009	Iron ore 65% Fe Brazil-origin fines, cfr Qingdao, \$/tonne	18 Nov 2021	102	-3.68%	Oct 2021	143.24
MB-IRO-0010	Iron ore 63% Fe Australia-origin lump ore premium, cfr Qingdao, US cents/dmtu	18 Nov 2021	11	0.00%	Oct 2021	20.5
MB-IRO-0011	Iron ore 62% Fe fines, fot Qingdao, yuan/wet tonne	18 Nov 2021	587	-3.45%	Oct 2021	876.38
MB-IRO-0012	Iron ore 65% Fe blast furnace pellet, cfr Qingdao, \$/tonne	12 Nov 2021	164.14	-3.27%	Oct 2021	186.24
MB-IRO-0013	Iron ore 66% Fe concentrate, cfr Qingdao, \$/tonne	12 Nov 2021	111.03	-5.69%	Oct 2021	141.88
MB-IRO-0015	Iron ore 58% Fe fines, cfr Qingdao, \$/tonne	18 Nov 2021	54.08	-3.96%	Oct 2021	77.06
MB-IRO-0016	Iron ore 58% Fe fines high-grade premium, cfr Qingdao, \$/tonne	18 Nov 2021	6.5	-7.14%	Oct 2021	15.1
MB-IRO-0017	Iron ore 58% Fe fines high-grade premium index, cfr Qingdao, \$/tonne	18 Nov 2021	60.58	-4.31%	Oct 2021	92.15
MB-IRO-0018	Iron ore 62% Fe fines, % Fe VIU, cfr Qingdao, \$/tonne	18 Nov 2021	1.85	0.00%	Oct 2021	2.36
MB-IRO-0019	Iron ore 65% Fe fines, % Fe VIU, cfr Qingdao \$/tonne	18 Nov 2021	2.03	0.00%	Oct 2021	2.77
MB-IRO-0020	Iron ore 62% Fe fines, % Si VIU, cfr Qingdao, \$/tonne	18 Nov 2021	(4.8)		Oct 2021	(5.45)
MB-IRO-0021	Iron ore 62% Fe fines, % Al ₂ O ₃ VIU, cfr Qingdao, \$/tonne	18 Nov 2021	(6.21)		Oct 2021	(6.62)
MB-IRO-0022	Iron ore 62% Fe fines, fot Qingdao, \$/tonne conversion	18 Nov 2021	83.79	-3.53%	Oct 2021	126.26
MB-IRO-0024	Iron ore 62% Fe fines, 0.01% P VIU, cfr Qingdao, \$/tonne	18 Nov 2021	(0.83)		Oct 2021	(0.83)
MB-IRO-0076	Iron ore product differential - 62% Fe Pilbara Blend Fines, cfr Qingdao, \$/tonne	18 Nov 2021	(0.62)		Oct 2021	(0.69)
MB-IRO-0077	Iron ore DR-grade pellet premium to 65% Fe fines index, Middle East reference, \$/tonne	29 Oct 2021	50	-28.57%	Oct 2021	50
MB-IRO-0114	Iron ore 62% Fe Pilbara blend fines, cfr Qingdao, \$/tonne	18 Nov 2021	86.65	-4.21%	Oct 2021	120.07
MB-IRO-0144	Iron ore 62% Fe low-alumina fines, cfr Qingdao, \$/tonne	18 Nov 2021	88.26	-3.33%	Oct 2021	122.87
MB-IRO-0177	Iron ore pellet premium over 65% Fe fines, cfr China, \$/tonne	12 Nov 2021	52.3	-6.10%	Oct 2021	44.58

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	15 Nov 2021	3485 - 3870	-6.90%	Oct 2021	3740 - 4250
MB-COA-0002	Hard coking coal, cfr Jingtang, \$/dmt	18 Nov 2021	348.75	-12.59%	Oct 2021	563.67
MB-COA-0003	Premium hard coking coal, fob DBCT, \$/dmt	18 Nov 2021	372.6	0.00%	Oct 2021	401.26
MB-COA-0004	Hard coking coal, fob DBCT, \$/dmt	18 Nov 2021	324.85	0.00%	Oct 2021	341.82
MB-COA-0005	Premium hard coking coal, cfr Jingtang, \$/dmt	18 Nov 2021	423.84	-5.85%	Oct 2021	609.59
MB-COA-0006	Coke 65% CSR, fob China, \$/tonne	16 Nov 2021	550 - 600	-12.55%	Oct 2021	695 - 711.67
MB-COA-0007	PCI low-vol, cfr Jingtang, \$/dmt	12 Nov 2021	225.67	-20.91%	Oct 2021	300.63
MB-COA-0008	PCI low-vol, fob DBCT, \$/dmt	12 Nov 2021	222.57	-11.56%	Oct 2021	269.1

**Pig iron, DRI & HBI prices**

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-FE-0002	Hot-briquetted iron export, fob main port Venezuela, \$/tonne	12 Nov 2021	370 - 390	0.00%	Oct 2021	370 - 390
MB-FE-0003	Hot-briquetted iron, fob New Orleans, \$/tonne	15 Nov 2021	460 - 470	0.00%	Oct 2021	430 - 440
MB-FE-0004	Hot-briquetted iron, cfr Italian ports, \$/tonne	18 Nov 2021	460	0.00%	Oct 2021	460
MB-FEN-0001	Nickel pig iron, high-grade NPI content 10-15%, contract, ddp China, yuan/nickel unit price	12 Nov 2021	1490 - 1525	0.00%	Oct 2021	1458 - 1485
MB-FEN-0002	Nickel pig iron, high-grade NPI content 10-15%, spot, ddp China, yuan/nickel unit price	12 Nov 2021	1480 - 1500	-0.67%	Oct 2021	1462 - 1487
MB-FEN-0004	Pig iron foundry grade, Brazil, fob New Orleans, \$/tonne	15 Nov 2021	690 - 720	0.00%	Oct 2021	677.5 - 707.5
MB-IRO-0001	Pig iron export, fob main port Baltic Sea, CIS, \$/tonne	18 Nov 2021	570 - 610	0.00%	Oct 2021	570 - 600
MB-IRO-0002	Pig iron export, fob main port Black Sea, CIS, \$/tonne	18 Nov 2021	530 - 540	0.94%	Oct 2021	517.5 - 527.5
MB-IRO-0004	Pig iron import, cfr Gulf of Mexico, US, \$/tonne	12 Nov 2021	570 - 575	2.23%	Oct 2021	541 - 547
MB-IRO-0005	Pig iron export, fob port of Vitoria/Rio, Brazil, \$/tonne	12 Nov 2021	500 - 510	0.00%	Oct 2021	492 - 495
MB-IRO-0006	Pig iron export, fob Ponta da Madeira, Brazil, \$/tonne	12 Nov 2021	550	4.07%	Oct 2021	524.2 - 526
MB-IRO-0014	Pig iron import, cfr Italy, \$/tonne	18 Nov 2021	565 - 585	0.44%	Oct 2021	558.75 - 567.5
MB-IRO-0023	Direct reduced iron domestic, exw India, rupees/tonne	12 Nov 2021	32300 - 32500	-6.36%	Oct 2021	35640 - 35840
MB-IRO-0078	Pig iron basic grade, Brazil, fob New Orleans, \$/tonne	15 Nov 2021	580 - 610	0.00%	Oct 2021	538.75 - 568.75
MB-IRO-0079	Pig iron basic grade, Ukraine/Russia, fob New Orleans, \$/tonne	15 Nov 2021	580 - 610	0.00%	Oct 2021	542.5 - 572.5
MB-IRO-0178	Pig iron, import, cfr China, \$/tonne	11 Nov 2021	540 - 550	-3.96%	Oct 2021	560 - 572.5

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	18 Nov 2021	399.67	-0.08%	Oct 2021	478.39
MB-AL-0329	Aluminium P1020A premium, cif Taiwan, \$/tonne	16 Nov 2021	180 - 200	-3.80%	Oct 2021	190 - 210
MB-AL-0001	Aluminium P1020A (MJP) quarterly premium, cif Japan, \$/tonne	05 Oct 2021	215 - 220	21.85%	Oct 2021	215 - 220
MB-AL-0343	Aluminium P1020A (MJP) spot premium, cif Japan, \$/tonne	16 Nov 2021	170 - 180	0.00%	Oct 2021	183.89 - 196.67
MB-AL-0328	Aluminium P1020A premium, bonded in-whs, Shanghai, \$/tonne	26 Oct 2021	140 - 150	-19.44%	Oct 2021	140 - 150
MB-AL-0345	Aluminium P1020A premium, cif Shanghai, \$/tonne	26 Oct 2021	130 - 140	-28.95%	Oct 2021	130 - 140
MB-AL-0307	Aluminium P1020A premium, fca South Korea, \$/tonne	16 Nov 2021	185 - 195	0.00%	Oct 2021	190 - 200
MB-AL-0344	Aluminium P1020A premium, cif South Korea, \$/tonne	16 Nov 2021	170 - 180	0.00%	Oct 2021	175 - 185
MB-AL-0316	Aluminium P1020A premium, fca dp Italy, \$/tonne	16 Nov 2021	365 - 380	0.00%	Oct 2021	410 - 422.5
MB-AL-0346	Aluminium P1020A premium, in-whs dup Rotterdam, \$/tonne	18 Nov 2021	235 - 250	0.00%	Oct 2021	277.86 - 289.05
MB-AL-0004	Aluminium P1020A premium, in-whs dp Rotterdam, \$/tonne	16 Nov 2021	290 - 310	0.00%	Oct 2021	342.22 - 357.22
MB-AL-0319	Aluminium P1020A premium, fca dp Spain, \$/tonne	16 Nov 2021	365 - 375	-3.27%	Oct 2021	427.5 - 437.5
MB-AL-0337	Aluminium P1020A premium, cif dup Turkey, \$/tonne	16 Nov 2021	265 - 280	-16.15%	Oct 2021	320 - 330
MB-AL-0020	Aluminium P1020A premium, ddp Midwest US, US cents/lb	16 Nov 2021	30 - 32	0.00%	Oct 2021	34.44 - 35.78
MB-AL-0021	Aluminium P1020A premium, delivered Sao Paulo region, \$/tonne	16 Nov 2021	450 - 480	0.00%	Oct 2021	415 - 445
MB-AL-0022	Aluminium P1020A premium, cif dup Brazilian main ports, \$/tonne	16 Nov 2021	380 - 400	0.00%	Oct 2021	410 - 440
MB-AL-0381	Aluminium low-carbon differential P1020A, Europe, \$/tonne	05 Nov 2021	0 - 10	42.86%	Oct 2021	0 - 7
MB-AL-0377	Aluminium P1020A premium, in-whs dup Rotterdam, inferred low-carbon midpoint, \$/tonne	18 Nov 2021	247.5	0.00%	Oct 2021	286.95
MB-AL-0378	Aluminium P1020A premium, in-whs dp Rotterdam, inferred low-carbon midpoint, \$/tonne	16 Nov 2021	305	0.00%	Oct 2021	353.22

Copper premiums

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-CU-0386	Copper grade A cathode premium, cif Taiwan, \$/tonne	16 Nov 2021	70 - 85	0.00%	Oct 2021	70 - 82.5
MB-CU-0405	Copper grade A cathode premium, in-whs Shanghai, \$/tonne	18 Nov 2021	95 - 115	7.69%	Oct 2021	97.38 - 115.71
MB-CU-0383	Copper grade A cathode ER premium, bonded in-whs Shanghai, \$/tonne	18 Nov 2021	105 - 115	10.00%	Oct 2021	107.38 - 115.71
MB-CU-0382	Copper grade A cathode SX-EW premium, bonded in-whs Shanghai, \$/tonne	18 Nov 2021	95 - 105	8.11%	Oct 2021	97.38 - 106.67
MB-CU-0403	Copper grade A cathode premium, cif Shanghai, \$/tonne	18 Nov 2021	90 - 108	8.20%	Oct 2021	87.62 - 107.05
MB-CU-0380	Copper grade A cathode ER premium, cif Shanghai, \$/tonne	18 Nov 2021	95 - 108	6.84%	Oct 2021	97.19 - 107.05
MB-CU-0384	Copper grade A cathode SX-EW premium, cif Shanghai, \$/tonne	18 Nov 2021	90 - 95	8.19%	Oct 2021	87.62 - 95.14
MB-CU-0399	Copper grade A cathode premium, cif Southeast Asia, \$/tonne	16 Nov 2021	80 - 90	0.00%	Oct 2021	77.5 - 87.5
MB-CU-0404	Copper grade A cathode premium, cif South Korea, \$/tonne	16 Nov 2021	75 - 85	0.00%	Oct 2021	75 - 82.5
MB-CU-0372	Copper grade A cathode premium, delivered Germany, \$/tonne	16 Nov 2021	80 - 100	0.00%	Oct 2021	77.5 - 95
MB-CU-0406	Copper grade A cathode premium, cif Leghorn, \$/tonne	16 Nov 2021	80 - 90	6.25%	Oct 2021	70 - 82.5



Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-CU-0369	Copper grade A cathode premium, cif Rotterdam, \$/tonne	16 Nov 2021	50 - 60	0.00%	Oct 2021	45 - 55
MB-CU-0002	Copper grade 1 cathode premium, ddp Midwest US, US cents/lb	16 Nov 2021	8 - 9	0.00%	Oct 2021	8 - 9
MB-CU-0411	Copper EQ cathode premium, cif Europe, \$/tonne	16 Nov 2021	20 - 45	0.00%	Oct 2021	10 - 30
MB-CU-0412	Copper EQ cathode premium, cif Shanghai, \$/tonne	16 Nov 2021	20 - 35	0.00%	Oct 2021	20 - 37.5

Lead premiums

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-PB-0084	Lead 99.97% ingot premium, cif Taiwan, \$/tonne	16 Nov 2021	100 - 115	0.00%	Oct 2021	100 - 115
MB-PB-0083	Lead 99.99% ingot premium, cif Taiwan, \$/tonne	16 Nov 2021	125 - 135	0.00%	Oct 2021	125 - 135
MB-PB-0087	Lead 99.97% ingot premium, cif India, \$/tonne	09 Nov 2021	70 - 135	7.89%	Oct 2021	60 - 130
MB-PB-0086	Lead 99.99% ingot premium, cif India, \$/tonne	09 Nov 2021	140 - 150	7.41%	Oct 2021	130 - 140
MB-PB-0107	Lead 99.97% ingot premium, cif Southeast Asia, \$/tonne	09 Nov 2021	80 - 110	11.76%	Oct 2021	80 - 90
MB-PB-0108	Lead 99.99% ingot premium, cif Southeast Asia, \$/tonne	09 Nov 2021	125 - 150	1.85%	Oct 2021	125 - 145
MB-PB-0099	Lead 99.99% ingot premium, delivered Midwest US, US cents/lb	16 Nov 2021	17 - 19	0.00%	Oct 2021	17 - 19
MB-PB-0006	Lead 99.97% ingot premium, ddp Midwest US, US cents/lb	16 Nov 2021	15 - 18	0.00%	Oct 2021	15 - 18

Tin premiums

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-SN-0038	Tin 99.9% ingot premium, cif Taiwan, \$/tonne	16 Nov 2021	300 - 400	-12.50%	Oct 2021	350 - 450
MB-SN-0002	Tin 99.9% ingot premium, in-whs Rotterdam, \$ per tonne	16 Nov 2021	1100 - 1400	-7.41%	Oct 2021	1200 - 1650
MB-SN-0029	Tin 99.9% low lead ingot premium, in-whs Rotterdam, \$/tonne	16 Nov 2021	1500 - 2000	0.00%	Oct 2021	1600 - 1800
MB-SN-0036	Tin 99.85% ingot premium, in-whs Baltimore, \$/tonne	16 Nov 2021	2000 - 2700	-18.26%	Oct 2021	2400 - 3650
MB-SN-0011	Tin grade A min 99.85% ingot premium, ddp Midwest US, \$/tonne	16 Nov 2021	2200 - 2900	-16.39%	Oct 2021	2580 - 3820

Zinc premiums

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-ZN-0116	Zinc SHG 99.995% ingot premium, cif Taiwan \$/tonne	16 Nov 2021	140 - 150	7.41%	Oct 2021	125 - 135
MB-ZN-0106	Zinc SHG min 99.995% ingot premium, cif Shanghai, \$/per tonne	16 Nov 2021	70 - 90	0.00%	Oct 2021	87.5 - 107.5
MB-ZN-0119	Zinc min 99.995% ingot premium, in-whs Shanghai, \$/tonne	16 Nov 2021	70 - 90	0.00%	Oct 2021	87.5 - 107.5
MB-ZN-0113	Zinc SHG 99.995% ingot premium, fca Singapore, \$/per tonne	16 Nov 2021	130 - 140	0.00%	Oct 2021	110 - 127.5
MB-ZN-0115	Zinc SHG 99.995% ingot premium, fca Malaysia, \$/per tonne	16 Nov 2021	130 - 140	0.00%	Oct 2021	110 - 127.5
MB-ZN-0093	Zinc SHG min 99.995% ingot premium, cif Southeast Asia, \$/tonne	16 Nov 2021	130 - 140	-3.57%	Oct 2021	125 - 135
MB-ZN-0001	Zinc SHG min 99.995% ingot premium, dp fca Rotterdam, \$/tonne	16 Nov 2021	230 - 260	2.08%	Oct 2021	170 - 192.5
MB-ZN-0099	Zinc SHG min 99.995% ingot premium, dp fca Antwerp, \$/tonne	16 Nov 2021	230 - 260	2.08%	Oct 2021	170 - 192.5
MB-ZN-0103	Zinc SHG min 99.995% ingot premium, fca dp Italy, \$/tonne	16 Nov 2021	290 - 310	36.36%	Oct 2021	180 - 195
MB-ZN-0102	Zinc SHG min 99.995% ingot premium, ddp Italy, \$/per tonne	16 Nov 2021	310 - 350	20.00%	Oct 2021	212.5 - 235
MB-ZN-0005	Zinc SHG min 99.995% ingot premium, ddp Midwest US, US cents/lb	16 Nov 2021	14 - 17	19.23%	Oct 2021	11.38 - 13.13

**Nickel premiums**

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-NI-0245	Nickel min 99.8% briquette premium, cif Shanghai, \$/tonne	26 Oct 2021	250 - 300	37.50%	Oct 2021	250 - 300
MB-NI-0143	Nickel min 99.8% full plate premium, in-whs Shanghai, \$/tonne	16 Nov 2021	340 - 360	0.00%	Oct 2021	332.5 - 355
MB-NI-0142	Nickel min 99.8% full plate premium, cif Shanghai, \$/tonne	16 Nov 2021	320 - 350	-1.47%	Oct 2021	322.5 - 355
MB-NI-0003	Nickel uncut cathode premium, in-whs Rotterdam, \$/tonne	16 Nov 2021	60 - 80	0.00%	Oct 2021	40 - 75
MB-NI-0001	Nickel 4x4 cathode premium, in-whs Rotterdam, \$/tonne	16 Nov 2021	190 - 250	2.33%	Oct 2021	165 - 220
MB-NI-0002	Nickel briquette premium, in-whs Rotterdam, \$/tonne	16 Nov 2021	150 - 170	0.00%	Oct 2021	130 - 150
MB-NI-0240	Nickel 4x4 cathode premium, delivered Midwest US, US cents/lb	16 Nov 2021	55 - 60	0.00%	Oct 2021	46.25 - 56.25
MB-NI-0241	Nickel briquette premium, delivered Midwest US, US cents/lb	16 Nov 2021	65 - 90	0.00%	Oct 2021	46.25 - 56.25

Base metals warrant premiums

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-AL-0334	Aluminium P1020A, warrant premium, in-whs East Asia, \$/tonne	17 Nov 2021	50 - 80	0.00%	Oct 2021	61.25 - 95
MB-AL-0333	Aluminium P1020A warrant premium, in-whs Southeast Asia, \$/tonne	17 Nov 2021	50 - 80	0.00%	Oct 2021	46.25 - 95
MB-AL-0338	Aluminium P1020A warrant premium, in-whs US, \$/tonne	17 Nov 2021	115 - 125	0.00%	Oct 2021	115 - 125
MB-CU-0398	Copper grade A cathode warrant premium, in-whs East Asia \$/tonne	17 Nov 2021	15 - 25	-38.46%	Oct 2021	25 - 40
MB-CU-0397	Copper grade A cathode warrant premium, in-whs Southeast Asia, \$/tonne	17 Nov 2021	15 - 25	-38.46%	Oct 2021	25 - 40
MB-CU-0400	Copper grade A cathode warrant premium, in-whs North Europe, \$/tonne	17 Nov 2021	5 - 10	0.00%	Oct 2021	5 - 10
MB-CU-0401	Copper grade A cathode warrant premium, in-whs South Europe, \$/tonne	17 Nov 2021	15 - 25	0.00%	Oct 2021	15 - 25
MB-CU-0377	Copper grade A cathode warrant premium, in-whs US, \$/tonne	17 Nov 2021	20 - 25	0.00%	Oct 2021	20 - 25
MB-PB-0106	Lead min 99.97% ingot warrant premium, in-whs East Asia \$/tonne	17 Nov 2021	5 - 20	0.00%	Oct 2021	5 - 20
MB-PB-0105	Lead min 99.97% ingot warrant premium, in-whs Southeast Asia \$/tonne	17 Nov 2021	5 - 20	0.00%	Oct 2021	5 - 20
MB-PB-0109	Lead 99.97% ingot warrant premium, in-whs North Europe, \$/tonne	17 Nov 2021	10 - 30	0.00%	Oct 2021	10 - 30
MB-PB-0110	Lead 99.97% ingot warrant premium, in-whs South Europe, \$/tonne	17 Nov 2021	20 - 30	0.00%	Oct 2021	20 - 30
MB-PB-0097	Lead 99.97% ingot warrant premium, in-whs US, \$/tonne	17 Nov 2021	20 - 30	0.00%	Oct 2021	20 - 30
MB-NI-0138	Nickel min 99.8% briquette warrant premium, in-whs Southeast Asia, \$/tonne	17 Nov 2021	40 - 50	-14.29%	Oct 2021	28.75 - 50
MB-NI-0140	Nickel min 99.8% briquette warrant premium, in-whs East Asia, \$/tonne	17 Nov 2021	45 - 50	-9.52%	Oct 2021	37.5 - 50
MB-NI-0137	Nickel min 99.8% full plate warrant premium, in-whs Southeast Asia, \$/tonne	17 Nov 2021	30 - 45	0.00%	Oct 2021	31.25 - 43.75
MB-NI-0139	Nickel min 99.8% full plate warrant premium, in-whs East Asia, \$/tonne	17 Nov 2021	30 - 40	0.00%	Oct 2021	30 - 40
MB-NI-0141	Nickel min 99.8% warrant premium, in-whs North Europe, \$/tonne	17 Nov 2021	50 - 130	-2.70%	Oct 2021	36.25 - 130
MB-SN-0042	Tin min 99.85% ingot warrant premium, in-whs South East Asia, \$/tonne	17 Nov 2021	50 - 150	0.00%	Oct 2021	50 - 150
MB-ZN-0117	Zinc SHG min 99.995% warrant premium, in-whs North Europe, \$/tonne	17 Nov 2021	80 - 100	0.00%	Oct 2021	80 - 100
MB-ZN-0104	Zinc SHG min 99.995% warrant premium, in-whs US, \$/per tonne	17 Nov 2021	10 - 15	0.00%	Oct 2021	10 - 15
MB-ZN-0123	Zinc SHG min 99.995% warrant premium, in-whs Southeast Asia, \$/tonne	17 Nov 2021	10 - 20	0.00%	Oct 2021	10 - 21.25

Coking coal/coke markets

Source: dashboard.fastmarkets.com/m/00000021-0000-4000-8000-000000000000

Coking coal/coke/PCI news

SSAB announces two further partnerships to use its fossil-free steel

By Carrie Bone - Thursday 18 November

Swedish steelmaker SSAB has announced a further two partnerships involving its fossil-fuel-free steel, to commence in 2026, the company said in separate announcements this week.

It is to collaborate on the research and development of fossil-free steel with automotive safety supplier Autoliv for use in products such as airbags and seatbelts, it said on November 15.

"We are looking forward to working with Autoliv and to starting the research and development of innovative fossil-free steel components for [use in] their automotive safety products," SSAB chief executive officer Martin Lindqvist said.

"We are initiating a number of pilot projects together with Autoliv with the aim of reducing the [effect of these operations on] climate... and to strengthen competitiveness," he added.

SSAB hopes to supply fossil-free steel to the market on a commercial scale in 2026 after converting its Oxelösund blast furnace operation to use an electric-arc furnace, and by replacing coking coal with power from fossil-free electricity and hydrogen.

The process will use the Hybrit technology. This is a project involving SSAB, iron ore company LKAB and power company Vattenfall that started in 2016 and will result in the virtual elimination of carbon dioxide emissions from steel production.

"We are committed to becoming carbon-neutral in our own operations by 2030 and furthermore aim for net-zero emissions across our supply chain by 2040," Mikael Bratt, chief executive of Autoliv, said.

"This means reducing our carbon emissions through the use of renewable electricity in our own and suppliers' operations, improving energy and materials efficiency, and adopting low-carbon logistics and low-carbon materials," he added.

"We are now turning our commitment into action and are well-positioned to continue supporting our customers and partners to reach their sustainability goals. Gradually switching to fossil-free steel in our products is an important step toward achieving our climate targets," he said.

On November 18, SSAB announced that it will also partner with ventilation specialist Lindab to use fossil-free steel in ventilation systems and building products. The two companies will work together on the introduction of SSAB's fossil-free steel to Lindab, SSAB said.

"I am happy to welcome Lindab as a fossil-free steel partner," Lindqvist said. "Together, we are contributing to reduced carbon dioxide emissions in the building and ventilation sector, as well as strengthening competitiveness while maintaining the high quality of [our] products. We are building a fossil-free value chain all the way to the end-customer."

Ola Ringdahl, chief executive officer of Lindab, said: "For us, fossil-free steel is central to our sustainability work. It is the single [material] that has the greatest effect on the environment. We have had a close relationship with SSAB for a long time and we are very happy about the collaboration on fossil-

free steel. We look forward to being able to offer our customers the same high quality as before, but with an even stronger sustainability profile."

Earlier this year, SSAB announced it had produced and delivered the [world's first fossil-fuel-free steel at its site in Oxelösund](#).

Since then it has announced other partnerships involving the [construction industry](#) and the [automotive manufacturing sector](#).

Bangladesh import steel scrap prices dip amid weaker sentiment across Asia

By Paul Lim, Lee Allen, Tianran Zhao - Thursday 18 November

Bangladeshi import steel scrap prices have fallen over the past week despite a continued rise in offer prices for rebar and domestic shipbreaking scrap in the country, sources told Fastmarkets on Thursday November 18.

- Bangladeshi import prices ease downward
- Taiwanese buyers secure containerized scrap at \$445-452 per tonne cfr
- Lack of demand for scrap in China due to hot metal being more attractive to mills.

Bangladesh

Souring sentiment in Asia has led to [lower prices in key markets such as those in South Korea, Japan and Vietnam in recent days](#) [LINK]. Although Bangladeshi container prices have largely been stable over the past two weeks, offer prices for deep-sea cargoes to the country have come down noticeably.

Offers for deep-sea cargoes from the United States West Coast were heard at \$560-565 per tonne cfr Bangladesh for HMS 1&2 (80:20) over the past week, while an offer for UK-origin shredded scrap in bulk was heard at \$585 per tonne cfr on Thursday.

An Australian cargo totaling 30,000 tonnes was heard offered around \$555-560 per tonne cfr Bangladesh for HMS 1&2 (80:20) last week, but the Bangladeshi mill buyer was heard to have waited before taking a decision on the material. The cargo was instead [heard sold to Vietnam at \\$540 per tonne cfr on Friday last week](#).

Deals for two cargoes of bulk Japanese H1:H2 scrap were heard at \$560 per tonne cfr Bangladesh this week, but these could not be confirmed at the time of publication.

Fastmarkets' price assessment for bulk cargoes of [steel scrap, HMS 1&2 \(80:20\), deep-sea origin, import, cfr Bangladesh](#), was \$540-560 per tonne on November 18, down by \$15-25 per tonne week on week from \$565-575 per tonne cfr one week earlier.

Key market sources said that Bangladeshi mills may not step into the deep-sea bulk market while prices were still dropping.

"When people see a downtrend, they watch and wait for the market [to fall]," an exporter source said. "One major mill says they have not bought any containers recently, but I heard they did buy two pig iron cargoes from India at \$535-538 per tonne cfr Bangladesh in October, totaling around 70,000 tonnes."

Local shipbreaking scrap prices were heard to stay strong at 54,500-55,000



taka (\$623-629) per tonne this week, narrowing from **last week's 54,000-55,500 taka per tonne**, while rebar offers moved up to 78,000-79,000 taka per tonne from a major mill. But it was unclear whether end-users could accept such a high bar price, the exporter said.

"There are not a lot of cargoes available on the [US] West Coast at the moment. One cargo was sold to Peru recently, where the turnaround time is only about 14-15 days from the West Coast," a South Asian scrap trader said.

"If US East Coast sellers are struggling to sell to Turkey at \$500 per tonne cfr for HMS 1&2 (80:20) right now, why can't US shippers sell to Bangladesh at \$540 per tonne?" a Singapore-based trading source said. "On the other hand, there is better sentiment in the US domestic market, with expectations of a \$50-60 per tonne increase for December."

Containers of plate and structural (P&S) scrap from Jordan were sold at \$580 per tonne cfr Bangladesh this week, while a mix of HMS 1 and P&S from unspecified origins, in containers, was also sold at \$580 per tonne cfr.

UK-origin HMS 1&2 (80:20) was heard offered at \$540-545 per tonne cfr Bangladesh on Thursday. Sources said earlier in the week that buyers would have accepted at \$545-550 per tonne cfr for similar material.

Fastmarkets' price assessment for **steel scrap, HMS 1&2 (80:20), containerized, import, cfr Bangladesh**, was \$540-550 per tonne cfr on Thursday, down by \$5-10 per tonne from \$550-555 per tonne week on week.

Shredded scrap in containers was heard offered from the UK at \$576-585 per tonne cfr over the past week, with buyers able to accept prices of \$570-575 per tonne cfr.

Taiwan

More transactions for containerized HMS 1&2 (80:20) have been concluded recently at \$445, \$450, \$451 and \$452 per tonne cfr Taiwan by major electric-arc furnace-based producers.

One producer purchased at least 2,000 tonnes of containerized scrap from the US West Coast this week at \$445 per tonne.

But there remains no interest for bulk Japanese H1&H2 (50:50) cargoes, especially after last week's transaction at \$482 per tonne cfr Taiwan.

Fastmarkets' daily price assessment for containerized **steel scrap, HMS 1&2 (80:20 mix), US material import, cfr main port Taiwan**, was \$445-452 per tonne on Thursday, widening downward by \$7 per tonne from \$452 per tonne on Wednesday.

China

A limited number of bids was heard for imported scrap in China on November 18 due to the lack of demand for material, according to sources.

No firm bids were heard for imported HRS101-grade scrap. Market participants estimated that the prevailing market price for such material was \$460-480 per tonne cfr north China on the day.

Fastmarkets' calculation of the **steel scrap, index, heavy recycled steel materials, cfr north China**, was \$470 per tonne on November 18, unchanged from a day earlier.

"With the weak iron ore and coking coal prices, hot metal becomes cheaper than scrap," a mill source in Hebei told Fastmarkets. "Also, because more production curbs [are imposed] during winter, it is not good news for raw material demand. Around \$470 per tonne would be the domestic-import parity price, but I don't think anyone is interested in purchasing cargoes."

The wide gap between bids and offers was another reason for the low liquidity in the imported scrap market, Fastmarkets heard. Offers from Japan for heavy scrap were heard at \$505-510 per tonne fob on November 18, with market sources indicating that the equivalent cost would be about \$550-560 per tonne cfr China.

Seaborne coking coal prices down after a sharp fall in domestic cargoes

By Alice Li - Thursday 18 November

Seaborne coking coal prices in the cfr China market dropped further on Thursday November 18 after domestic cargoes plunged due to weak demand, while the fob Australia coking coal market continued to be quiet without firm buying interest, market sources said.

Fastmarkets indices

Premium hard coking coal, cfr Jingtang: \$523.84 per tonne, down \$26.35 per tonne

Hard coking coal, cfr Jingtang: \$348.75 per tonne, down \$50.22 per tonne

Premium hard coking coal, fob DBCT: \$372.60 per tonne, unchanged

Hard coking coal, fob DBCT: \$324.85 per tonne, unchanged

Market sentiment for seaborne coking coal prices was further dampened after domestic coking coal prices in China's coal hub Shanxi province dropped by about 1,000 yuan (\$157) per tonne day on day to 2,600-2,800 yuan per tonne on Thursday.

"Mills are trying to save [on the cost of] raw materials due to the falling steel prices and there is more room for a price decrease in the coking coal market than the iron ore market," an international trader source said.

United States-origin premium low-volatility hard coking coal was offered at about \$420 per tonne in the reported week but no buying interest was reported.

"US-origin miners have canceled the offers for December-laycan cargoes; they wait [for the] buyer side to actively give bids if [buyers] have firm demand," a trader source from Shanghai said.

The fob Australia coking coal market was muted on Thursday without any visible trading activities, sources told Fastmarkets.

Dalian Commodity Exchange

The most-traded January coking coal futures contract closed at 1,845.50 yuan (\$289.06) per tonne on Thursday, down by 54.50 yuan per tonne day on day.

The most-traded January coke contract closed at 2,770 yuan per tonne on Thursday, down by 7 yuan per tonne day on day.

Coking coal/coke/PCI prices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-COA-0003	Premium hard coking coal, fob DBCT, \$/dmt	18 Nov 2021	372.6	0.00%	Oct 2021	401.26
MB-COA-0005	Premium hard coking coal, cfr Jingtang, \$/dmt	18 Nov 2021	423.84	-5.85%	Oct 2021	609.59
MB-COA-0004	Hard coking coal, fob DBCT, \$/dmt	18 Nov 2021	324.85	0.00%	Oct 2021	341.82



Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-COA-0002	Hard coking coal, cfr Jingtang, \$/dmt	18 Nov 2021	348.75	-12.59%	Oct 2021	563.67
MB-COA-0001	Hard coking coal domestic China spot market, Shanxi-origin, delivered Tangshan, yuan/tonne	15 Nov 2021	3485 - 3870	-6.90%	Oct 2021	3740 - 4250
MB-COA-0008	PCI low-vol, fob DBCT, \$/dmt	12 Nov 2021	222.57	-11.56%	Oct 2021	269.1
MB-COA-0007	PCI low-vol, cfr Jingtang, \$/dmt	12 Nov 2021	225.67	-20.91%	Oct 2021	300.63
MB-COA-0006	Coke 65% CSR, fob China, \$/tonne	16 Nov 2021	550 - 600	-12.55%	Oct 2021	695 - 711.67

Copper raw materials

Source: dashboard.fastmarkets.com/m/00000004-0000-4000-8000-000000000000

Top stories

Kamoa to build Cu smelter at DRC complex

By Yasemin Esmen - Thursday 18 November

A day after Kamoa Copper reported its first full quarter of production, the company announced that it will build a smelter in its Kamoa-Kakula Copper Complex in the Democratic Republic of Congo (DRC).

Kamoa Copper announced on Wednesday November 17 that it produced 41,545 tonnes of copper concentrate in the three months ending September 30.

Approximately 35% of this was sent to the local Lualaba Copper Smelter near Kolwezi for processing into blister copper ingots. The remainder was destined for international markets, the company said.

Production in the mine started in May 2021 and achieved commercial production in July. Reaching a total of 77,500 tonnes of copper concentrate produced by November 15, the company revised its 2021 production guidance to 92,500-100,000 tonnes from the initial 80,000-95,000 tonnes.

"Turning an operating profit in just the first quarter of commercial production at Kamoa highlights the ability of the mine to deliver as promised, and to self-fund its expansion to produce up to 800,000 tonnes of copper yearly, as demonstrated in previous independent studies," Ivanhoe Mines founder and executive co-chair Robert Friedland said.

Kamoa Copper is a joint venture between Ivanhoe Mines, Zijin Mining Group, Crystal River Global Limited, and the Government of the Democratic Republic of Congo.

On Thursday November 18, the company announced that China Nerin Engineering was awarded the basic engineering contract for the planned smelter at Kamoa-Kakula Copper Complex.

The direct-to-blister flash smelter will be built adjacent to the company's concentrator plants and will incorporate technology from sustainable technology producer Metso Outotec. It has been sized to process the majority of the copper concentrate forecast to be produced by Kamoa-Kakula's Phase 1, Phase 2 and Phase 3 concentrators, Kamoa Copper said.

The smelter will have a nameplate capacity of 500,000 tonnes per annum of 99% purity blister copper. It will be built concurrently with the project's Phase 3 mine and concentrator expansion, and the upgrading of turbine 5 at the Inga II hydropower complex, the company said.

Earthworks for the smelter is expected to start in the second quarter 2022.

Copper concentrate news

EV battery recycling infrastructure not keeping pace with demand, report says

By Andrea Hotter - Thursday 18 November

The infrastructure to recycle electric vehicle (EV) batteries is currently not optimized either to handle end-of-life battery capacity or to meet critical materials demands placed on the market with the ramping-up of electrification, according to US-based consultancy Lux Research.

In a report issued on Thursday November 18, the consultancy said that, despite a flurry of activity in the past few years, widespread battery recycling adoption was being hindered by technology limitations and uncertain profitability.

"The recycling industry has historically been buoyed by high-cobalt-content consumer electronics batteries. As EV batteries begin to dominate lithium-ion waste streams, recyclers will have to process diverse cathode chemistries at higher volumes," the report said.

EV batteries contain key minerals such as cobalt, nickel, lithium, copper and manganese, and recycling them would help to create a more circular economy as well as help to alleviate the supply bottlenecks that have appeared with the growth in electrification.

According to Lux Research, more than 100GWh of lithium-ion batteries were deployed in battery EVs and plug-in hybrid EVs in 2020, and that number is rapidly increasing.

"When those batteries reach their end of life, they [will] represent a large environmental risk [but will] contain valuable metals that can be recovered via recycling," the report said.

By the end of 2020, more than 100,000 tonnes (17.6GWh) of batteries reached their end of life; by 2030, this will rise to more than 1 million tonnes (about 150GWh), Lux Research added.

Companies such as TES, Northvolt, Li-Cycle, GEM and Redwood Materials have projects to recycle EV batteries.

But one of the main barriers to battery recycling in the near term is a lack of technology and process innovation, the report said.

"Current battery collection infrastructure and recycling technology are not optimized for cost-effective reuse of valuable materials. Improvements in recycling rate, efficiency and cost savings drive current research & development efforts, but integration into large-scale recycling will take time," the report said.

"As battery waste volumes increase over the next few years, the recyclers with the best technology will be the most competitive," it added.

Diversity in EV battery configurations, meanwhile, posed a challenge to large-scale adoption, Lux Research said.

"While the current battery recycling infrastructure has focused on consumer electronics, whose batteries are nearly the same in size and material composition, the lithium-ion batteries used in EV lack standardization," the report said.

"The variability in design and composition poses a challenge for waste collection and sorting. It also makes it difficult to automate disassembly and recycling processes, requiring costly manual pack removal, pack disassembly, module removal and cell separation," it added.

Similarly, the report noted that the path to profitability was not guaranteed.

"The value of waste batteries lies in the recovered cathode materials.



Recovered battery-grade metals fetch a higher price but require careful refining processes," the report said.

"Furthermore, less valuable cathode chemistries such as the lithium-iron-phosphate [LFP] battery drag down the economic outlook," it added. "Regulations across the globe will force recyclers to accept high volumes of batteries, but it's up to them to make this profitable."

Western Canada copper mine logistics disrupted by major floods

By Ana de Liz, Julian Luk - Thursday 18 November

The logistics of a cluster of copper mines in western Canada have been disrupted by extreme weather conditions in the province of British Columbia (BC) this week, Fastmarkets has learnt.

"All transportation routes, rails and highways, to the interior of the province are closed due to washouts and [land]slides," one Canadian miner source said on Thursday November 18.

The province declared a state of emergency on November 17.

The region is home to Canada's major copper deposits, with mines including Teck's Highland Valley, Taseko's Gibraltar, New Gold's New Afton, Imperial Metals' Red Chris, Centerra Gold's Mount Milligan, as well as Copper Mountain Mining's operation named after the company.

Teck Resources said on November 18 that its copper mining operations were still running, but the logistics between west coast terminals and its BC operations have been disrupted by mudslides, so it has had to divert some trains to Prince Rupert, the province's northern-most outlet port.

The effects on Teck's fourth-quarter sales will depend on the duration of the logistics disruption, the company added.

There has been major damage to rail bridges and the Coquihalla highway, the main route for the transport of mined copper output out of BC via the city of Kamloops.

Local media has reported that it would take months to repair Coquihalla, citing a local government official. With mines low on inventory, declarations of force majeure were possible in the near future.

Canada exported 1,661,000 tonnes and 446,200 tonnes of copper concentrates in 2019 and 2020 respectively, according to the International Copper Study Group.

Fastmarkets' [copper concentrates TC index, cif Asia Pacific](#), was most recently calculated at \$57.90 per tonne/5.79 cents per lb on November 12.

LME base metal futures largely up, tin posts new record price

By Callum Perry - Thursday 18 November

Base metal futures prices on the London Metal Exchange were largely up at the 5pm close on Thursday November 18, with tin reaching a new all-time high.

The three-month tin price closed at \$38,453 per tonne, a rise of 1.2% from \$37,975 per tonne at the 5pm close on Wednesday.

This marks a new all-time high for the soldering metals three-month price, with the previous record being \$38,330 on October 20. Tin had reached \$40,000 during trading on Thursday.

This comes off the back of a report that the Malaysian Smelting Corporation (MSC) is tentatively looking at [ending their force majeure on November 30](#). However, there are questions about whether this will be enough to end the market tightness.

"The [tin] market is and will still be pretty short even if MSC get back to full capacity," one tin trader said.

Elsewhere in the complex, LME three-month nickel saw the biggest price increase, ending its week long decline. The price rallied slightly, rising by 1.5% to \$19,639 per tonne, up from \$19,355 at Wednesday's 5pm close.

Nickel stocks continued to decline further, [reaching 124,866 tonnes](#), further supporting the global market tightness.

The three-month copper price rose modestly at Thursday's 5pm close. Copper rose by 0.3%, up to \$9,441.50 per tonne, after falling to \$9,406.50 per tonne on Wednesday, its lowest level since October 8.

The cash-to-three-month copper spread widened slightly to a \$67-per-tonne backwardation at the 5pm close, up from \$11.50 backwardation on Wednesday.

This is still significantly lower than backwardations in previous weeks and comes after [more Chinese material entered into LME warehouses](#) due to the implementation of measures from the LME to [cool the market on October 19](#).

Elsewhere, the three-month aluminium price remained steady at \$2,616 per tonne, losing only \$0.5 on the \$2,616.50-per-tonne price at the 5pm close on Wednesday.

The light-metal traded on low volumes, with only 9,747 lots traded on Thursday November 18, the lowest volumes since September 7.

The three-month price continued to be supported by tight market supplies, with on-warrant stocks in LME warehouses reaching 587,900 tonnes, their lowest levels since 2005.

"Falling warehouse stocks continue to support our view of strong demand coupled with smelter disruptions creating tightness in the underlying fundamentals," Fastmarkets analyst James Moore said.

The only two metals with no increase in their three-month prices were lead and zinc.

The worst performer of the day was lead; the three-month lead price fell by 1.7% to \$2,215 per tonne, its lowest level since October 12.

The three-month zinc price fell by 1% to \$3,159 per tonne, down from \$3,192 per tonne on Wednesday.

Other highlights

- The US Dollar Index declined modestly to 95.53, at the time of writing, down from 95.72 on Wednesday.

Chile presidential election preview: Main candidates' mining policy and implications for key copper country

By Ana de Liz - Thursday 18 November

Fastmarkets has summarized mining-related policy proposals for the key candidates ahead of Chile's presidential election as presented on their political programs, with the population of the world's biggest copper producing country set to cast their vote on Sunday November 21.

What is at stake?

Chile produced a third of the world's copper in 2020, in the form of concentrates, anodes and cathodes. It is also home to large [lithium](#), zinc, molybdenum, gold, silver and lead reserves, among others.

The Chilean people's choice in the election could sway Chilean mining policies, including the fate of a controversial tax reform bill that may put a [quarter of Chilean copper](#) output at risk.

While current mining officials told Fastmarkets they are eyeing an alternative bill, the direction of travel for the new president and new members of Congress is uncertain on a [proposed tax change](#) that will determine profitability and business sustainability of major miners in the country.

Chile is home to the biggest copper deposits on the planet, including BHP's Escondida; Codelco's Andina and El Teniente projects; Collahuasi, which is jointly owned by Glencore and Anglo American; Teck Resources' Quebrada Blanca project and Antofagasta's Centinela.

Key candidates

Among seven candidates, two front runners have emerged in recent polls: Gabriel Boric Font, a left-wing candidate representing a coalition called Social Convergence, and Jose Antonio Kast Rist, a conservative candidate put forward by the Republican Party of Chile.

Meanwhile, Yasna Provoste Campillay, member of the Democrat-Christian Party and the only female candidate in the race, has fielded 13% of intended votes in a poll conducted on November 7, after which a "blackout" period is mandated by the country's legislation whereby no political canvassing can be published ahead of the election.

The 155 seats in the country's lower house of Congress are also set to be renewed in the election, together with 27 of its 50 Senate posts.

Fastmarkets has summarized the mining-specific proposals made by the three front-running presidential candidates as seen in their political programs to revitalize Chile's mining industry, accounting for over one-tenth of the country's economic output and key to economic recovery after the ramifications of Covid-19.

"We've seen candidates emerge on both sides of the political spectrum, but the uncertainty around the political situation and the outcome of the election is an impairment to longer-term investment planning, and the result of that uncertainty is likely to delay, if not ultimately derail, investment commitments," Concord's head of research Duncan Hobbs said, noting the uncertainty that emerged [ahead of Peru's elections](#) earlier this year.

"We should be mindful of lower copper mining output than expected from countries like Chile and Peru, and other metals coming from those countries, at a time when expected future demand for those metals looks very good," Hobbs added.

Codelco reform, diversification from copper, harmonization of water resources – Kast's key proposals

Kast's official political program includes a stress on diversification to "not depend only on copper and molybdenum and better face international markets" and adding that his party aims for the "transformation of Codelco [the Chilean state-owned copper mining entity] into a diversified mining company."

Kast also says he will "prioritize" a model that allows creation of subsidiaries of Codelco, involved in sectors such as mineral processing plants or electrical energy production. He has proposed a "harmonization" of the country's water resources - battled for by the mining industry and the country's population.

His vision is that "all economic activities in Chile, particularly the manufacturing and mining industries, must commit to the national community to promote long-term sustainability."

Diversification into lithium, environment, new wealth distribution systems – Boric's key proposals

Boric's mining policy outline is relatively brief and abstract, taking up less than one page of his program - as opposed to other candidates, who referenced the mining industry throughout their presentation documents.

Similarly to Kast, the Social Convergence candidate also mentions that mining-related discussions "cannot be based only on the development of copper [mining], but must also be broadened to include metals such as lithium."

The main points of action for would be to "take into relevant environmental aspects for the [development of] mining [activities], such as tailings and desalination." Boric also proposes an "extension and rise in the carbon tax" and its related "polluting activities and motor vehicles."

Boric, who advocates combatting social equality, hopes to establish a "value-generation system" that allows Chile to go from "being a purely extractive country to one that generates wealth from its natural resources."

Reducing mining dependency, a lithium national company and blockchain – Provoste's key propositions:

The only female candidate in the presidential race, Provoste pushed for the "diversification of the country's production matrix" and "reducing economic dependence on mining production" in her political program.

Among her proposals, however, is the creation of a "Lithium National Company," which would be in charge of the country's exploration and exploitation contracts for lithium and its mining projects in Chile's salt flats.

Provoste has also put forward the "promotion of the certification of the sustainability of mining processes based on blockchain." The candidate noted in her political program that "special attention [would be paid to] the interaction between mining, climate change and particular ecosystems, such as salt flats and wetlands."

What next?

The first round of elections is scheduled on November 21, and should no candidate win more than 50% of the vote, a second round would take place on December 19, with the winning candidate set to take charge in March 2022.

The process to change the country's constitution, meanwhile, was kickstarted in May 2021 when 155 members of a new commission were elected to write the new constitution, a process that will remain ongoing despite the election's victor.

Whoever wins, the country's copper mining commission has stated that [nearly \\$69 billion is set up for investment](#) in some of the country's biggest mines, with around 70% of that investment set to come from private companies that have operations in Chile.

Julian Luk, in London, contributed to this article.

China's domestic premium for copper cathodes surges on low supply

By Sally Zhang - Thursday 18 November

The premium for copper cathodes in China's domestic spot market has surged, buoyed by low spot availability, market participants told Fastmarkets.

The premium in the Shanghai spot copper market, which is paid on top of the copper contract price on the Shanghai Futures Exchange, was reported at around 1,200 yuan (\$188.1) per tonne for regular electro-refined (ER) copper cathodes, Fastmarkets learned.

"Spot stocks are low now in Shanghai and this is driving up the premium all the way; some spot business happened at more than 1,000 yuan per tonne, a very high level," a Shanghai-based trader said.

Deliverable stocks of copper at SHFE-registered warehouses stood at 38,037 tonnes in the week to November 12, down by 53.8% from 82,342 tonnes on January 8.

[Shanghai bonded copper stocks](#) were assessed at 180,500-194,500 tonnes on November 15, down by 45.9% from 339,000-354,000 tonnes on January 11.

The spread between the SHFE December copper contract and January copper contract was at a backwardation of 500 yuan per tonne on November 18 amid low stocks.

Previously, there were steep backwardations on London Metal Exchange's copper forward curve, with the cash/three month backwardation briefly soaring up to over \$1,000 per tonne in mid October, which [eased notably](#) in November to \$14.90 per tonne with deliveries of copper cathodes by Chinese smelters.

Falling SHFE copper price also supported the spot premium, the same trader source said.

[SHFE copper](#) closed at 68,910 yuan per tonne on November 18, down by 1,230 per tonne from a day earlier.

The astonishingly high spot premium in China's domestic market, together with easing backwardations on the LME, cheered import appetite for the red metal in the week. This came after absence of import activity for about two weeks amid LME steep backwardations, which put off spot buying.

Fastmarkets assessed the [Shanghai copper premium](#) at \$83-100 per tonne on November 17, widening upward by \$2 per tonne from \$83-98 per tonne on November 16. The premium is up by \$3-5 per tonne from \$80-95 per tonne on November 15, a level unchanged since October 26.

Key copper raw materials prices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-CU-0287	Copper concentrates TC index, cif Asia Pacific, \$/tonne	12 Nov 2021	57.9	-1.19%	Oct 2021	59.92
MB-CU-0288	Copper concentrates RC index, cif Asia Pacific, US cents/lb	12 Nov 2021	5.79	-1.19%	Oct 2021	5.99
MB-CU-0409	Copper blister 98-99% RC annual benchmark, cif China, \$/tonne	22 Jan 2021	140 - 150	12.40%	Oct 2021	140 - 150
MB-CU-0408	Copper blister 98-99% RC spot, cif China, \$/tonne	29 Oct 2021	150 - 170	0.00%	Oct 2021	150 - 170
MB-CU-0512	No1 copper material, RCu-2A,1B (candy/berry), cif China, LME/Comex discount, US cents per lb	25 Oct 2021	12 - 15	38.46%	Oct 2021	12 - 15
MB-CU-0360	No2 copper material, RCu-2B (birch/cliff), cif China, LME/Comex discount, US cents per lb	25 Oct 2021	29 - 33	12.73%	Oct 2021	29 - 33
MB-CU-0422	Copper concentrates counterparty spread, \$/tonne	01 Nov 2021	11.8	26.07%	Oct 2021	9.36
MB-CU-0423	Copper Concentrates Co-VIU, \$/tonne	01 Nov 2021	(0.1)		Oct 2021	(0.1)
MB-CU-0508	Copper concentrates TC implied smelters purchase, cif Asia Pacific, \$/tonne	12 Nov 2021	63.8	-1.09%	Oct 2021	64.6
MB-CU-0510	Copper concentrates RC implied smelters purchase, cif Asia Pacific, cents/lb	12 Nov 2021	6.38	-1.09%	Oct 2021	6.46
MB-CU-0509	Copper concentrates TC implied traders purchase, cif Asia Pacific, \$/tonne	12 Nov 2021	52	-1.33%	Oct 2021	55.24
MB-CU-0511	Copper concentrates RC implied traders purchase, cif Asia Pacific, cents/lb	12 Nov 2021	5.2	-1.33%	Oct 2021	5.52

Ferro-alloy markets

Source: dashboard.fastmarkets.com/m/1746b0c9-25c5-4ffd-b531-bdec474d8481

Bulk ores & alloys news

China's ferro-silicon prices fall further on weakened steel demand

By Jessica Long - Thursday 18 November

China's ferro-silicon prices are not showing any signs of a recovery, having been declining since late September, due to weakened steel demand, improved power supply and cheaper raw materials, especially semi-coke.

Fastmarkets' price assessment for **ferro-silicon 75% Si min export, fob China** was \$2,100-2,300 per tonne on Wednesday November 17, down by \$700 per tonne (25%) from \$2,800-3,000 per tonne a week earlier. The assessment is also 51.6% lower than where it was on September 29, when prices rose to a year-to-date high of \$4,450-4,550 per tonne.

Fastmarkets' price assessment for **ferro-silicon 75% Si min, in-whs China** was 9,500-10,000 yuan (\$1,487-1,565) per tonne on Wednesday, down by 1,500-2,500 yuan per tonne (18.1%) from 11,000-12,500 yuan per tonne on November 10. The assessment is 57.9% lower than a year-to-date high of 22,000-23,000 per tonne on September 29.

Weakened downstream demand due to the steel sector being in its low season as temperatures drop is the principal driver of the decreasing ferro-silicon prices in China, sources said. The onset of the winter heating season in northern China also puts the steel sector under tighter restrictions to lower emissions.

"As I know, steel production in November reached 71 million tonnes, down by 2 million tonnes compared with September... If the downstream steel sector is weakening, how can ferro-silicon prices strengthen?" a market participant

told Fastmarkets.

In addition, the power supply situation affecting many provinces in China is improving, and the operating rates of ferro-silicon producers are higher in October, sources said.

"The previous power cuts among many ferro-alloy producers are now been alleviated to some extent. Therefore, the supply of ferro-silicon is on the rise, which makes the spot market less tight. Naturally prices may weaken," a second market participant told Fastmarkets.

Even though electricity tariffs have been raised, prices for semi-coke, a key ferro-silicon raw material, have moved from over 3,000 yuan per tonne to under 1,700 yuan per tonne, which takes away support from the ferro-silicon market.

"I've even heard of semi-coke being offered at 3,700 yuan per tonne or even higher previously and one tonne of ferro-silicon production requires one tonne of semi-coke. Now that semi-coke prices have plummeted to around 1,700 yuan per tonne, ferro-silicon prices obviously went downward," a third market participant told Fastmarkets.

"Ferro-silicon is a typical market in which participants would conduct purchases when prices are rising and withdraw to the sidelines when prices fall," a fourth market participant said.

The same source said that the price drop was the result of concerns driven by weak ferro-silicon futures. Those who have stock in hand are now destocking, which also results in prices falling.

Most market participants are still taking a wait-and-see approach with ferro-silicon since they believe producers will suspend production once prices fall to cost levels. When this happens, supply will fall and prices will rise again.

Chrome ore

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-CHO-0003	Chrome ore South Africa UG2 concentrates index basis 42%, cif China, \$/tonne	16 Nov 2021	156	0.00%	Oct 2021	159
MB-CHO-0002	Chrome ore Turkish lumpy 40-42%, cfr main Chinese ports, \$/tonne	16 Nov 2021	280 - 300	0.00%	Oct 2021	285 - 305

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	18 Nov 2021	2 - 2.2	0.00%	Oct 2021	
MB-FEC-0004	Ferro-chrome high carbon 6-8.5% C, basis 60-70% Cr, max 1.5% Si, delivered Europe, \$/lb Cr	16 Nov 2021	1.72 - 1.87	0.56%	Oct 2021	1.66 - 1.82
MB-FEC-0001	Ferro-chrome low phosphorous, min 65% Cr, max 0.015% P, delivered Europe, \$/lb	09 Nov 2021	1.78 - 1.95	1.63%	Oct 2021	1.74 - 1.9
MB-FEC-0017	Ferro-chrome high carbon 57-65% Cr, cif dup Japan, \$/lb	18 Nov 2021	1.29 - 1.32	-2.96%	Oct 2021	1.27 - 1.31
MB-FEC-0018	Ferro-chrome high carbon 57-65% Cr, cif dup South Korea, \$/lb	18 Nov 2021	1.28 - 1.31	-2.26%	Oct 2021	1.26 - 1.3
MB-FEC-0021	Ferro-chrome high carbon 6-8.5% C, basis 65-70% Cr, max 1.5% Si, delivered Europe, \$/lb Cr	16 Nov 2021	1.72 - 1.87	0.56%	Oct 2021	1.66 - 1.82

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-FEC-0020	Ferro-chrome high carbon 6-8.5% C, basis 60-64.9% Cr, max 3% Si, cif Europe, \$/lb Cr	16 Nov 2021	1.48 - 1.54	0.00%	Oct 2021	1.43 - 1.49
MB-FEC-0011	Ferro-chrome 50% Cr import, cif main Chinese ports, \$/lb contained Cr	16 Nov 2021	1.3	-0.76%	Oct 2021	1.31
MB-FEC-0006	Ferro-chrome spot 6-8% C, basis 50% Cr, ddp China, yuan/tonne	16 Nov 2021	9600 - 10200	-5.26%	Oct 2021	10875 - 11475
MB-FEC-0005	Ferro-chrome contract 6-8% C, basis 50% Cr, ddp China, yuan/tonne	16 Nov 2021	10295 - 10495	0.00%	Oct 2021	9765 - 9995
MB-FEC-0019	Ferro-chrome lumpy Cr benchmark indicator, charge basis 52% (and high carbon), Europe, \$/lb	16 Nov 2021	1.93	0.52%	Oct 2021	1.88
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 Oct 2021	1.8	15.38%	Oct 2021	1.8
MB-FEC-0014	Ferro-chrome low carbon 0.10%C, 62% Cr min, in-whs Pittsburgh, \$/lb	18 Nov 2021	3.65 - 3.75	0.54%	Oct 2021	
MB-FEC-0013	Ferro-chrome low carbon 0.05%C, 65% Cr min, in-whs Pittsburgh, \$/lb	18 Nov 2021	3.8 - 3.85	0.00%	Oct 2021	
MB-FEC-0015	Ferro-chrome low carbon 0.15%C, 60% Cr min, in-whs Pittsburgh, \$/lb	18 Nov 2021	3.55 - 3.6	0.00%	Oct 2021	
MB-FEC-0003	Ferro-chrome 0.10% C, average 65-70% Cr, delivered Europe, \$/lb Cr	09 Nov 2021	3.8 - 4.09	10.03%	Oct 2021	3.24 - 3.5
MB-FEC-0002	Ferro-chrome low carbon, 65% Cr, max 0.06% C, delivered Europe, \$/lb Cr	09 Nov 2021	3.84 - 4.13	9.92%	Oct 2021	3.28 - 3.54

Manganese ore

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-MNO-0002	Manganese ore 37% Mn, fob Port Elizabeth, \$/dmtu	12 Nov 2021	3.43	-0.58%	Oct 2021	3.06
MB-MNO-0001	Manganese ore 44% Mn, cif Tianjin, \$/dmtu	12 Nov 2021	5.66	-2.41%	Oct 2021	5.47
MB-MNO-0003	Manganese ore index 37% Mn, cif Tianjin, \$/dmtu	12 Nov 2021	4.8	-1.23%	Oct 2021	4.7
MB-MNO-0004	Manganese ore port index, base 37% Mn, range 35-39%, fot Tianjin China, yuan/dmtu	12 Nov 2021	34.7	-2.25%	Oct 2021	35.68
MB-MNO-0005	Manganese ore port index, base 44% Mn, range 42-48%, fot Tianjin China, yuan/dmtu	12 Nov 2021	43.8	-2.67%	Oct 2021	43.72

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	12 Nov 2021	8800 - 9000	-7.77%	Oct 2021	10800 - 11280
MB-FEM-0006	Ferro-manganese basis 78% Mn max, standard 7.5% C, delivered Europe, €/tonne	12 Nov 2021	1800 - 2000	-5.00%	Oct 2021	1830 - 1985
MB-FEM-0002	Ferro-manganese low carbon 80% Mn, max 0.80% C, in-whs Pittsburgh, US cents/lb	18 Nov 2021	315 - 320	0.00%	Oct 2021	295 - 300
MB-FEM-0004	Ferro-manganese medium carbon 80% Mn, max 1.50% C, in-whs Pittsburgh, \$/lb	18 Nov 2021	2.25 - 2.3	0.00%	Oct 2021	
MB-FEM-0003	Ferro-manganese medium carbon 80% Mn, max 1.50% C, in-whs Pittsburgh, US cents/lb	18 Nov 2021	225 - 230	0.00%	Oct 2021	195 - 200
MB-FEM-0001	Ferro-manganese high carbon 78% Mn, standard 7.5% C, in-whs Pittsburgh, \$/long ton	18 Nov 2021	2600 - 2650	0.00%	Oct 2021	2537.5 - 2587.5

Silico-manganese

Symbol	Description	Date	Price	+/-	Month	Monthly Average
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Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-SIM-0001	Silico-manganese 65% Mn min, max 17% Si, in-whs China, yuan/tonne	12 Nov 2021	8600 - 9200	-6.81%	Oct 2021	11260 - 11760
MB-SIM-0004	Silico-manganese 65% Mn min, min 16% Si, fob India, \$/tonne	12 Nov 2021	1650 - 1750	-8.11%	Oct 2021	1830 - 1900
MB-SIM-0002	Silico-manganese lumpy 65-75% Mn, basis 15-19% Si (scale pro rata), major European destinations €/tonne	12 Nov 2021	1800 - 2000	-5.00%	Oct 2021	1840 - 1970
MB-SIM-0005	Silico-manganese 65% Mn min, min 16% Si, in-whs Pittsburgh, \$/lb	18 Nov 2021	1.2 - 1.25	0.00%	Oct 2021	
MB-SIM-0003	Silico-manganese 65% Mn min, min 16% Si, in-whs Pittsburgh, US cents/lb	18 Nov 2021	120 - 125	0.00%	Oct 2021	119 - 121.75

Ferro-silicon

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-FES-0003	Ferro-silicon 75% Si, in-whs Pittsburgh, \$/lb	18 Nov 2021	3.3 - 3.4	0.00%	Oct 2021	
MB-FES-0005	Ferro-silicon lumpy basis 75% Si (scale pro rata), delivered Europe, €/tonne	12 Nov 2021	4000 - 4300	-4.60%	Oct 2021	3860 - 4100
MB-FES-0004	Ferro-silicon 75% Si min export, fob China, \$/tonne	17 Nov 2021	2100 - 2300	-24.14%	Oct 2021	4112.5 - 4262.5
MB-FES-0001	Ferro-silicon 75% Si min, in-whs China, yuan/tonne	17 Nov 2021	9500 - 10000	-17.02%	Oct 2021	19250 - 21125

Noble ores & alloys news

China's APT export price flat, domestic tungsten market weakens

By Ruby Liu - Thursday 18 November

Chinese exporters of ammonium paratungstate (APT) kept their spot offers unchanged in the week to Wednesday November 17 amid slow conditions after foreign buyers took to the sidelines upon noticing weakness in China's domestic market.

Fastmarkets' weekly price assessment for tungsten APT 88.5% WO₃ min, fob main ports China was \$313-319 per metric tonne unit (mtu) on Wednesday, unchanged from a week earlier.

China-based market sources said they would keep their export offers flat until overseas buyers started to show real buying intention.

"Overseas inquiries for APT were very limited in the past week. The prices suggested by some buyers abroad were too low to be accepted. Thus, I would rather not make offers or just keep my offers unchanged," a trader said.

"Once overseas buyers, particularly those downstream manufacturers, began to procure APT, I would negotiate prices with them," he added.

Market sources also told Fastmarkets that they are confident in overseas demand, thus there is no need to cut prices.

"The company I work for is negotiating long-term contracts for APT and tungsten oxide next year with overseas consumers. Those consumers show stable demand for those tungsten intermediates and tell us that they are steadily recovering their production and sales," a producer source said.

Other producer sources said they received similar feedback from foreign buyers.

"Since the overseas market has potential demand for APT while local supply remains tight, I think we don't need to take a rush to reduce export prices in the first place. I will wait for solid [spot] inquiries from established overseas buyers," the first producer source said.

Uncertainty due to price fluctuations in the domestic market and the potential appreciation of the Chinese yuan also encouraged China-based exporters not to reduce their offers this week.

"The domestic market is unpredictable; domestic prices could rise and fall in a very short period. If I reduce offers now, I wouldn't have the confidence to be able to source cheap material in the domestic market once a deal is concluded," a second trader said.

The second trader added that some domestic market participants are trying to build up APT stocks and prices may not experience significant falls as a result.

He also noted that many participants believe the Chinese yuan will continue to strengthen against US dollar.

The Chinese currency was trading at around 6.38395 yuan to \$1 on Wednesday, according to Oanda.com. This compares with 6.40470 yuan to \$1 on November 1.

Chinese yuan was exchanged at 6.3840 per US dollar on November 17, while the exchange rate was 6.4047 on November 1, according to Oanda.

"Exporters like me have to take appreciation of yuan into consideration when making an offer price in dollars," the second trader said.

Weakened domestic market

China's domestic tungsten market weakened this past week, with prices for tungsten concentrate and APT both falling after some sellers lowered their offers to facilitate sales ahead of the year-end.

Fastmarkets' weekly price assessment for tungsten concentrate 65% WO₃, in-whs China was 108,000-111,000 yuan (\$16,857-17,326) per tonne on Wednesday, down by 1,000-3,000 yuan per tonne from 111,000-112,000 yuan per tonne a week earlier.

Market sources told Fastmarkets that some cargo holders, who needed to generate cash before the end of the year, had reduced prices to facilitate sales.

"However, the current concentrate prices still couldn't meet buyers' expectation. Buyers want to purchase the raw materials at prices below 100,000 yuan per tonne. No cargo holders would reduce prices to such a low

level," a second producer source said.

Downstream APT prices in China's domestic market also declined due to falling prices for the auxiliary materials that APT refineries use, such as sodium hydroxide.

"Sodium hydroxide prices once were around 6,000 yuan per tonne in September, but the prices drop by about 2,000 yuan per tonne to less than 4,000 yuan per tonne now," a third trader said. "With reduced input costs, buyers expect APT producers to lower prices."

Producer Xiamen Tungsten reduced its long-term contract prices for APT in the second half of November to 166,000 yuan per tonne, a decline of 5,000 yuan per tonne from 171,000 yuan per tonne for the first half of the month.

Domestic spot APT prices also fell to around 165,000-168,000 yuan per tonne this past week, according to market sources. Prices had been around 169,000-171,000 yuan per tonne in the prior week.

Sources told Fastmarkets that downstream plants are very cautious about spending money to buy raw material at the end of year, when companies usually review their full-year performance and prepare financial reports.

Molybdenum/ferro-molybdenum

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-MO-0001	Molybdenum canned molybdic oxide, in-whs Pittsburgh, \$/lb	18 Nov 2021	18.75 - 19.5	-1.90%	Oct 2021	18.88 - 19.75
MB-FEO-0003	Molybdenum drummed molybdic oxide 57% Mo min, in-whs Rotterdam, \$/lb Mo	17 Nov 2021	18.9 - 19.2	-0.94%	Oct 2021	19.48 - 19.76
MB-FEO-0004	Molybdenum MB drummed molybdic oxide Mo, in-whs Busan, \$/lb	17 Nov 2021	18.3 - 18.5	-2.13%	Oct 2021	18.7 - 18.96
MB-FEO-0002	Ferro-molybdenum 65-70% Mo, in-whs Pittsburgh, \$/lb	18 Nov 2021	21.5 - 22	-2.82%	Oct 2021	21.75 - 22.38
MB-FEO-0001	Ferro-molybdenum 65% Mo min, in-whs Rotterdam, \$/kg Mo	17 Nov 2021	44 - 45	-0.56%	Oct 2021	44.41 - 45.43

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	17 Nov 2021	44 - 46	0.00%	Oct 2021	44 - 46
MB-FET-0001	Ferro-titanium 70% Ti, max 4.5% Al, ddp Europe, \$/kg Ti	17 Nov 2021	7.7 - 8.2	0.00%	Oct 2021	7.7 - 8.18
MB-FET-0002	Ferro-titanium 68-72% Ti, ex-whs US, \$/lb	18 Nov 2021	3.6 - 3.85	0.81%	Oct 2021	3.6 - 3.7

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	12 Nov 2021	320 - 325	0.00%	Oct 2021	317 - 322
MB-W-0003	Tungsten APT 88.5% WO3 min, fob main ports China, \$/mtu WO3	17 Nov 2021	313 - 319	0.00%	Oct 2021	311 - 317.5
MB-W-0002	Tungsten concentrate 65% WO3, in-whs China, yuan/tonne	17 Nov 2021	108000 - 111000	-1.79%	Oct 2021	111500 - 113250
MB-FEU-0001	Ferro-tungsten basis 75% W, in-whs dup Rotterdam, \$/kg W	17 Nov 2021	37 - 38.5	1.62%	Oct 2021	37.04 - 38.5
MB-FEU-0003	Ferro-tungsten export, min 75% fob China, \$/kg W	17 Nov 2021	38 - 40	0.00%	Oct 2021	38.63 - 40.18

Vanadium pentoxide/ferro-vanadium

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-V-0001	Vanadium pentoxide 98% V2O5 min, in-whs Rotterdam, \$/lb V2O5	12 Nov 2021	7.5 - 8.5	0.00%	Oct 2021	7.46 - 8.5
MB-V-0002	Vanadium pentoxide 98% V2O5 min, fob China, \$/lb V2O5	18 Nov 2021	8.03 - 8.17	6.16%	Oct 2021	7.1 - 7.25
MB-V-0004	Vanadium pentoxide 98% V2O5 min, exw China, yuan/tonne	18 Nov 2021	113000 - 115000	6.05%	Oct 2021	100500 - 102750
MB-FEV-0002	Ferro-vanadium 70-80% V, in-whs Pittsburgh, \$/lb	18 Nov 2021	14.9 - 15.25	1.55%	Oct 2021	14.85 - 15.5
MB-FEV-0001	Ferro-vanadium basis 78% V min, 1st grade, ddp Western Europe, \$/kg V	17 Nov 2021	32 - 33	0.78%	Oct 2021	31.25 - 32.39
MB-FEV-0003	Ferro-vanadium 78% V min, fob China, \$/kg V	18 Nov 2021	33.77 - 35.19	5.06%	Oct 2021	31.11 - 31.86

Iron ore markets

Source: dashboard.fastmarkets.com/m/74f0932b-34c8-430d-a2b6-2402986448e2

Top stories

DCE's most-traded iron ore futures contract hits record low

By Zihao Yu - Thursday 18 November

Iron ore prices fell in China on Thursday November 18 in response to a new round of controls imposed on blast furnace operation and emissions restrictions in the city of Handan in Hebei province, sources said.

Fastmarkets iron ore indices

62% Fe fines, cfr Qingdao: \$87.27 per tonne, down \$3.81 per tonne

62% Fe low-alumina fines, cfr Qingdao: \$88.26 per tonne, down \$3.04 per tonne

58% Fe fines high-grade premium, cfr Qingdao: \$60.58 per tonne, down \$2.73 per tonne

65% Fe Brazil-origin fines, cfr Qingdao: \$102 per tonne, down \$3.90 per tonne

63% Fe Australia-origin lump ore premium, cfr Qingdao: \$0.1100 per dry metric tonne unit (dmtu), unchanged

62% Fe fines, fot Qingdao: 587 yuan per wet metric tonne (implied 62% Fe China port price: \$83.79 per dry tonne), down by 21 yuan per wmt

Key drivers

The most-traded January iron ore futures contract on the Dalian Commodity Exchange (DCE) fell by 5% from Wednesday's closing price of 538.50 yuan (\$84) per tonne to close at a record low in the most-traded contract of 511.50 yuan per tonne - the previous low was 515 yuan per tonne on January 7, 2019.

The most-traded December iron ore forward-month swap contract on the Singapore Exchange (SGX) also decreased. By 6:06pm Singapore time, it had fallen by \$2.41 per tonne from Wednesday's settlement price of \$88.81 per tonne.

According to sources, steelmaking restrictions in Handan came into force from November 18 and will remain in place until December 31, including sintering restrictions and blast furnace shutdowns of 30-50% in some steel mills.

The restrictions have soured market sentiment and weighed on the near-term demand outlook for iron ore, which pressured iron ore prices lower, a trading source in Shanghai said.

The imbalance between supply and demand of iron ore supply has also been driving down prices, a trading source in Singapore added.

Although steel prices have held up relatively well, which might otherwise support iron ore prices within a narrow range at these lower levels, the weakening of iron ore demand is significant especially given the current over-supply situation, making it likely that prices will drop further, he also said.

Rebar production and inventory levels are decreasing alongside demand, a trading source in southern China said. The forthcoming winter season could further depress steel demand to due a seasonal slowdown in the construction section, which also cause demand for iron ore to shrink, he added.

Quote of the day

"Iron Ore Carajas fines prices have slumped so much that to sell it at ports in Shandong province is no longer profitable compared with a profit of around \$56 per tonne at the previous peak, which implies weak demand for high-grade fines due to falling steel mills' margins," a second trading source in Singapore said.

Trades/offers/bids heard in the market

Spot market, 170,000 tonnes of 62% Fe Pilbara Blend fines, traded at the December average of a 62% Fe index at a premium of \$0.90 per tonne, laycan November 27-December 6.

Spot market, 170,000 tonnes of 62% Fe Pilbara Blend fines, traded at the January average of a 62% Fe index at a premium of \$0.70 per tonne, December arrival.

Rio Tinto, Globalore, 170,000 tonnes of 62% Fe Pilbara Blend fines, offered at \$87.75 per tonne cfr China, December 11-20.

Market participant indications

Fastmarkets index for iron ore 62% Fe fines

Pilbara Blend fines: \$84.36-87.20 per tonne cfr China
Brazilian Blend fines: \$87-89.50 per tonne cfr China
Newman fines: \$85.59-87.58 per tonne cfr China
Mining Area C fines: \$76.33-76.99 per tonne cfr China
Jimblebar fines: \$66.65-71.14 per tonne cfr China

Fastmarkets index for iron ore 65% Fe Brazil-origin fines
Iron Ore Carajas fines: \$101-103 per tonne cfr China

Port prices

Pilbara Blend fines were traded at 565-620 yuan per wmt in Shandong province, Tangshan and Tianjin City on Thursday compared with 590-645 yuan per wmt on Wednesday.

The latest range is equivalent to about \$80-89 per tonne in the seaborne market.

Dalian Commodity Exchange

The most-traded January iron ore futures contract closed at 511.50 yuan (\$80) per tonne on Thursday, down by 27 yuan per tonne from Wednesday's closing price.

Alex Theo in Singapore and Alice Li in Shanghai contributed to this article.



News

SSAB announces two further partnerships to use its fossil-free steel

By Carrie Bone - Thursday 18 November

Swedish steelmaker SSAB has announced a further two partnerships involving its fossil-fuel-free steel, to commence in 2026, the company said in separate announcements this week.

It is to collaborate on the research and development of fossil-free steel with automotive safety supplier Autoliv for use in products such as airbags and seatbelts, it said on November 15.

"We are looking forward to working with Autoliv and to starting the research and development of innovative fossil-free steel components for [use in] their automotive safety products," SSAB chief executive officer Martin Lindqvist said.

"We are initiating a number of pilot projects together with Autoliv with the aim of reducing the [effect of these operations on] climate... and to strengthen competitiveness," he added.

SSAB hopes to supply fossil-free steel to the market on a commercial scale in 2026 after converting its Oxelösund blast furnace operation to use an electric-arc furnace, and by replacing coking coal with power from fossil-free electricity and hydrogen.

The process will use the Hybrit technology. This is a project involving SSAB, iron ore company LKAB and power company Vattenfall that started in 2016 and will result in the virtual elimination of carbon dioxide emissions from steel production.

"We are committed to becoming carbon-neutral in our own operations by

2030 and furthermore aim for net-zero emissions across our supply chain by 2040," Mikael Bratt, chief executive of Autoliv, said.

"This means reducing our carbon emissions through the use of renewable electricity in our own and suppliers' operations, improving energy and materials efficiency, and adopting low-carbon logistics and low-carbon materials," he added.

"We are now turning our commitment into action and are well-positioned to continue supporting our customers and partners to reach their sustainability goals. Gradually switching to fossil-free steel in our products is an important step toward achieving our climate targets," he said.

On November 18, SSAB announced that it will also partner with ventilation specialist Lindab to use fossil-free steel in ventilation systems and building products. The two companies will work together on the introduction of SSAB's fossil-free steel to Lindab, SSAB said.

"I am happy to welcome Lindab as a fossil-free steel partner," Lindqvist said. "Together, we are contributing to reduced carbon dioxide emissions in the building and ventilation sector, as well as strengthening competitiveness while maintaining the high quality of [our] products. We are building a fossil-free value chain all the way to the end-customer."

Ola Ringdahl, chief executive officer of Lindab, said: "For us, fossil-free steel is central to our sustainability work. It is the single [material] that has the greatest effect on the environment. We have had a close relationship with SSAB for a long time and we are very happy about the collaboration on fossil-free steel. We look forward to being able to offer our customers the same high quality as before, but with an even stronger sustainability profile."

Earlier this year, SSAB announced it had produced and delivered the [world's first fossil-fuel-free steel at its site in Oxelösund](#).

Since then it has announced other partnerships involving the [construction industry](#) and the [automotive manufacturing sector](#).

Daily indices price table

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-IRO-0009	Iron ore 65% Fe Brazil-origin fines, cfr Qingdao, \$/tonne	18 Nov 2021	102	-3.68%	Oct 2021	143.24
MB-IRO-0144	Iron ore 62% Fe low-alumina fines, cfr Qingdao, \$/tonne	18 Nov 2021	88.26	-3.33%	Oct 2021	122.87
MB-IRO-0008	Iron ore 62% Fe fines, cfr Qingdao, \$/tonne	18 Nov 2021	87.27	-4.18%	Oct 2021	120.76
MB-IRO-0017	Iron ore 58% Fe fines high-grade premium index, cfr Qingdao, \$/tonne	18 Nov 2021	60.58	-4.31%	Oct 2021	92.15
MB-IRO-0016	Iron ore 58% Fe fines high-grade premium, cfr Qingdao, \$/tonne	18 Nov 2021	6.5	-7.14%	Oct 2021	15.1
MB-IRO-0015	Iron ore 58% Fe fines, cfr Qingdao, \$/tonne	18 Nov 2021	54.08	-3.96%	Oct 2021	77.06
MB-IRO-0010	Iron ore 63% Fe Australia-origin lump ore premium, cfr Qingdao, US cents/dmtu	18 Nov 2021	11	0.00%	Oct 2021	20.5
MB-IRO-0022	Iron ore 62% Fe fines, fot Qingdao, \$/tonne conversion	18 Nov 2021	83.79	-3.53%	Oct 2021	126.26
MB-IRO-0011	Iron ore 62% Fe fines, fot Qingdao, yuan/wet tonne	18 Nov 2021	587	-3.45%	Oct 2021	876.38
MB-IRO-0076	Iron ore product differential - 62% Fe Pilbara Blend Fines, cfr Qingdao, \$/tonne	18 Nov 2021	(0.62)		Oct 2021	(0.69)
MB-IRO-0114	Iron ore 62% Fe Pilbara blend fines, cfr Qingdao, \$/tonne	18 Nov 2021	86.65	-4.21%	Oct 2021	120.07

Weekly and monthly indices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-IRO-0012	Iron ore 65% Fe blast furnace pellet, cfr Qingdao, \$/tonne	12 Nov 2021	164.14	-3.27%	Oct 2021	186.24
MB-IRO-0013	Iron ore 66% Fe concentrate, cfr Qingdao, \$/tonne	12 Nov 2021	111.03	-5.69%	Oct 2021	141.88

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-IRO-0077	Iron ore DR-grade pellet premium to 65% Fe fines index, Middle East reference, \$/tonne	29 Oct 2021	50	-28.57%	Oct 2021	50
MB-IRO-0177	Iron ore pellet premium over 65% Fe fines, cfr China, \$/tonne	12 Nov 2021	52.3	-6.10%	Oct 2021	44.58

Weekly value-in-use indices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-IRO-0021	Iron ore 62% Fe fines, % Al ₂ O ₃ VIU, cfr Qingdao, \$/tonne	18 Nov 2021	(6.21)		Oct 2021	(6.62)
MB-IRO-0018	Iron ore 62% Fe fines, % Fe VIU, cfr Qingdao, \$/tonne	18 Nov 2021	1.85	0.00%	Oct 2021	2.36
MB-IRO-0020	Iron ore 62% Fe fines, % Si VIU, cfr Qingdao, \$/tonne	18 Nov 2021	(4.8)		Oct 2021	(5.45)
MB-IRO-0024	Iron ore 62% Fe fines, 0.01% P VIU, cfr Qingdao, \$/tonne	18 Nov 2021	(0.83)		Oct 2021	(0.83)
MB-IRO-0019	Iron ore 65% Fe fines, % Fe VIU, cfr Qingdao \$/tonne	18 Nov 2021	2.03	0.00%	Oct 2021	2.77

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	12 Nov 2021	3.43	-0.58%	Oct 2021	3.06
MB-MNO-0001	Manganese ore 44% Mn, cif Tianjin, \$/dmtu	12 Nov 2021	5.66	-2.41%	Oct 2021	5.47
MB-MNO-0003	Manganese ore index 37% Mn, cif Tianjin, \$/dmtu	12 Nov 2021	4.8	-1.23%	Oct 2021	4.7
MB-MNO-0004	Manganese ore port index, base 37% Mn, range 35-39%, fot Tianjin China, yuan/dmtu	12 Nov 2021	34.7	-2.25%	Oct 2021	35.68
MB-MNO-0005	Manganese ore port index, base 44% Mn, range 42-48%, fot Tianjin China, yuan/dmtu	12 Nov 2021	43.8	-2.67%	Oct 2021	43.72

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	12 Nov 2021	8600 - 9200	-6.81%	Oct 2021	11260 - 11760
MB-SIM-0004	Silico-manganese 65% Mn min, min 16% Si, fob India, \$/tonne	12 Nov 2021	1650 - 1750	-8.11%	Oct 2021	1830 - 1900
MB-SIM-0002	Silico-manganese lumpy 65-75% Mn, basis 15-19% Si (scale pro rata), major European destinations €/tonne	12 Nov 2021	1800 - 2000	-5.00%	Oct 2021	1840 - 1970
MB-SIM-0005	Silico-manganese 65% Mn min, min 16% Si, in-whs Pittsburgh, \$/lb	18 Nov 2021	1.2 - 1.25	0.00%	Oct 2021	
MB-SIM-0003	Silico-manganese 65% Mn min, min 16% Si, in-whs Pittsburgh, US cents/lb	18 Nov 2021	120 - 125	0.00%	Oct 2021	119 - 121.75

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	12 Nov 2021	8800 - 9000	-7.77%	Oct 2021	10800 - 11280
MB-FEM-0006	Ferro-manganese basis 78% Mn max, standard 7.5% C, delivered Europe, €/tonne	12 Nov 2021	1800 - 2000	-5.00%	Oct 2021	1830 - 1985
MB-FEM-0002	Ferro-manganese low carbon 80% Mn, max 0.80% C, in-whs Pittsburgh, US cents/lb	18 Nov 2021	315 - 320	0.00%	Oct 2021	295 - 300
MB-FEM-0004	Ferro-manganese medium carbon 80% Mn, max 1.50% C, in-whs Pittsburgh, \$/lb	18 Nov 2021	2.25 - 2.3	0.00%	Oct 2021	
MB-FEM-0003	Ferro-manganese medium carbon 80% Mn, max 1.50% C, in-whs Pittsburgh, US cents/lb	18 Nov 2021	225 - 230	0.00%	Oct 2021	195 - 200
MB-FEM-0001	Ferro-manganese high carbon 78% Mn, standard 7.5% C, in-whs Pittsburgh, \$/long ton	18 Nov 2021	2600 - 2650	0.00%	Oct 2021	2537.5 - 2587.5

SPB

Source: dashboard.fastmarkets.com/m/74fba24b-937e-4451-9960-041bac5bbfa3

Pittsburgh

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0303	Steel scrap No1 heavy melt, consumer buying price, delivered mill Pittsburgh, \$/gross ton	04 Nov 2021	475	13.10%	Oct 2021	420
MB-STE-0304	Steel scrap No1 bundles, consumer buying price, delivered mill Pittsburgh, \$/gross ton	04 Nov 2021	591	3.50%	Oct 2021	571
MB-STE-0305	Steel scrap No2 bundles, consumer buying price, delivered mill Pittsburgh, \$/gross ton	04 Nov 2021	389	18.24%	Oct 2021	329
MB-STE-0306	Steel scrap No1 busheling, consumer buying price, delivered mill Pittsburgh, \$/gross ton	04 Nov 2021	610	3.39%	Oct 2021	590
MB-STE-0308	Steel scrap shredded auto scrap, consumer buying price, delivered mill Pittsburgh, \$/gross ton	04 Nov 2021	530	12.77%	Oct 2021	470
MB-STE-0309	Steel scrap machine shop turnings, consumer buying price, delivered mill Pittsburgh, \$/gross ton	04 Nov 2021	375	11.94%	Oct 2021	335
MB-STE-0310	Steel scrap cast iron borings, consumer buying price, delivered mill Pittsburgh, \$/gross ton	04 Nov 2021	330	13.79%	Oct 2021	290
MB-STE-0312	Steel scrap cut structural/plate 5ft max, consumer buying price, delivered mill Pittsburgh, \$/gross ton	04 Nov 2021	505	10.99%	Oct 2021	455
MB-STE-0598	Steel scrap punchings and plate, consumer buying price, delivered mill Pittsburgh, \$/gross ton	08 Nov 2021	832	5.05%	Oct 2021	792

Chicago

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0228	Steel scrap No1 heavy melt, consumer buying price, delivered mill Chicago, \$/gross ton	04 Nov 2021	480	11.63%	Oct 2021	430
MB-STE-0229	Steel scrap No2 heavy melt, consumer buying price, delivered mill Chicago, \$/gross ton	04 Nov 2021	465	12.05%	Oct 2021	415
MB-STE-0230	Steel scrap No1 bundles, consumer buying price, delivered mill Chicago, \$/gross ton	04 Nov 2021	585	3.54%	Oct 2021	565
MB-STE-0231	Steel scrap No2 bundles, consumer buying price, delivered mill Chicago, \$/gross ton	04 Nov 2021	355	12.70%	Oct 2021	315
MB-STE-0232	Steel scrap No1 busheling, consumer buying price, delivered mill Chicago, \$/gross ton	04 Nov 2021	580	3.57%	Oct 2021	560
MB-STE-0233	Steel scrap shredded auto scrap, consumer buying price, delivered mill Chicago, \$/gross ton	04 Nov 2021	540	12.50%	Oct 2021	480
MB-STE-0234	Steel scrap machine shop turnings, consumer buying price, delivered mill Chicago, \$/gross ton	04 Nov 2021	330	13.79%	Oct 2021	290
MB-STE-0235	Steel scrap cast iron borings, consumer buying price, delivered mill Chicago, \$/gross ton	04 Nov 2021	370	15.63%	Oct 2021	320
MB-STE-0236	Steel scrap cut structural/plate 2ft max, consumer buying price, delivered mill Chicago, \$/gross ton	04 Nov 2021	634	8.56%	Oct 2021	584
MB-STE-0237	Steel scrap cut structural/plate 5ft max, consumer buying price, delivered mill Chicago, \$/gross ton	04 Nov 2021	505	8.60%	Oct 2021	465
MB-STE-0577	Steel scrap low-residual, black foundry busheling, consumer buying price, delivered mill Chicago, \$/gross ton	08 Nov 2021	742	2.77%	Oct 2021	722



Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0578	Steel scrap low-residual, ductile-quality shredded clips, consumer buying price, delivered mill Chicago, \$/gross ton	08 Nov 2021	742	2.77%	Oct 2021	722
MB-STE-0579	Steel scrap low-alloy punchings, consumer buying price, delivered mill Chicago, \$/gross ton	08 Nov 2021	762	2.70%	Oct 2021	742
MB-STE-0239	Steel scrap cupola cast, consumer buying price, delivered mill Chicago, \$/gross ton	04 Nov 2021	609	8.94%	Oct 2021	559
MB-STE-0240	Steel scrap clean auto cast, consumer buying price, delivered mill Chicago, \$/gross ton	04 Nov 2021	672	8.04%	Oct 2021	622
MB-STE-0243	Steel scrap drop broken machinery cast, consumer buying price, delivered mill Chicago, \$/gross ton	04 Nov 2021	587	9.31%	Oct 2021	537
MB-STE-0246	Steel scrap steel car wheels, consumer buying price, delivered mill Chicago, \$/gross ton	04 Nov 2021	545	10.10%	Oct 2021	495
MB-STE-0244	Steel scrap rail crops 2ft max, consumer buying price, delivered mill Chicago, \$/gross ton	04 Nov 2021	603	9.04%	Oct 2021	553

Philadelphia

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0285	Steel scrap No1 heavy melt, consumer buying price, delivered mill Philadelphia, \$/gross ton	05 Nov 2021	440	10.00%	Oct 2021	400
MB-STE-0286	Steel scrap No1 bundles, consumer buying price, delivered mill Philadelphia, \$/gross ton	05 Nov 2021	550	3.77%	Oct 2021	530
MB-STE-0287	Steel scrap No2 bundles, consumer buying price, delivered mill Philadelphia, \$/gross ton	05 Nov 2021	390	16.42%	Oct 2021	335
MB-STE-0288	Steel scrap No1 busheling, consumer buying price, delivered mill Philadelphia, \$/gross ton	05 Nov 2021	550	3.77%	Oct 2021	530
MB-STE-0289	Steel scrap shredded auto scrap, consumer buying price, delivered mill Philadelphia, \$/gross ton	05 Nov 2021	505	12.22%	Oct 2021	450
MB-STE-0290	Steel scrap machine shop turnings, consumer buying price, delivered mill Philadelphia, \$/gross ton	05 Nov 2021	335	6.35%	Oct 2021	315
MB-STE-0291	Steel scrap cut structural/plate 2ft max, consumer buying price, delivered mill Philadelphia, \$/gross ton	05 Nov 2021	565	7.62%	Oct 2021	525
MB-STE-0292	Steel scrap cut structural/plate 3ft max, consumer buying price, delivered mill Philadelphia, \$/gross ton	05 Nov 2021	460	9.52%	Oct 2021	420
MB-STE-0293	Steel scrap cut structural/plate 5ft max, consumer buying price, delivered mill Philadelphia, \$/gross ton	05 Nov 2021	450	9.76%	Oct 2021	410

St Louis

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0621	Steel scrap No1 heavy melting, broker buying price, fob St Louis, \$/gross ton	08 Nov 2021	425	10.39%	Oct 2021	385
MB-STE-0622	Steel scrap No2 heavy melting, broker buying price, fob St Louis, \$/gross ton	08 Nov 2021	415	10.67%	Oct 2021	375
MB-STE-0623	Steel scrap No1 busheling, broker buying price, fob St Louis, \$/gross ton	08 Nov 2021	565	3.67%	Oct 2021	545
MB-STE-0624	Steel scrap No1 dealer bundles, broker buying price, fob St Louis, \$/gross ton	08 Nov 2021	560	3.70%	Oct 2021	540
MB-STE-0626	Steel scrap shredded scrap, broker buying price, fob St Louis, \$/gross ton	08 Nov 2021	465	13.41%	Oct 2021	410
MB-STE-0627	Steel scrap machine shop turnings, broker buying price, fob St Louis, \$/gross ton	08 Nov 2021	270	17.39%	Oct 2021	230
MB-STE-0631	Steel scrap plate and structurals 5ft and under, broker buying price, fob St Louis, \$/gross ton	08 Nov 2021	440	10.00%	Oct 2021	400

Detroit

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0633	Steel scrap No1 heavy melting, broker buying price, fob Detroit, \$/gross ton	08 Nov 2021	325	20.37%	Oct 2021	270
MB-STE-0634	Steel scrap No1 dealer bundles, broker buying price, fob Detroit, \$/gross ton	08 Nov 2021	390	5.41%	Oct 2021	370
MB-STE-0635	Steel scrap No1 busheling, broker buying price, fob Detroit, \$/gross ton	08 Nov 2021	438	4.78%	Oct 2021	418
MB-STE-0636	Steel scrap shredded scrap, broker buying price, fob Detroit, \$/gross ton	08 Nov 2021	393	23.58%	Oct 2021	318
MB-STE-0637	Steel scrap plate and structurals 5ft and under, broker buying price, fob Detroit, \$/gross ton	08 Nov 2021	356	20.27%	Oct 2021	296
MB-STE-0638	Steel scrap machine shop turnings, broker buying price, fob Detroit, \$/gross ton	08 Nov 2021	85	88.89%	Oct 2021	45
MB-STE-0640	Steel scrap cast iron borings, broker buying price, fob Detroit, \$/gross ton	08 Nov 2021	115	53.33%	Oct 2021	75

Cleveland

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0255	Steel scrap No1 heavy melt, consumer buying price, delivered mill Cleveland, \$/gross ton	08 Nov 2021	480	12.94%	Oct 2021	425
MB-STE-0256	Steel scrap No1 bundles, consumer buying price, delivered mill Cleveland, \$/gross ton	08 Nov 2021	640	3.23%	Oct 2021	620
MB-STE-0257	Steel scrap No1 busheling, consumer buying price, delivered mill Cleveland, \$/gross ton	08 Nov 2021	640	3.23%	Oct 2021	620
MB-STE-0258	Steel scrap shredded auto scrap, consumer buying price, delivered mill Cleveland, \$/gross ton	08 Nov 2021	530	15.22%	Oct 2021	460
MB-STE-0259	Steel scrap machine shop turnings, consumer buying price, delivered mill Cleveland, \$/gross ton	08 Nov 2021	305	24.49%	Oct 2021	245
MB-STE-0260	Steel scrap cut structural/plate 5ft max, consumer buying price, delivered mill Cleveland, \$/gross ton	08 Nov 2021	500	13.64%	Oct 2021	440
MB-STE-0653	Steel scrap punchings and plate, broker buying price, fob Cleveland, \$/gross ton	08 Nov 2021	780	5.41%	Oct 2021	740

Cincinnati

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0249	Steel scrap No1 heavy melt, consumer buying price, delivered mill Cincinnati, \$/gross ton	04 Nov 2021	460	12.20%	Oct 2021	410
MB-STE-0250	Steel scrap No1 bundles, consumer buying price, delivered mill Cincinnati, \$/gross ton	04 Nov 2021	575	3.60%	Oct 2021	555
MB-STE-0251	Steel scrap No1 busheling, consumer buying price, delivered mill Cincinnati, \$/gross ton	04 Nov 2021	575	3.60%	Oct 2021	555
MB-STE-0252	Steel scrap shredded auto scrap, consumer buying price, delivered mill Cincinnati, \$/gross ton	04 Nov 2021	505	17.44%	Oct 2021	430
MB-STE-0253	Steel scrap machine shop turnings, consumer buying price, delivered mill Cincinnati, \$/gross ton	04 Nov 2021	287	16.19%	Oct 2021	247
MB-STE-0254	Steel scrap cut structural/plate 5ft max, consumer buying price, delivered mill Cincinnati, \$/gross ton	04 Nov 2021	485	11.49%	Oct 2021	435

Birmingham

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0698	Steel scrap No1 heavy melting, broker buying price, fob Birmingham, \$/gross ton	05 Nov 2021	313	14.65%	Oct 2021	273



Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0699	Steel scrap No2 heavy melting, broker buying price, fob Birmingham, \$/gross ton	05 Nov 2021	303	15.21%	Oct 2021	263
MB-STE-0700	Steel scrap No1 dealer bundles, broker buying price, fob Birmingham, \$/gross ton	05 Nov 2021	505	4.12%	Oct 2021	485
MB-STE-0702	Steel scrap No1 busheling, broker buying price, fob Birmingham \$/gross ton	05 Nov 2021	475	4.40%	Oct 2021	455
MB-STE-0703	Steel scrap shredded scrap, broker buying price, fob Birmingham \$/gross ton	05 Nov 2021	480	11.63%	Oct 2021	430
MB-STE-0704	Steel scrap machine shop turnings, broker buying price, fob Birmingham \$/gross ton	05 Nov 2021	270	17.39%	Oct 2021	230
MB-STE-0710	Steel scrap plate and structurals 5ft and under, broker buying price, fob Birmingham \$/gross ton	05 Nov 2021	385	11.59%	Oct 2021	345

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	05 Nov 2021	460	9.52%	Oct 2021	420
MB-STE-0323	Steel scrap No1 busheling, consumer buying price, delivered mill South Carolina, \$/gross ton	05 Nov 2021	550	3.77%	Oct 2021	530
MB-STE-0324	Steel scrap shredded auto scrap, consumer buying price, delivered mill South Carolina, \$/gross ton	05 Nov 2021	490	11.36%	Oct 2021	440
MB-STE-0325	Steel scrap machine shop turnings, consumer buying price, delivered mill South Carolina, \$/gross ton	05 Nov 2021	375	11.94%	Oct 2021	335
MB-STE-0326	Steel scrap cut structural/plate 5ft max, consumer buying price, delivered mill South Carolina, \$/gross ton	05 Nov 2021	470	9.30%	Oct 2021	430

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	15 Nov 2021	390	0.00%	Oct 2021	342.5
MB-STE-0380	Steel scrap No2 bundles, export yard buying price, delivered to yard New York, \$/gross ton	15 Nov 2021	340	0.00%	Oct 2021	292.5
MB-STE-0381	Steel scrap machine shop turnings, export yard buying price, delivered to yard New York, \$/gross ton	15 Nov 2021	285	0.00%	Oct 2021	237.5
MB-STE-0382	Steel scrap mixed cast, export yard buying price, delivered to yard New York, \$/gross ton	15 Nov 2021	385	0.00%	Oct 2021	337.5
MB-STE-0383	Steel scrap unstripped motor blocks, export yard buying price, delivered to yard New York, \$/gross ton	15 Nov 2021	405	0.00%	Oct 2021	357.5
MB-STE-0384	Steel scrap auto bodies, export yard buying price, delivered to yard New York, \$/gross ton	15 Nov 2021	370	0.00%	Oct 2021	322.5
MB-STE-0385	Steel scrap cut structural/plate 5ft max, export yard buying price, delivered to yard New York, \$/gross ton	15 Nov 2021	400	0.00%	Oct 2021	352.5

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	15 Nov 2021	370	1.37%	Oct 2021	337.5
MB-STE-0369	Steel scrap unstripped motor blocks, export yard buying price, delivered to yard Boston, \$/gross ton	15 Nov 2021	370	1.37%	Oct 2021	337.5

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0370	Steel scrap auto bodies, export yard buying price, delivered to yard Boston, \$/gross ton	15 Nov 2021	280	1.82%	Oct 2021	233.75
MB-STE-0371	Steel scrap cut structural/plate 5ft max, export yard buying price, delivered to yard Boston, \$/gross ton	15 Nov 2021	380	1.33%	Oct 2021	347.5

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	15 Nov 2021	265	-3.64%	Oct 2021	260
MB-STE-0373	Steel scrap No2 bundles, export yard buying price, delivered to yard Los Angeles, \$/gross ton	15 Nov 2021	165	-5.71%	Oct 2021	160
MB-STE-0374	Steel scrap No1 busheling, export yard buying price, delivered to yard Los Angeles, \$/gross ton	15 Nov 2021	275	-3.51%	Oct 2021	270
MB-STE-0375	Steel scrap machine shop turnings, export yard buying price, delivered to yard Los Angeles, \$/gross ton	15 Nov 2021	60	-7.69%	Oct 2021	57.5
MB-STE-0378	Steel scrap cut structural/plate 5ft max, export yard buying price, delivered to yard Los Angeles, \$/gross ton	15 Nov 2021	275	-3.51%	Oct 2021	270

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	05 Nov 2021	45	650.00%	Oct 2021	6
MB-STE-0411	Steel scrap machine shop turnings, consumer buying price trend, delivered mill Seattle/Portland, \$/gross ton	05 Nov 2021	45	650.00%	Oct 2021	6
MB-STE-0410	Steel scrap shredded auto scrap, consumer buying price trend, delivered mill Seattle/Portland, \$/gross ton	05 Nov 2021	45	650.00%	Oct 2021	6
MB-STE-0412	Steel scrap cut structural/plate 5ft max, consumer buying price trend, delivered mill Seattle/Portland, \$/gross ton	05 Nov 2021	45	650.00%	Oct 2021	6

Hamilton, Ontario

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0772	Steel scrap No1 heavy melting, broker buying price, fob Hamilton, Canadian \$/net ton	08 Nov 2021	344	17.01%	Oct 2021	294
MB-STE-0773	Steel scrap No1 dealer bundles, broker buying price, fob Hamilton, Canadian \$/ net ton	08 Nov 2021	590	2.43%	Oct 2021	576
MB-STE-0774	Steel scrap No1 busheling, broker buying price, fob Hamilton, Canadian \$/net ton	08 Nov 2021	485	2.97%	Oct 2021	471
MB-STE-0776	Steel scrap shredded scrap, broker buying price, fob Hamilton, Canadian \$/ net ton	08 Nov 2021	325	27.45%	Oct 2021	255
MB-STE-0777	Steel scrap machine shop turnings, broker buying price, fob Hamilton, Canadian \$/ net ton	08 Nov 2021	236	26.88%	Oct 2021	186

Houston

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0765	Steel scrap No1 heavy melting, broker buying price, fob Houston \$/gross ton	08 Nov 2021	280	9.80%	Oct 2021	255
MB-STE-0766	Steel scrap No2 heavy melting, broker buying price, fob Houston \$/gross ton	08 Nov 2021	270	10.20%	Oct 2021	245

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0767	Steel scrap No1 busheling, broker buying price, fob Houston \$/gross ton	08 Nov 2021	430	4.88%	Oct 2021	410
MB-STE-0768	Steel scrap shredded scrap, broker buying price, fob Houston \$/gross ton	08 Nov 2021	325	18.18%	Oct 2021	275
MB-STE-0769	Steel scrap machine shop turnings, broker buying price, fob Houston \$/gross ton	08 Nov 2021	200	14.29%	Oct 2021	175
MB-STE-0770	Steel scrap plate and structurals 5ft and under, broker buying price, fob Houston \$/gross ton	08 Nov 2021	305	8.93%	Oct 2021	280

Weekly composite prices

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STE-0531	Steel scrap No1 heavy melt, consumer buying price, delivered mill, \$/gross ton, weekly composite	12 Nov 2021	465	7.31%	Oct 2021	
MB-STE-0526	Steel scrap No1 busheling, consumer buying price, delivered mill Pittsburgh, \$/gross ton, weekly composite	12 Nov 2021	610	2.01%	Oct 2021	
MB-STE-0523	Steel scrap shredded auto scrap, consumer buying price, delivered mill, \$/gross ton, weekly composite	12 Nov 2021	523.25	8.05%	Oct 2021	

Pittsburgh stainless steel scrap

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STS-0046	Stainless steel scrap 304 solids, clips, broker buying price, delivered to processor Pittsburgh, \$/gross ton	16 Nov 2021	2016 - 2106	-1.08%	Oct 2021	1937.25 - 2021.5
MB-STS-0047	Stainless steel scrap 304 turnings, broker buying price, delivered to processor Pittsburgh, \$/gross ton	16 Nov 2021	1904 - 1994	0.00%	Oct 2021	1808.75 - 1909.5
MB-STS-0133	Stainless steel scrap 304 solids, clips, consumer buying price, delivered mill Pittsburgh, \$/gross ton	10 Nov 2021	2061 - 2083	5.10%	Oct 2021	1949 - 1994
MB-STS-0134	Stainless steel scrap 304 turnings, consumer buying price, delivered mill Pittsburgh, \$/gross ton	10 Nov 2021	1859 - 1882	5.71%	Oct 2021	1747 - 1792

Chicago stainless steel scrap

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STS-0067	Stainless steel scrap 304 solids, clips, broker buying price, delivered to processor Chicago, \$/gross ton	16 Nov 2021	2083 - 2106	0.53%	Oct 2021	1965.5 - 2027.25
MB-STS-0068	Stainless steel scrap 304 turnings, broker buying price, delivered to processor Chicago, \$/gross ton	16 Nov 2021	1926 - 1994	0.56%	Oct 2021	1831.25 - 1915.25
MB-STS-0069	Stainless steel scrap 430 bundles, solids, broker buying price, delivered to processor Chicago, \$/gross ton	16 Nov 2021	762 - 874	2.83%	Oct 2021	778.5 - 817.5

Detroit stainless steel scrap

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STS-0087	Stainless steel scrap 304 solids, clips, broker buying price, delivered to processor Detroit, \$/gross ton	16 Nov 2021	2083 - 2106	0.53%	Oct 2021	1965.5 - 2016
MB-STS-0088	Stainless steel scrap 304 turnings, broker buying price, delivered to processor Detroit, \$/gross ton	16 Nov 2021	1926 - 1994	0.56%	Oct 2021	1831.25 - 1909.5
MB-STS-0048	Stainless steel scrap 430 bundles, solids, broker buying price, delivered to processor Pittsburgh, \$/gross ton	16 Nov 2021	784 - 874	2.79%	Oct 2021	750.5 - 812

Cleveland stainless steel scrap

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STC-0196	Stainless steel scrap 304 solids, clips, dealer buying price, delivered to yard Cleveland, \$/gross	02 Nov 2021	1120 - 1456	0.00%	Oct 2021	1120 - 1456
MB-STC-0197	Stainless steel scrap 304 turnings, dealer buying price, delivered to yard Cleveland, \$/gross	02 Nov 2021	896 - 1344	2.05%	Oct 2021	896 - 1299

New York stainless steel scrap

Symbol	Description	Date	Price	+/-	Month	Monthly Average
MB-STC-0115	Stainless steel scrap 304 solids, clips, export yard buying price, delivered to yard New York, \$/gross ton	16 Nov 2021	2128 - 2150	0.00%	Oct 2021	2060.75 - 2122.25
MB-STC-0116	Stainless steel scrap 304 turnings, export yard buying price, delivered to yard New York, \$/gross ton	16 Nov 2021	1882 - 1904	0.00%	Oct 2021	1299 - 1322
MB-STC-0117	Stainless steel scrap 430 bundles, solids, export yard buying price, delivered to yard New York, \$/gross ton	16 Nov 2021	717 - 739	0.00%	Oct 2021	470 - 493