### PRICE INDEXES

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**PRICE INDEXES**

Each of these three indexes is a straight arithmetic average calculated in such a way that its value would have been 100.00 on Dec. 30, 1982. The prices averaged are usually from the next to last business day of the week. When the price is a range, the low end is used in calculating the average. MW Base Index includes Aluminum MW US Market; Copper COMEX first position plus NY Dealer premium cathode weekly midpoint; Lead North American Market; Tin NY Dealer, Zinc MW NA SHG; and Nickel Cathode NY Dealer. MW Precious Index includes Gold London Initial, Silver Comex 1st Position, Palladium MW NY Dealer and Platinum MW NY Dealer. MW Composite Index includes MW Base and MW Precious Indexes.

**PRICE ASSESSMENTS, EXCHANGE PRICES AND LIST PRICES**

**ALUMINUM**

**Unalloyed primary ingot and billet prices:**

**LME** – Official morning session prices on the London Metal Exchange. First price is bid, second is asked. Weekly average is the bid/asked mean; settlement is official cash asked price, with weekly average being average of that price alone. HG (high grade) is min. 99.7% purity, quoted in US dollars.

**NYMEX/COMEX** – Daily official settlement/closing prices of the New York Mercantile Exchange’s COMEX division, for 99.7% purity, in warehouse on warrant at select COMEX-registered warehouses. To meet COMEX specs, reflected as futures prices for each active trading month.

**MW US Market** – Weekly estimated US free market price for prompt delivery Midwest of 99.7% purity high-grade, (arrival within 30 days). Pre-dating the LME, the price reflects an “all-in” end price for the aluminum, accounting for premiums done over the LME in a given week but also enabling for adjustments in times of LME backwardation. The assessment, published usually every Thursday, includes the LME prices and daily survey premiums for Monday through Thursday only, incorporated into a one-cent range to smooth out volatility and reflect the majority of the week’s business. Monthly average of this price uses the low end of the range only, so the price tends to be lower than the Transaction price.

**MW US Transaction Premium** – Daily premium or discount to the London Metal Exchange cash price for spot physical 99.7% high-grade aluminum, delivered, duty-paid US consumer works, arrival within 7-30 days from date of publication, net-30-day terms. Assessment is expressed in cents per pound but also available on a converted dollars/mt basis. Premium or discount is determined based on physical spot deals, bids and offers reported through a daily survey of spot buyers and sellers, using a representative sample of producers, traders and different types of end users (sheet mills, remelt billet makers, extruders, rod mills, etc.). Includes business for LME-deliverable, any-origin 99.7% North American P1020 ingot, low-profile sow or T-bars, meeting LME specifications, basis delivery US Midwest. Volumes are minimum full 45,000 lb truckloads, typical quantities 100-500 mt.

**MW US Net-cash premium** – Daily premium or discount to the London Metal Exchange cash price for spot physical 99.7% high-grade aluminum, delivered, duty-paid US consumer works, arrival within 7-30 days from date of publication, net-cash payment terms, normalized to a broad Midwest region. The premium is determined based on a survey of producers, traders and end users to determine the prevailing spread between net-cash and net-30 terms, on a cents/lb basis. All other specifications are the same as for the US Transaction Premium (see separate reference).

**US Six-Months P1020** – Weekly estimated US free-market premium over LME for North American 99.7% ingot delivered Midwest for a period in time six months forward, based on a survey of quotes and sales during the current week for six months from that date. Reflects both physical and financial swaps business done by producers, traders and consumers.

Europe-Good Western Duty-paid Premium Rotterdam – Duty-paid daily estimated $/mt premium over LME cash for Western-origin 99.7% ingot meeting LME high grade specifications. In warehouse Rotterdam, 0-30 days terms, prompt delivery. Based on a survey of producers, traders and consumers (extruders, rolling mills). Began being assessed daily September 2003.

Europe-Good Western Duty-Unpaid Premium Rotterdam – Daily estimated $/mt premium over LME cash for 99.7% ingot meeting LME high grade specifications. In warehouse Rotterdam, 0-30 day terms, prompt delivery, on a duty-unpaid basis. Based on a survey of producers, traders and consumers of aluminium. Assessed daily as of September 2003.

Europe-Russian A7E Duty-Unpaid Premium Rotterdam – Daily estimated $/mt premium over LME cash for 99.7% Russian origin ingot in warehouse Rotterdam, 0-30 day terms, prompt delivery, on a duty-unpaid basis. Based on a survey of producers, traders and consumers of aluminium. Assessed daily as of September 2003.

Europe-Russian A7E FOB Premium St. Petersburg – Daily estimated $/mt premium over LME cash for 99.7% Russian origin ingot on a FOB St. Petersburg basis, 0-30 day terms, prompt delivery. Based on a survey of producers, traders and consumers of aluminium. Replaced with daily price effective September 2003.

(DISCONTINUED)Europe – Good Western Premium: Duty paid weekly estimated $/mt premium over LME cash for Western-origin 99.7% ingot meeting LME high grade specifications. In warehouse Rotterdam, 0-30 days terms, prompt delivery. Based on a weekly survey of producers, traders and consumers (extruders, rolling mills). Replaced with daily price effective September 2003.


(DISCONTINUED)Europe – Russian A7E Premium St Petersburg: Weekly estimated $/mt premium over LME cash for 99.7% Russian origin ingot on a FOB St Petersburg basis, 0-30-day terms, prompt delivery. Based on a survey of producers, traders and consumers of aluminium. Replaced with daily price effective September 2003.


CIF Japan Spot Premium – Daily spot premium or discount to the London Metal Exchange cash settlement price for high-grade aluminum. Minimum 99.7% primary aluminum meeting LME P1020A chemical specifications. CIF main Japanese ports of Yokoyama, Nagoya or Osaka, all origins, except excluding Iran, India, Egypt and LME warehouses. The assessment is expressed in a narrow price range reflecting the majority of business or spot bids/offers for ingot, T-bars and sow, minimum volumes of 250 mt, cash within 3 days of bill of lading, or cash against documents. Cargo leaves ports during or following the month of transaction. Platts surveys market sources, gathering information from a representative sample of traders, consumers, producers and brokers deemed reliable and active in the spot market. Platts contacts sources based in Japan, Australia, Russia, Europe, the Middle East and other Asian countries.

CIF Japan Forward Quarter Premium – Premium or discount to the LME price at time of shipment for minimum 99.7% primary aluminum meeting the LME P1020A chemical specifications, CIF main Japanese ports of Yokoyama, Nagoya or Osaka, origins excluding Iran, India, Egypt and LME warehouses. The premium range reflects the majority of concluded quarterly contracts for minimum 500 mt/month volumes, in ingot, T-bars or sow form, cash within 3 days of bill of lading, or cash against documents. Cargo leaves ports during or following the month of transaction. Platts surveys market sources, gathering information from a representative sample of traders, consumers, producers and brokers deemed reliable and active in the market. Platts contacts sources based in Japan, Australia, Russia, Europe, the Middle East and other Asian countries. The final quarterly assessment range will be published in advance of the start of the quarter, usually by the first date of the quarter, or once the majority of buyers and sellers have concluded negotiations. The number of deals typically included in the assessment ranges from 10 to 20.

C&F China Western – Daily estimated premium for 99.7% (0.1% Si, 0.2% Fe) Good Western aluminum in the form of ingots, sow, T-bars, over LME cash for C&F China aluminum business. Cargo leaves port upon receipt of letter of credits, usually within one month following the transaction. Delivered to main Chinese ports such as Huangpu, Shanghai, Fuzhou, Qingdao, Zhongshan, Zhumai, and Hong Kong. Under consideration to be changed to CIF China.

C&F China Russian – Daily estimated premium for 99.7% (0.1% Si, 0.2% Fe) Russian aluminum in the form of ingots, sow, T-bars, over LME cash for C&F China aluminum business. Cargo leaves port upon receipt of letter of credits, usually within one month following the transaction. Delivered to main Chinese ports such as Huangpu, Shanghai, Fuzhou, Qingdao, Zhongshan, Zhumai, and Hong Kong. Under consideration for change to CIF, Chinese origin only

In-Warehouse Singapore – Daily estimated premium for 99.7% (0.1% Si, 0.2% Fe) material of all origin, mainly Indian, Chinese, and some Russian and Western, in-warehouse Singapore. Cargo released immediately upon payment.

Aluminum CIF Brazil premium duty unpaid (MMABP04) – Weekly premium or discount to the LME cash settlement price for spot physical high-grade aluminum P1020A, 99.7% Al purity, standard ingot, sow and T-Bars. Assessed once per week, typically on Friday, in dollars per mt, the value will reflect the typical transactable value as of week’s end, based on a weekly survey of producers, traders and consumers of P1020 active in the spot market. Assessment basis CIF Brazil (to include major ports Santos/SP, Itajai/SC, Itaguaí/RJ and Sao Francisco do Sul/SC), duty unpaid, VAT not included (ICMS, PIS/Cofins and IPI), delivery within 30-60 days, typical volumes up to 2,000 mt, payment net-30 days. Prices for volumes, grade, shape or payment terms that differ from the standard specification may be normalized to the typical range, FOB values from exporting regions may also be considered in the assessment process. Platts monitors the market throughout the week and considers in its assessments all of the information provided regarding deals, bids and offers in the market, reflecting in its assessment the tradable value as of Friday.

Aluminum Premium delivered SE Brazil (MMABS04) – Weekly premium or discount to the LME cash settlement price for spot physical high-grade aluminum P1020A, 99.7% Al purity, standard ingot, sow and T-Bars. Assessed once per week, typically on Friday, in dollars per mt, the value will reflect the typical transactable value as of week’s end, based on a weekly survey of producers, traders and consumers of P1020 active in the spot market. Delivery within 30 days to customers’ works in the Southeast region of Brazil (including Sao Paulo, Rio de

METALS

METHODOLOGY AND SPECIFICATIONS GUIDE

Platts surveys market sources, gathering information from a representative sample of traders, consumers, producers and brokers deemed reliable and active in the spot market. Platts contacts sources based in Japan, Australia, Russia, Europe, the Middle East and other Asian countries.
Janeiro, Minas Gerais and Espírito do Santo), duty-paid, VAT not included (ICMS, PIS/Cofins and IPI). Payment terms net-7 to net-10 days, based on a typical order size of 100 mt. Other shapes, grades, locations, delivery periods, volumes and payment terms may be normalized to this standard specification. Platts monitors the market throughout the week and considers in its assessments all of the information provided regarding deals, bids and offers in the market, reflecting in its assessment the tradable value as of Friday.

**Aluminum Brazil Market, delivered SE Brazil (MMADB04)** – Weekly assessment of the all-in delivered value of spot physical high-grade aluminum F1020A, 99.7% Al purity, standard ingot, sow and T-Bars. Assessed once per week, typically on Friday, in dollars per mt, reflecting the typical transactable value as of week’s end, based on a weekly survey of producers, traders and consumers of P1020 active in the spot market. Delivery within 30 days to customers’ works in the Southeast region of Brazil (including Sao Paulo, Rio de Janeiro, Minas Gerais and Espirito do Santo), duty-paid, VAT not included (ICMS, PIS/Cofins and IPI). Payment terms net-7 to net-10 days, full-truckload, 25 mt. Other shapes, grades, delivery periods, locations, volumes and payment terms may be normalized to this standard specification. Platts monitors the market throughout the week and considers in its assessments all of the information provided regarding deals, bids and offers in the market, reflecting in its assessment the tradable value as of Friday.

**Secondary alloy ingot prices**

**LME Alloy** – Official morning session prices on the LME. First price is bid, second is asked. Weekly average is the bid/asked mean; settlement is official cash asked price, with weekly average being average of that price alone. Aluminum alloy delivered under this contract shall be: A380.1 alloy produced in conformity with the Aluminum Assn. specification; 226 alloy, produced in conformity with GBD-AlSi9Cu3 as described in DIN standard 1725, and D12S alloy, produced in conformity with JIS H2118-1976, Class 12. (Note: this specification to be read in conjunction with the provision that there be an allowance as follows: Others, total 0.50% max. Al balance). Lot sizes are 20 mt and in US dollar per mt. Cash price started Feb 1, 1993.

**LME North American Special Aluminum Alloy Contract** – Aluminum alloy conforming to the special North American A380.1 specification; size of lot is 20mt (with a tolerance of +/-2%). Delivery is daily from cash to 3 months from cash (first prompt date two working days from cash), then every Wednesday from 3 months to 6 months. Then every third Wednesday from 7 months out to 27 months forward. The aluminum delivered under this contract shall be: A380.1 alloy produced in conformity with the Aluminum Assn. specification; 226 alloy, produced in conformity with GBD-AlSi9Cu3 as described in DIN standard 1725; and D12S alloy, produced in conformity with JIS H2118-1976, Class 12. (Note: this specification to be read in conjunction with the provision that there be an allowance as follows: Others, total 0.50% max. Al balance). Lot sizes are 20 mt and in US dollar per mt. Cash price started Feb 1, 1993.

**A-380 Alloy** – 8-9.5% Si, 1% Fe, 3-4% Cu, 0.5% Mn, 0.1% Mg, 0.5% Ni, 2.9% Zn, and 0.35% Sn. Estimated twice-weekly (Monday-Thursday) market price for prompt delivery Midwest, customer works, payment net-30 to net-60 days, 45,000-lb truckload amounts. Price represents a range of spot transaction prices conducted by a survey of US secondary aluminum smelters, diecasters, foundries, automotive companies, traders and brokers. Price started in 1992.

**US 319, 356, F132, A-431.3, F-132 and B390** – Twice-weekly price assessment ranges for major secondary aluminum alloys. Delivered Midwest customer works, payment net-30 to net-60 days, 45,000-lb truckload quantities. Assessed twice per week, on Mondays and Thursdays (except for changes during holidays), through a survey of US secondary aluminum smelters, diecasters, foundries, automotive companies, traders and brokers. The assessments reflect the narrow low-high price range, in cents/lb, of the majority of concluded deals, bids and offers. The impurity levels represent the Aluminum Assn. specifications or typical market specifications for 319.1, 356.1, 337.2, A413 and B390, respectively, as follows: 319.1 – 5.5-6.5% Si; 0.8% Fe; 3.0-4.0% Cu; 0.50% Mn; 0.10% Mg; 0.35% Ni; 1.0% Zn; 0.25% Ti; 356 – 6.5-7.56% Si; 0.50% Fe; 0.25% Cu; 0.35% Mn; 0.25-0.45% Mg; 0.35% Zn; 0.25 Ti. F-132 – 8-10.0% Si; 0.6% Fe; 2.0-4.0% Cu; 0.20 Mn; 0.9-1.3% Mg; 0.10% Ni; 0.10% Zn; 0.20% Ti. A-413.1 -- 11-13% Si; 1% Fe max; 0.6% Cu max; 0.35% Mn; 0.1% Mg; 0.5% Ni; 0.5% Zn; and 0.15% Sn. B390 -- 16-18% Si, 1.3% Fe max, 4.0-5.0% Cu, 0.50% Mn, 0.45-0.65% Mg, 0.10% Ni, 1.4% Zn and 0.20% Ti. Price assessments for 319, 356, and F132 started in April 1993; A413 started in 2010 and B390 in 2013.

**Europe** – Secondary Aluminum 226 Price (Started Sep 1, 2003): Weekly estimated Eur/mt price for secondary aluminium alloy 226 LME grade on a delivered works basis 0-30 day terms, prompt delivery. The alloy is produced in conformity with GBD-AlSi9Cu3 as described in DIN standard 1725 (1986). Based on a survey of producers, traders and consumers of aluminium. Price assessed weekly and published on Fridays.

**ADC12 ex-works China:** Platts assessment for ADC12 Alloy to conform to JIS standard – 9.6-12% Si, 0.9% Fe, 1.5-3.5% Cu, 0.5% Mn, 0.3% Mg, 0.5% Ni, 0.1% Zn, and 0.2% Sn. Spot prices assessed weekly on Tuesday or closest working day. The assessment reflects the domestic market price, on a spot trade basis, in yuan per mt, ex-plant from a typical supplier. The spot price represents a range of spot transactions, bids and offers determined by surveying Chinese secondary aluminum smelters, diecasters, foundries, automotive companies, traders and brokers.

**ADC12 FOB China:** Platts assessment for ADC12 Alloy to conform to JIS standard – 9.6-12% Si, 0.9% Fe, 1.5-3.5% Cu, 0.5% Mn, 0.3% Mg, 0.5% Ni, 0.1% Zn, and 0.2% Sn. Spot prices assessed weekly on Tuesday or closest working day. The assessment reflects the export market price, on a spot trade basis, in $/mt, FOB Chinese ports, mainly Shanghai and Tianjin. The spot price represents a range of spot transactions, bids and offers determined by surveying secondary aluminum smelters, diecasters, foundries, automotive companies, traders and brokers in China, Hong Kong and Japan.

**Scrap prices.**

**US Old Cast** – Aluminum castings for consumption by secondary aluminum smelters, crushed cast, shreddable, less than 1% Mg and Zn, low Fe, low contamination; minimum recovery rate 92%; cents/lb, within 30-day delivery US Midwest. Assessed twice a week, usually on Mondays and Thursdays, through a survey of secondary aluminum smelters and scrap dealers. Price started in July 2000.

**US Old Sheet** – Non-cast aluminum items for consumption by secondary aluminum smelters to meet ISRI “taint/tabor” specification; cents/lb, 30-day delivery US Midwest. Assessed twice a week, usually on Mondays and Thursdays, through a survey of secondary aluminum smelters and scrap dealers. Price started in July 2000.

**US Mill-grade MLCCs** – Mixed-low copper clips able to be consumed by aluminum rolling mills, 1000, 3000, 5000, 6000 series only; cents/lb, 30-day delivery US Midwest. Assessed twice a week, usually on Mondays and Thursdays, through a survey of secondary aluminum smelters, scrap dealers and rolling mills. Price
started in July 2000.


**US UBCs** – Baled used beverage cans, to meet ISRI “taldon” specification; cents/lb, delivered US Midwest. Assessed once a week, usually on Thursdays, reflecting the range of spot business concluded by consumers and mid-to-large scrap dealer/consolidators/brokers. Business that is reported as non-Midwest or FOT (picked up) is adjusted to reflect average US Midwest delivery. Price started July 2000.

**US 6063 Press Scrap** – New 6063 extrusion press scrap, direct from presses, billet with butts included. Expressed as a cents/lb discount below US Midwest P1020 Transaction price, delivered US Midwest cast houses. Assessed once a week as the range of discounts most commonly concluded on a spot basis, via a survey of primary producers, extruders and scrap dealers. Price started September 2000.

**US Painted Siding** – Siding consisting of clean, low-copper aluminum siding scrap, painted one or two sides, free of plastic coating, iron, dirt, corrosion, fiber, foam or fiberglass backing or other non-metallic items, for US Midwest delivery within 30 days. Assessed once a week, usually on Thursdays, through a survey of scrap dealers and rolling mill buyers. Price started in March 2006.

**US High-grade auto shreds** – Auto shreds generated through a heavy media-based separation process, containing at least 98% metallics and not more than 1% free zinc, to include material from the following suppliers: Huron Valley, Newell, Ferrous Processing/SLC Recycling and Fort Wayne OmniSource Corp., for US Midwest delivery within 30 days. Assessed twice a week, usually on Mondays and Thursdays, through a survey of secondary aluminum smelters and scrap dealers/processors. Price started in May 2006, replacing previous auto shreds/twitch price effective September 2006.

**US Low-grade auto shreds** – Auto shreds generated through an eddy current-based or hand separation process, containing at least 90% mettaliccs and not more than 4% zinc, for US Midwest delivery within 30 days. Assessed twice a week, usually on Mondays and Thursdays, through a survey of secondary aluminum smelters and scrap dealers. Price started in May 2006, replacing previous auto shreds/twitch price effective September 2006.

**ANTIMONY**

**MW NY Dealer** – 99.65% min. antimony ingot, 0.15% max. arsenic, warehouse, 5-ton lots, duty paid.

**99.65% HK** – Chinese produced antimony regulus, min. 99.65% Sb, $ per mt, FOB Hong Kong.
COPPER

COMEX — Settlement prices on New York Mercantile Exchange’s COMEX division. Forward positions are indicated by footnote (C) on price pages. The high-grade contract is ASTM B115.

LME — Official morning session prices on London Metal Exchange. First price is bid, second is asked. Weekly average is the bid/asked mean. The grade A contract is 99.995% Cu and only cathode and wirebar shapes are deliverable. Quoted as $/mt until June 30, 1993. Started quote in $/mt as of July 1, 1993.

MW No. 1 Scrap — Mid-week transaction based, buy-side indications for US-delivered bare bright scrap and burnt wire, expressed as a cts/lb discount spread to the First Position COMEX price.

MW No. 2 Scrap — Estimated New York area delivered price for US-delivered clean No. 2 scrap (96% Cu) for the next to last business day of the week expressed as a cts/lb discount spread to the First Position COMEX price.

(_DISCONTINUED) MW CIF Europe — LME grade A asked price.

(_DISCONTINUED) MW Composite — Weighted average based on estimated US refined copper production, on a delivered cathode basis.

NY Dealer Premium/Cathode — Typical premiums expressed in cts/lb above First Position COMEX being charged by New York metal merchants on the next to last business day of the week.

(_DISCONTINUED) MW US Producer Cathode — Weighted average based on estimated US refined copper production and published prices for delivered full-plate cathodes.

(_DISCONTINUED) MW US Producer/Refinery — f.o.b. quotation is MW US producer/delivered prices less 1.4cts shipping cost.

(_DISCONTINUED) US Producer Cathodes and US Producer Wirebars — Official list prices for those grades (99.9% Cu).

Europe — Grade A CIF Rotterdam: Weekly estimated $/mt premium for Grade A LME copper on a CIF Rotterdam basis, 0-30 day terms, prompt delivery. Based on a survey of producers, traders and consumers of copper. Assessed weekly, usually on Wednesdays.

Europe — Grade A CIF Italy: Weekly estimated $/mt premium for Grade A LME copper on a CIF Italian port basis, 0-30 day terms, prompt delivery. Based on a survey of producers, traders and consumers of copper. Assessed weekly, usually on Wednesdays.

Europe — Standard CIF Rotterdam: Weekly estimated $/mt premium for Russian standard grade copper on a CIF Rotterdam basis, 0-30 day terms, prompt delivery. Based on a survey of producers, traders and consumers of copper. Assessed weekly, usually on Wednesdays.

Copper Concentrate — Cu 30%, CIF Japan. Daily estimated treatment and refining charges ($/mt; cts/lb) for 25-30% copper-in-concentrate, any origin, lumpy ore, 0-30 day terms, Cargo leaves port in month following that of transaction.

Copper C&F China — Daily estimated premium for Grade A 99.95% minimum cathode, mostly of Chilean origin, over LME cash for C&F China copper business. Cargo leaves port upon receipt of letter of credits, usually within one month following the transaction. Delivered to main Chinese ports such as Huangpu, Shanghai, Guangzhou, and Hong Kong. (Under consideration to be changed to a CIF basis price)

In-Warehouse Singapore Premium — Daily estimated premium for Grade A 99.95% minimum material of all origin, mainly Philippines, Indonesia, Chilean, South Korean, and Australian, Chinese, and Japanese, in-warehouse Singapore. Cargo released immediately upon payment.

FERROCHROME

65% 6-8% High Carbon DDP NWE: Weekly assessment of 60-70% chrome, normalised to 65% Cr, with Si content of 1.5%; P content 0.030%. The specification is for volumes of 200-500 mt, delivered, duty-paid Northwest Europe, basis for delivery within four weeks from date of transaction, net-30 days payment terms. Assessment will be in $/lb Cr contained and conducted on Thursdays (or closest business day in the case of holidays) through a survey of producers, traders and steel mill buyers. Started July 8, 1992.

65% High-Carbon, in-warehouse US: Weekly assessment of the repeatable, tradable, spot price for 60-65% Cr, high-carbon ferrochrome, normalized to 65% Cr, 6-8% carbon, 2% max silicon, 0.03% max phosphorous, 0.04% max sulfur, lumps size 0.50 x 2.5 inch; US origin and imported material; free market, cents/lb Cr contained; in-bulk or 2,000-3,000 lb supersacks; paid-in-warehouse in key locations along the Mississippi, Chicago, Ohio and Columbia River systems and other key port warehousing locations, including Baltimore, Maryland, Long Beach, California and Portland, Oregon; delivery within 60 days from date of transaction, net-30 days payment terms from date of delivery. Transactions reported on a delivered basis normalized to an in-warehouse basis. Fines normalized to stated lump specifications. Special packaging and payment terms normalized to meet stated specifications. The assessment will reflect pricing for quantities of four truckloads and greater. Assessment made Wednesdays, or closest business day, from survey of producers, traders and end users in the carbon, stainless and specialty steel sectors, closing at 4pm New York time. Started December 15, 1971.

High-carbon 58-60% CIF China: Weekly price assessment of the repeatable, tradable spot price for 58-60% Cr high-carbon ferrochrome, with a maximum silicon content of 5%; maximum 8% carbon, 0.04% max phosphorous, 0.05% max sulfur, in lumps, lump size 10-150 mm, all origins. The assessment will reflect a typical order quantity of a minimum 500 mt, delivered CIF main Chinese ports within 60 days from date of transaction, payment terms cash against documents or payment terms letter of credit at sight, packed in 1 mt big bags, or in bulk, and/or in ocean-going, custom-sealed containers at point of export. Assessment made Fridays (or closest business day in the case of holidays), from a survey of producers, traders and end users in the carbon, stainless and specialty steel sectors, reflecting the narrow low-high price range of the majority of spot deals, bids and offers on a cents/lb Cr contained basis.

Low Carbon 0.15% in-warehouse US: Weekly assessment of the repeatable, tradable, spot price for 0.15% carbon, 68-74% Cr, ferrochrome, carbon 0.15% max, silicon 1% max, phosphorous 0.3% max, sulfur 0.02% max, lumps size 0.50 x 2.5 inch; US origin and imported material, free market; cents/lb Cr contained;
in-bulk or 2,000-3,000 lb supersacks; duty-paid in-warehouse in key locations along the Mississippi, Chicago, Ohio and Columbia River systems and other key port warehousing locations, including Baltimore, Maryland, Long Beach, California and Portland, Oregon; delivery within 60 days from date of transaction, net-30 days payment terms from date of delivery. Transactions reported on a delivered basis normalized to an in-warehouse basis. Fines normalized to stated lump specifications. Special packaging and payment terms normalized to meet stated specifications. The assessment will reflect pricing for full truckload quantities and greater. Assessment made Wednesdays, or closest business day, from survey of producers, traders and end users in the carbon, stainless and specialty steel sectors, closing at 4pm New York time. Started October 4, 1995.

**Low-Carbon 0.10% DDP NWE:** Weekly assessment of 60-70% chrome, normalized to an assessed grade with a Si content of 0.05% and P content 0.05%. The specification will be for volumes of 200-500 mt, delivered, duty-paid Northwest Europe basis for delivery within 4 weeks from date of transaction, net-30 days payment terms. Assessment will be in $/lb Cr contained and conducted on Thursdays (or the closest business day in the case of holidays) through a survey of producers, traders and steel mill buyers. Started July 8, 1992.

**Low Carbon 0.10% in-warehouse US:** Weekly assessment of the repeatable, tradeable, spot price for 0.10% carbon, 65-74% Cr, ferrochrome, normalized to 68% Cr, carbon 0.10% max, silicon 1% max, phosphorous 0.3% max, sulfur 0.02% max, lumps size 0.50 x 2.5 inch. The assessment covers US origin and imported material, free market, cents/lb Cr contained, in-bulk or 2,000-3,000 lb supersacks; duty-paid in-warehouse in key locations along the Mississippi, Chicago, Ohio and Columbia River systems and other key port warehousing locations, including Baltimore, Maryland, Long Beach, California and Portland, Oregon; delivery within 60 days from date of transaction, net-30 days payment terms from date of delivery. Transactions reported on a delivered basis normalized to an in-warehouse basis. Fines normalized to stated lump specifications. Special packaging and payment terms normalized to meet stated specifications. The assessment will reflect pricing for full truckload quantities and greater. Assessment made Wednesdays, or closest business day, from survey of producers, traders and end users in the carbon, stainless and specialty steel sectors, closing at 4pm New York time. Started September 1, 1992.

**Low Carbon 0.05% in-warehouse US:** Weekly assessment of the repeatable, tradeable, spot price for 0.05% carbon, 65-74% chrome, normalized to 68% Cr, carbon 0.05% max, silicon 1% max, phosphorous 0.3% max, sulfur 0.02% max; lumps 0.50 x 2.5 inch; US origin and imported material, free market, cents/lb Cr contained, in-bulk or 2,000-3,000 lb supersacks; duty-paid in-warehouse in key locations along the Mississippi, Chicago, Ohio and Columbia River systems and other key port warehousing locations, including Baltimore, Maryland, Long Beach, California and Portland, Oregon; delivery within 60 days from date of transaction, net-30 days payment terms from date of delivery. Transactions reported on a delivered basis normalized to an in-warehouse basis. Fines normalized to stated lump specifications. Special packaging and payment terms normalized to meet stated specifications. The assessment will reflect pricing for full truckload quantities and greater. Assessment made Wednesdays, or closest business day, from survey of producers, traders and end users in the carbon, stainless and specialty steel sectors, closing at 4pm New York time. Started January 3, 1973.

**Charge Chrome 52% DDP NWE:** Weekly assessment for 48-52% grades normalized to a Si content of maximum 6-8% and P content 0.030%. The specification will be for volumes of 200-500 mt, delivered, duty-paid Northwest Europe basis, for delivery within 4 weeks from date of transaction, net-30 days payment. Assessment will be in $/lb Cr contained and conducted on Thursdays (or the closest business day in the case of holidays) through a survey of producers, traders and steel mill buyers. Started July 8, 1992.

**Charge Chrome 48-52% Cr, in-warehouse US:** Weekly assessment of the repeatable, tradeable, spot price for 48-52% Cr charge chrome, carbon 8% max, silicon 4% max, phosphorous 0.03% max, sulfur 0.04% max, lumps size 1 x 2.5 inch; US origin and imported material, free market, cents/lb Cr contained, in-bulk or 2,000-3,000 lb supersacks; duty-paid in-warehouse in key locations along the Mississippi, Chicago, Ohio and Columbia River systems and other key port warehousing locations, including Baltimore, Maryland, Long Beach, California and Portland, Oregon; delivery within 60 days from date of transaction; net-30 days payment terms from date of delivery. Transactions reported on a delivered basis normalized to an in-warehouse basis. Fines normalized to stated lump specifications. Special packaging and payment terms normalized to meet stated specifications. The assessment will reflect pricing for quantities of four tralkoads and greater. Assessment made Wednesdays, or closest business day, from survey of producers, traders and end users in the carbon, stainless and specialty steel sectors, closing at 4pm New York time. Started March 16, 1977.

**NSSC Charge Chrome 50-55% Quarterly CIF Japan:** Quarterly price as published by Nippon Steel & Sumikin Stainless Steel Corporation, for 50-55% Cr, 6-9% C. Started July 1, 1993.

**NSSC Charge Chrome 50-55% CIF China:** Weekly assessment of the repeatable, tradeable spot price for charge chrome CIF main Chinese ports, with chrome content of 48-52%, normalized to a maximum 9% carbon, max 0.05% sulfur, max 0.04% phosphorous and max 6% silicon, lump size 10-100 mm, all origins. The assessment will reflect a typical order quantity of minimum 500 mt, delivered CIF China within 90 days from the date of transaction, cash against documents or payment terms letter of credit at sight, packed in 1 mt big bags, or in bulk, and/or in ocean-going, customs-sealed containers at point of export. Assessment made Fridays (or closest business day in the case of holidays), from a survey of producers, traders and end users in the carbon, stainless and specialty steel sectors, reflecting the narrow low-high price range of the majority of spot deals, bids and offers on a cents/lb Cr contained basis.

**Charge Chrome 48-52% CIF China:** Weekly assessment of the repeatable, tradeable spot price for charge chrome CIF main Chinese ports, with chrome content of 48-52%, normalized to a maximum 9% carbon, max 0.05% sulfur, max 0.04% phosphorous and max 6% silicon, lump size 10-100 mm, all origins. The assessment will reflect a typical order quantity of minimum 500 mt, delivered CIF China within 90 days from the date of transaction, cash against documents or payment terms letter of credit at sight, packed in 1 mt big bags, or in bulk, and/or in ocean-going, customs-sealed containers at point of export. Assessment to be made Fridays (or closest business day in the case of holidays), from a survey of producers, traders and end users in the carbon, stainless and specialty steel sectors, reflecting the narrow low-high price range of the majority of spot deals, bids and offers on a cents/lb Cr contained basis.

**High-Carbon 60-65% CIF Japan:** Weekly assessment of the repeatable, tradeable spot price for 60-65% high-carbon ferrochrome, with silicon content of 2-4%, maximum 8% carbon, 0.02-0.05% phosphorous, 0.05% max sulfur, lump size 10-100 mm, all origins. The assessment will reflect a typical order quantity of a minimum 200 mt, loading from the port of origins for shipping to Japan within 60 days from the date of transaction, CIF main Japanese port basis, payment cash against documents, or payment terms letter of credit at sight. Packed in 1 mt big bags, or in bulk, and/or in ocean-going, customs-sealed containers at point of export. Assessment to be made Fridays (or closest business day in the case of holidays), from a survey of producers, traders and end users in the carbon, stainless and specialty steel sectors, reflecting the narrow low-high price range of the majority of spot deals, bids and offers on a cents/lb Cr contained basis.

**High-Carbon 76% Mn in-warehouse US:** Weekly assessment of the repeatable, tradeable, spot price for high-carbon ferromanganese 74-78% Mn, normalized to 76% Mn, carbon 7.5% max, silicon 1.2%, phosphorous 0.5%, sulfur 0.02%;
lumps 0.5 x 4.00 inch; US-origin and imported material, $/long ton Mn contained; in-bulk or 2,000-3,000 lb supersacks; duty-paid in-warehouse in key locations along the Mississippi, Chicago, Ohio and Columbia River systems and other key port warehousing locations, including Baltimore, Maryland, Long Beach, California and Portland, Oregon; delivery within 60 days from date of transaction, net-30 days payment terms from date of delivery. Transactions reported on a delivered basis normalized to an in-warehouse basis. Fines normalized to stated lump specifications. Special packaging and payment terms normalized to meet stated specifications. The specification will be for a minimum of four truckload quantities and greater. The assessment will reflect pricing for minimum quantities of four truckloads and greater. Assessment made Wednesdays, or closest business day, from survey of producers, traders and end users in the carbon, stainless and specialty steel sectors, closing at 4pm New York time.

High-Carbon 75% Mn – 75% Mn, US dollar per mt, f.o.b. main Chinese ports.

Medium Carbon 85% Mn in-warehouse US: Weekly assessment of the repeatable, tradable, spot price for medium-carbon ferromanganese 80-85% Mn, carbon 1.5% max, silicon 1.5% max, phosphorous 0.40% max, sulfur 0.2%; lumps size 0.50 x 2.5 inch; US-origin and imported material; cents/lb Mn contained; in-bulk or 2,000-3,000 lb supersacks; duty-paid in-warehouse in key locations along the Mississippi, Chicago, Ohio and Columbia River systems and other key port warehousing locations, including Baltimore, Maryland, Long Beach, California and Portland, Oregon; delivery within 60 days from date of transaction, net-30 days payment terms from date of delivery. Transactions reported on a delivered basis normalized to an in-warehouse basis. Fines normalized to stated lump specifications. Special packaging and payment terms normalized to meet stated specifications. The assessment will be for minimum quantities of four truckloads and greater. Assessment made Wednesdays, or closest business day, from survey of producers, traders and end users in the carbon, stainless and specialty steel sectors, closing at 4pm New York time.

Ferramolybdenum 60% CIF Japan (MMAFM00) – Weekly assessment of the repeatable, tradable spot price Ferramolybdenum imported into Japan, with 60-65% molybdenum and normalized to 60% molybdenum, maximum 0.1% carbon, maximum 2.0% silicon, maximum 0.06% phosphorous, maximum 0.1% sulfur, and maximum 0.5% copper; packed in 1mt big bags, 25-kg paper boxes, steel drums or other packaging, normalized to 1 mt big bags; CIF main port Japan; payment cash against documents or LC at site, loading less than 60 days after the date of transaction. Minimum volume 18 mt per transaction. Assessed in dollars per kilogram in a narrow price range that reflects the majority of business. Assessment made Thursdays or closest business day from survey of producers, traders and end-users in steel and other metal sectors.

Ferrosilicon 75% CIF Japan (MMAP00) – Weekly assessment of the repeatable, tradable spot price ferrosilicon imported into Japan, with 73-79% Si, normalized to 75% Si, aluminum 0.5% min-1.5% max, calcium 1.5% max; carbon 0.10% max, lumps 2x0.50 inch, 2x1 inch, or 4x1 inch; US-origin and imported material; in cents/lb Si contained; in-bulk or 2,000-3,000 lb supersacks; duty-paid in-warehouse in key locations along the Mississippi, Chicago, Ohio and Columbia River systems and other key port warehousing locations, including Baltimore, Maryland, Long Beach, California, and Portland, Oregon; delivery within 60 days from date of transaction, net-30 days payment terms from date of delivery. Transactions reported on a delivered basis will be normalized to an in-warehouse basis. Fines normalized to stated lump specifications. The assessment will be for a minimum of four truckload quantities and greater. Special packaging and payment terms normalized to meet stated specifications. Assessment made Wednesdays or closest business day from survey of producers, traders and end users in the carbon, stainless and specialty steel sectors, closing at 4pm New York time.
traders and end-users in the steel and other metal sectors. The Platts assessment will only consider bids, offers or deals complying with the legal documentation and taxation requirements of the exporting country. Includes all origins meeting the specification. Started July 1, 1993.

**Ferrosilicon 75% FOB China (MMAKB00)** — Weekly assessment of the repeatable, tradable, spot price for Chinese-origin ferrosilicon with 73-79% silicon, normalized to 75% Si; maximum 1.5% aluminum, maximum 0.02% sulfur, maximum 0.04% phosphorous, maximum 0.2% carbon; lumps 10-50 mm; FOB main Chinese sea ports, packed in 1 mt big bags loaded on oceangoing vessel or packed in sea-going 20-foot (18-24-mt) containers and customs sealed, export tariff-paid, within 30 days of date of transaction. Assessment is made in dollars per metric ton reflecting the narrow range where the majority of business is occurring. Payment by telegraphic transfer, cash against documents, irrevocable letter of credit drawn against approved bank at site or equivalent. Assessment quantities are 18 mt and greater. Assessment made Thursdays or closest business day from a survey of producers, traders and consumers.

**US Free Market Ferrovanadium** — weekly spot sales; 80% minimum V content, $/lb/V; 2% max Si, 2% max AI, delivered.

**US Free Market V205, (vanadium pentoxide)** — weekly spot sales/indications; 98% minimum, delivered, price per lb/V205.

**Europe-70-80% V Ferrovanadium:** Free market weekly estimated $/kg price for ferrovanadium 70-80% V, on an in-warehouse Europee basis. Based on a survey of producers, traders and consumers of ferrovanadium. Assessed in Europe on Thursdays.

**Ferrovanadium**

**US Free Market Ferrovanadium** — weekly spot sales; 80% minimum V content, $/lb/V; 2% max Si, 2% max AI, delivered.

**US Free Market V205, (vanadium pentoxide)** — weekly spot sales/indications; 98% minimum, delivered, price per lb/V205.

**Europe-70-80% V Ferrovanadium:** Free market weekly estimated $/kg price for ferrovanadium 70-80% V, on an in-warehouse Europee basis. Based on a survey of producers, traders and consumers of ferrovanadium. Assessed in Europe on Thursdays.

**Ferrovanadium**

**80% Prod/Japan** — 80% V, V content ferrovanadium, Japanese producer, and imported, yen per kilo. Discontinued June 30, 1993.

**Gold**

**COMEX** — Settlement prices on the New York Mercantile Exchange’s COMEX Division. Forward position is indicated by footnote (C) on price pages. These months are spot and one year out.

**Handy & Harman** — Daily quotation is the lowest price at which offers can be obtained by Handy & Harman for gold, min 99.95% purity, for nearby delivery in New York in quantities sufficient to meet its daily requirements.

**London Final and London Initial** — These spot quotations are established twice daily by consensus of major London bullion dealers. Purity: 99.5% fine.

**Engelhard Unfab** — base price per tr oz, asked price at 10:30 EST for 99.99% purity, unfabricated, f.o.b. Carteret, NJ, vault.

**Lead**


**MW NY Dealer** — f.o.b. New York spot, estimated market price for min. 99% Ir purity.

**Iridium**

**US Producer Indium Corp.** — Indium Corp.’s price for 99.97% purity metal; 1 kilo bar in lots of 10,000 tr oz, f.o.b., Utica, NY, published in $/kg.

**MW NY Dealer Indium** — Price is based on 99.99% minimum purity indium at warehouse (Rotterdam), CIF, in minimum lots of 50kg.

**Indium 99.99% CIF Japan:** Indium metal with 99.99% purity, primary or secondary, measured in $/kg, shipped to Japan, delivery within 30 days. The metal should be compliant to European Union’s RoHS directive, which restricts content of cadmium to less than 75 ppm, lead to less than 100 ppm, mercury to less than 100 ppm and hexavalent chromium to less than 20 ppm in 1 kilogram of the metal. 99.995% and 99.999% purity metal prices are to be considered as references. Platts assesses materials of Chinese and South Korean origins. Platts reserves the right to omit materials of unspecified origins from the assessment. Lots are 50 kg minimum and should not exceed 5 mt. Lots less than 50 kg are not to be considered as they are likely to be priced higher, and lots over 5 mt are likely to be sold with a volume discount. Platts assesses prices of the metal exported to Japan to be sold to Japanese traders, indium tin oxide manufacturers, solder and electronics equipment makers, as well as solar battery material makers. Spot prices are assessed on a weekly basis every Tuesday or closest working day based on a survey of Chinese producers, traders, South Korean producers and traders, Japanese traders, Japanese ITO makers and solder/electronics and battery makers.

**Platts** — Settlement prices on the New York Mercantile Exchange’s COMEX Division. Forward position is indicated by footnote (C) on price pages. These months are spot and one year out.

**Handy & Harman** — Daily quotation is the lowest price at which offers can be obtained by Handy & Harman for gold, min 99.95% purity, for nearby delivery in New York in quantities sufficient to meet its daily requirements.

**London Final and London Initial** — These spot quotations are established twice daily by consensus of major London bullion dealers. Purity: 99.5% fine.

**Engelhard Unfab** — base price per tr oz, asked price at 10:30 EST for 99.99% purity, unfabricated, f.o.b. Carteret, NJ, vault.
US Used Lead-Acid Batteries – Weekly assessment for 50% lead-acid, starter-lighter ignition automotive batteries, picked up US Midwest, assessed in cents/lb, suitable for delivery to secondary smelters within 30 days, net-30 days payment terms. Minimum quantity one truckload (42,000-44,000 lb), with typical order size one to five truckloads, packaged in shrink-wrapped pallets or skids, pallet size 40” or 44” by 48”, maximum 3,600 lb per skid, no more than three battery layers separated by cardboard sheets. Assessed weekly through a survey of secondary lead smelter buyers, scrap dealers/processors, traders and brokers. Input from scrap yards will also be considered for trend purposes. The lead prices will be assessed weekly on Tuesdays (or closest business day in the event of holidays).

Europe – Dealer Premium 99.990% Rotterdam: Weekly estimated $/mt premium over LME cash for 99.990% lead on an in-warehouse Rotterdam basis, duty paid. Based on a survey of producers, traders and consumers of lead. Assessed every other week, usually on Tuesdays.

Europe – 99.985% Rotterdam: Weekly estimated $/mt premium over LME cash for 99.985% lead on an in-warehouse Rotterdam basis, duty paid. Based on a survey of producers, traders and consumers of lead. Assessed every other week, usually on Tuesdays.

Europe – 99.970% Rotterdam: Weekly estimated $/mt premium over LME cash for 99.970% lead on an inwarehouse Rotterdam basis, duty paid. Based on a survey of producers, traders and consumers of lead. Assessed every other week, usually on Tuesdays.

In-Warehouse Singapore Premium – Daily estimated premium for 99.97% material of mainly Chinese origin, in-warehouse Singapore. Cargo released immediately upon payment.

MANGANESE ORE

Platts launched on January 3, 2012, a daily spot market price assessment of manganese ore.

Price Assessment: Platts publishes the daily spot market price for manganese ore, reflecting the price at which a cargo could be traded on a CIF North China basis, Tianjin, at the close of the assessment period on the day of publishing. These assessed values are based on confirmed spot cargo transactions, or the tradable price falling between firm cargo bids/offers, or in the absence of liquidity, where spot market transactions would have been concluded for the benchmark grade.

Spot price bids/offers or trades basis FOB or CIF in other locations may be netted back to CIF North China using prevailing spot freight rates for dry bulk carriers on the day of assessment. For netback/netforward calculations, the appropriate vessel class freight costs are taken into consideration.

Platts spot market price assessment can also take into account fundamentals of demand/supply of manganese ore and alloys in key consumer and producer markets internationally.

Frequency: The assessment CIF China is published daily and reflects market values prevailing at the close of Asian markets, typically at 6:30 pm Singapore time (1030 GMT). The assessment is published following editorial engagement with market participants such as producers, consumers, traders, shippers and other active spot market participants.

Basis & Location: Cargoes offered Cost, Insurance and Freight (CIF) Tianjin North China are the basis for delivery, with delivery to other Chinese ports normalized to Tianjin.

Unit: All prices are quoted in US dollars per dry contained manganese unit ($/dmtu).

Timing: Platts assesses cargoes arriving CIF North China typically from 2 – 8 weeks forward from the date of publication and will normalize to the middle of the delivery window.

Quality: The assessment reflects high grade manganese ore lumps normalized to a standard specification of 44% Mn contained content. All values deemed typical; specifications with Mn content ranging from 41% to 46% are to be normalized to a standard where Fe content is 6.00%, SiO2 is 8.00%, Al2O3 is 7.00% P is 0.11%, moisture is 3.00% and sizing at 5mm to 80mm, 90% passing.

Quality inspections are typically made at discharge port. Re-assessments of quality at delivered ports will not be considered for assessment of spot prices based on the principle that the original transaction was executed in good faith.

Volume: Minimum cargoes of 5,000 mt or one full hatch are assessed as standard.

Payment terms: Cash or at sight terms are standard for assessment all deviations will be normalized to this standard.

**Mercury**


US Domestic – Price based on 99.99% minimum purity Hg, Prime Virgin, FOB US East Coast warehouse, in minimum quantity of 50fl, $/fl.

**Molybdenum**

Daily Dealer Oxide (MMAYQ00) – Platts launched a daily Molybdenum Oxide assessment on October 10, 2011. The assessment is for “repeatable” dealer-to-consumer, producer-to-consumer, producer-to-dealer and/or dealer-to-dealer spot sales, technical-grade moly oxide (roasted molybdenum concentrates), min 57% Mo, max 0.5% Cu, 0.05% lead, drummed material, order quantities 18-24 metric tons for delivery 3-30 days forward from the date of publication, CIF Japan, in-warehouse European ports, delivered US, delivered duty-unpaid South Korean ports and CIF Nhava Sheva/Mumbai, India. Reported sales of powdered material packed in big bags or cans, and of oxide briquettes, are normalized to an equivalent price for powdered material in drums. The daily assessment takes into account all transactions, bids and offers reported to Platts in the 24-hour period up to 4:30 pm London time each day, except on the last business day of the calendar month, when the cut-off point for transactions to be included is 1:00 pm London time. The price is assessed as a range in US dollars per pound, reflecting the narrow price band where the majority of transactions took place or, in the absence of business, where most typical buyers and sellers would be likely to conclude a deal. The Daily Dealer Oxide price assessment is published in Platts’ real-time service Platts Metals Alert (PMA) on page PMA398, in Platts Metals Daily and in the Platts Metals Week supplement. Weekly and monthly averages of the high, low and mean of the daily assessment ranges are published on PMA and in Platts Metals Daily on the last business day of the week and the month, respectively, after close of business US East Coast time. Platts publishes weekly volume figures to show total tonnage by region for concluded deals accounted for in the assessment. Before January 3, 2012, the assessment only reflected dealer-to-consumer sales, CIF Japan, in-warehouse European ports and delivered US.

MW Dealer Oxide (MMAGQ00) – A weekly assessment for “repeatable” dealer-to-consumer, producer-to-consumer, producer-to-dealer and/or dealer-to-dealer spot sales, technical-grade moly oxide (roasted molybdenum concentrates), min 57% Mo, max 0.5% Cu, 0.05% lead, drummed material, order quantities 18-24 metric tons for delivery 3-30 days forward from the date of publication, CIF Japan, in-warehouse European ports, delivered US, delivered duty-unpaid South Korean ports and CIF Nhava Sheva/Mumbai, India. Price history begins in April 1971. Before January 3, 2012, the assessment only reflected dealer-to-consumer sales, CIF Japan, in-warehouse European ports and delivered US. Consolidated with the Daily Dealer Oxide assessment effective January 2, 2013, when the methodology changed to become the weekly average of the Daily Dealer Oxide assessment.

MW Oxide Transaction – A weekly assessment for “repeatable” dealer-to-consumer, producer-to-consumer, producer-to-dealer and/or dealer-to-dealer spot sales, technical-grade moly oxide (roasted molybdenum concentrates), min 57% Mo, max 0.5% Cu, 0.05% lead, drummed material, order quantities 18-24 metric tons for delivery 3-30 days forward from the date of publication, CIF Japan, in-warehouse European ports, delivered US, delivered duty-unpaid South Korean ports and CIF Nhava Sheva/Mumbai, India. Molybdenum is assessed every week on Thursdays or closest prior business day. Discontinued July 2, 2012.

(DISCONTINUED) Moly oxide CIF Japan – Moly Oxide min. 57% grade — Platts assesses weekly spot prices for molybdenum oxide (roasted molybdenum concentrates) of minimum 57% molybdenum, maximum 0.5% copper, and maximum 0.05% lead, with a chemistry composition of MoS3, exported to Japan on a CIF basis. Assessments are for moly oxide in powder form, drummed or sold in big bags, for delivery to Japanese ports. Prices for moly oxide briquettes are normalized to the price of powder, with Platts taking into consideration typical processing charges. Minimum tonnage of transactions to be considered for the assessment is 18 mt. Units for assessment are US dollar per pound. Discontinued May 1, 2013.

(DISCONTINUED) Moly oxide FOB China – Chinese Origin — Platts assesses weekly spot prices for molybdenum oxide (roasted molybdenum concentrates) of minimum 57% molybdenum, maximum 0.5% copper, and maximum 0.05% lead, with a chemistry composition of MoS3, exported from China on an FOB basis.
Assessments are for moly oxide in powder form, drummed or sold in big bags, for delivery from Chinese ports. Prices for moly oxide briquettes are normalized to the price of powder, with Platts taking into consideration typical processing charges. Minimum tonnage of transactions to be considered for the assessment is 18 mt. Units for assessment are US dollar per pound. Discontinued May 1, 2013.

**NICKEL**

- **N American Free Market** – 4X4 cathode, estimated weekly market price in US and Canada; 99.9% Ni, delivered.
- **N American Free Market** – melting grade; estimated weekly market price in US and Canada; briquettes, cathode, disc/pellets; 99.9% Ni, delivered.
- **N American Free Market** – plating grade; estimated weekly market price in US and Canada; 99.95% Ni, various forms, delivered.
- **LME** – Official morning session prices on the London Metal Exchange for the cash, three-month, and 15-month positions. First price is bid, second is asked. Weekly average is bid/asked mean. Meets LME specifications, duty unpaid in approved LME warehouses.
- **(DISCONTINUED) MW LME Mean** – The average of the cash and three months, bid and ask positions calculated on a daily basis.
- **Europe — Cut Cathode**: A weekly assessment for the spot premium over LME cash for nickel 4x4 inch cut cathodes, LME grade minimum 99.8% nickel, on an in-warehouse Rotterdam basis. The premium is assessed on US dollar per metric tonne basis. The assessment is based on a survey of producers, traders and consumers of nickel. Nickel cut cathode is assessed every week on Fridays or closest prior business day.
- **Europe — Briquettes**: A weekly assessment for the spot premium over LME cash for nickel briquettes, LME grade minimum 99.8% nickel, on an in-warehouse Rotterdam basis. The premium is assessed on US dollar per metric tonne basis. The assessment is based on a survey of producers, traders and consumers of nickel. Nickel briquettes are assessed every week on Fridays or closest prior business day.
- **Europe — Russian Full Plate**: A weekly assessment for the spot over LME cash for Russian Full Plate uncut cathode, LME grade minimum 99.8% nickel, on an in-warehouse Rotterdam basis. The premium is assessed on US dollar per metric tonne basis. The assessment is based on a survey of producers, traders and consumers of nickel. Russian full plate is assessed every week on Fridays or closest prior business day.
- **In-Warehouse Singapore Premium** – Daily estimated premium for 99.8% minimum material of mainly Brazilian and Russian origin, in-warehouse Singapore. Cargo sold in the form of squares, full plates, or briquettes. Cargo released immediately upon payment.

**OSMIUM**

- **MW New York Dealer** – f.o.b. New York, spot, estimated market price, min 99.5% purity osmium.

**PALLADIUM**

- **New York Mercantile Exchange** – 99.95% purity palladium in 100-oz lots. Settlement prices on the New York Mercantile Exchange for the nearest active delivery month. These months are January, April, July and October.
- **JM Base Asia, JM Base Europe, JM Base NA** – Quoted by Johnson Matthey to customers for 99.95% purity palladium, f.o.b. JM refinery.
- **Hong Kong spot at 0700 GMT** – These spot quotations are established daily at 0700 GMT, based on current trading levels quoted by Johnson Matthey. Purity: 99.95% purity.
- **Engelhard Unfab** – base price per tr oz, asked price at 10:30 EST for 99.95% purity, unfabricated, f.o.b. Carteret, NJ, vault.
- **London AM Fix** – Based on Good Delivery metal of 99.95% purity in the form of plate or ingot with a minimum weight of 1 kg and maximum of 6 kg.
- **London PM Fix** – Based on Good Delivery metal of 99.95% purity in the form of plate or ingot with a minimum weight of 1 kg and maximum of 6 kg.

**PLATINUM**

- **New York Mercantile Exchange** – 99.95% purity platinum in 50-oz lots. Settlement prices on the New York Mercantile Exchange for the nearest active delivery month. These months are January, April, July, and October.
- **JM Base Asia, JM Base Europe, JM Base NA** – Quoted by Johnson Matthey to customers for 99.95% purity platinum, f.o.b. JM refinery.
- **Hong Kong spot at 0700 GMT** – These spot quotations are established daily at 0700 GMT, based on current trading levels quoted by Johnson Matthey. Purity: 99.95% purity.
- **Engelhard Unfab** – base price per tr oz, asked price at 10:30 EST for 99.95% purity, unfabricated, f.o.b. Carteret, NJ, vault.
- **London AM Fix** – Based on Good Delivery metal of 99.95% purity in the form of plate or ingot with a minimum weight of 1 kg and maximum of 6 kg.
- **London PM Fix** – Based on Good Delivery metal of 99.95% purity in the form of plate or ingot with a minimum weight of 1 kg and maximum of 6 kg.

**RHENIUM**

- **MW NY Dealer** – Free market price based on 69.4% Re contained (ammonium perhenate), delivered to US customer works, quoted in $/kg, basis shipment and...
payment within 30 days. Based on a weekly survey of merchants, producers and consumers. Assessed Thursdays or closest business day.

**RHODIUM**


JM Base NA – Quoted by Johnson Matthey to customers for 99.9% purity Rh, f.o.b. JM refinery.

Engelhard Unfab – base price per tr. oz. asked price at 10:30 EST for 99.9% purity, unfabricated, f.o.b. Carteret, NJ, vault.

**RUTHERIUM**


JM Base NA – Quoted by Johnson Matthey to customers for 99.9% purity Ru, f.o.b. JM refinery.

Engelhard Unfab – base price per tr. oz. asked price at 10:30 EST for 99.9% purity, unfabricated, f.o.b. Carteret, NJ, vault.

**SELENIUM**

MW New York Dealer – Selenium metal powder, minus 200 mesh, min. Se 99.5% in warehouse, 5-ton lots. Assessed in $/lb, basis shipment and payment within 30 days. Assessed on Thursdays or closest business day based on a survey of merchants and producers.

**SILICOMANGANESE**

65:16 DDP NWE: Weekly assessment for grades will be normalized to a specification with P content 0.25% and C content 1.5%. The assessment will be for volumes of 300-1,000 mt delivered, duty-paid Northwest Europe basis for delivery within four weeks. Assessment will be in Eur/mt Mn contained and conducted on Thursdays (or the closest business day in the case of holidays) through a survey of producers, traders and steel mill buyers.

65% Mn, in-warehouse US: Weekly assessment of the repeatable, tradeable, spot price for 65-72% Mn, normalized to 65% Mn, silicon 16-18%, carbon 2% max, phosphorous 0.35% max, sulfur 0.04% max; lumps size 2.5x0.50 inch; in-bulk or 2,000-3,000 lb supersacks; US-origin and imported material; cents/lb Mn contained, duty-paid in-warehouse in key locations along the Mississippi, Ohio and Columbia River systems and other key port warehousing locations, including Baltimore, Maryland, Long Beach, California, and Portland, Oregon; delivery within 60 days from date of transaction, net-30 days payment terms from date of delivery. Transactions reported on a delivered basis normalized to an in-warehouse basis. Fines normalized to stated lump specifications. Special packaging and payment terms normalized to meet stated specifications. The assessment will reflect pricing for minimum quantities of four truckloads and greater. Assessment made Wednesdays or closest business day from survey of producers, traders and end-users in the carbon, stainless and specialty steel sectors, closing at 4pm New York time.

Silicomanganese 65% CIF Japan (MMAJG00) -- Weekly assessment of the repeatable, tradeable, spot price for 65-70% Mn, normalized to 65% Mn; silicon 14-20%, carbon maximum 2-2.5%, phosphorous maximum 0.3%, sulfur maximum 0.02%, boron maximum 0.02%, lump size 10-55 mm, in bulk or super sacks, all origins. Price is assessed in $/mt Mn contained, reflecting the narrow price range where the majority of business is occurring, basis CIF main Japanese ports of Yokohama, Nagoya and Osaka, loading within 60 days from the date of transaction, net 30-days payment terms from date of delivery. The assessment will reflect minimum quantities of 100 mt or greater. Assessment made Thursdays or closest business day from survey of producers, traders and end-users in the steel sector. Includes all origins meeting the specification. Started July 1, 1993.

(DISCONTINUED) 60-70%/Japan -- 60-70% silicomanganese, 16-20% Si imported, ( ) per mt. HK 65% Mn – min 65% Mn, max 17% Si, US dollar per kilo, f.o.b. main Chinese ports. Discontinued June 30, 1993.


**SILICON**

Silicon 553 Grade, Delivered US Midwest: Weekly assessment of the repeatable, tradeable, spot price for US and imported 553 grade silicon metal with minimum 98.50% silicon; maximum 0.50% iron; maximum 0.30% calcium and 0.2-0.5% aluminum; lumps size 4 inches; cents/lb, in bulk or 2,000-3,000 lb supersacks, duty-paid, delivered Midwest, delivery within 30 days from date of transaction, net-30 days payment terms from date of delivery. Reported in-warehouse, or picked-up, transactions normalized to delivered US Midwest. Fines normalized to stated lump specifications. Special packaging and payment terms to be normalized to meet stated specifications. Assessment quantities are three truckloads and upward. Smaller quantities to be normalized to stated quantity. Assessed on Thursdays or closest business day, based on a survey of producers, traders and consumers, closing at 4pm New York time. Assessment started October 22, 1975.

Silicon, 553 grade, in-warehouse EU: Weekly assessment of the repeatable, tradeable, spot price for EU origin and imported 553 grade silicon metal with minimum 98.50% silicon; maximum 0.50% iron; maximum 0.30% calcium and 0.2-0.5% aluminum; lumps size 50-100 mm; euros/m, in bulk/1 mt big bags in-warehouse, duty-paid, EU main ports, producer plants and major EU warehousing hubs; delivery within 60 days from date of transaction; net-30 days payment terms from date of delivery. Reported delivered transactions normalized back to in-warehouse basis. Special packaging and payment terms to be normalized to meet stated specifications. Transaction quantities are three truckloads and greater. Smaller quantities to be normalized to stated quantity. Assessment made Thursdays...
or closest business day from a survey of producers, traders and consumers. Assessment started March 7, 2002.

**Silicon 553 grade, FOB China:** Weekly assessment of the repeatable, tradable, spot price for Chinese origin and imported 553 grade silicon metal with minimum 98.50% silicon; maximum 0.50% iron; maximum 0.30% calcium and 0.2-0.5% aluminum; lump size 50-100 mm; $/mt, FOB main Chinese sea ports, in bulk/1 mt big bags loaded on oceangoing vessel or packed in seagoing 20ft or 40 ft containers and customs sealed, export tariff-paid, within 30 days of date of transaction. Payment by telegraphic transfer, cash against documents, including original bill of lading and irrevocable letter of credit drawn against approved bank at site or equivalent. Assessment quantities are 20 mt and greater, with smaller volumes normalized to stated quantity. Special packaging and payment terms to be normalized to meet stated specifications. Assessment made Thursdays or closest business day from a survey of producers, traders and consumers. Assessment started June 27, 1991.

**Silicon 553 grade, CIF Japan:** Weekly assessment of the repeatable, tradable, spot price for any origin silicon metal with minimum 98.50% silicon; maximum 0.50% iron; maximum 0.30% calcium and 0.2-0.5% aluminum; lump size 50-100 mm, $/mt, CIF main Japan sea ports, loaded in bulk or 1 mt big bags on oceangoing vessel or packed in seagoing 20ft or 40 ft containers and customs sealed at point of origin. Payment by telegraphic transfer, cash against documents, including original bill of lading and irrevocable letter of credit drawn against approved bank at site or equivalent. Assessment quantities are 20 mt and greater, with smaller volumes normalized to stated quantity. Assessment made Thursdays or closest business day from a survey of producers, traders and consumers. Assessment started July 1, 1993.

**COMEX** – Settlement prices on the New York Mercantile Exchange’s COMEX division. Forward positions are indicated by footnote (C) on price pages. These months are spot, three months out, and one year out.

**Handy & Harman** – Lowest price at which offers can be obtained by Handy & Harman for silicon in commercial bar form, in accordance with ASTM designation B413-69. Specification for refined silver, grade 99.9%, for nearby delivery at New York, in quantities sufficient to meet its daily requirements.

**London Fix** – This fix is established at 12:05 London time by consensus of major silver dealers.

**London Spot/US Equivalent** – Official US dollar equivalent of London Spot price as quoted by major London bullion dealers.

**Engelhard Unf Fab** – base price per tr oz asked price at 12:30 EST for 99.9% purity, unfabricated, f.o.b. Carteret, NJ, vault.

**Hong Kong spot at 0700 GMT** – These spot quotations are established daily at 0700 GMT, based on current trading levels quoted by Johnson Matthey. Purity: 99.9% purity.

**TANTALUM**

**Spot Tantalite Ore** – US import, dealer quote, $/lb, price based on Ta2O5 content.

**TIN**

**LME** – Official morning session prices on the London Metal Exchange. First price is bid, second is asked. Weekly average is the bid/asked mean. Purity 99.85%.

**(DISCONTINUED) MW Composite** – the price is calculated using an average of the KLTM price and the LME price, plus fixed charges, finance charges, Malaysian exchange rate, and a risk factor representing the cost to US consumers for Grade A tin, ex-dock, major port, duty paid.


**(DISCONTINUED) MW New York low lead tin** – New York low lead tin (i.e. 50 ppm lead content max) quotation by major dealers for spot material. Duty paid, ex-dock, for delivery within 30 days. Prices usually set Monday and Thursday. Price is in cents/lb.

**Europe** – 99.85% Malay origin: Weekly estimated $/mt premium for Malay origin 99.85% tin on a CIF Rotterdam basis, 0-30-day terms, prompt delivery. Based on a survey of producers, traders and consumers of tin. Assessed weekly, usually on Wednesdays.

**Europe** – 99.9% Chinese origin: Weekly estimated $/mt premium for Chinese origin 99.9% tin on a CIF Rotterdam basis, 0-30-day terms, prompt delivery. Based on a survey of producers, traders and consumers of tin. Assessed weekly, usually on Wednesdays.

**KLTM** – Daily settlement price for Straits tin (min 99.85% purity) on the Kuala Lumpur Tin Market, Malaysia, converted into US cents per lb, using the spot Citibank Malaysian exchange rate.

**TITANIUM**

**MW US 70% Ferrotitanium** – Estimated spot market price for 70% Ti ferrotitanium, lump form, max. 5% Al, 2-3% V, 0.5% tin, duty paid, delivered, per lb of Ti contained.

**European 70% Ferrotitanium** – Spot market transaction price for European standard grade 70% Ti ferrotitanium, max. 5% Al, 2-3% V, 0.5% tin, max. 0.5% N, duty paid, delivered, çe per kg Ti contained.

**MW US Turning 0.5%** – Free market price for US unprocessed turnings, 90% Ti, 6% Al, 4% V, 0.5% tin, delivered, duty paid.

**European Turning 0.5%** – Spot price for US- or European-generated turnings, 90% Ti, 6% Al, 4% V, 0.5% tin, delivered, duty paid.

**TUNGSTEN**

**MW US Free Market Tungsten Ore Import** – weekly estimate of market price; Min 65% WO3, price based on sto of WO3,
APT US – weekly estimate of market price; min 88.5% WO₃, $/stu, delivered.

MW US Free Market Ferrotungsten – weekly estimate of market price; min 75% W, max 0.5% Cu, $/lb W, delivered.

APT European – Min 88.5% WO₃, US dollar per mtu, c.i.f. Rotterdam, cash, duty free.

APT-HK – Chinese #1 grade, min 88.5% WO₃, US dollar per mtu, f.o.b. main Chinese ports.

HK Ferrotungsten – min 75% W, US dollar per kilo, f.o.b. main Chinese ports.

ZINC

LME SHG – Official morning session price for 99.95% or better zinc.

MW North American SHG (MW NA SHG) – Price based on LME base price plus premiums or discounts, depending on market conditions.

MW North American GAL (MW NA GAL) – A formula-based quote aimed at zinc users in the galvanized and steel markets. Factors considered are the LME cash price plus premiums or discounts, financing by the consumer, and other market-related conditions. Varies on a daily basis.

(DISCONTINUED) MW Four Corners – (Formerly MPR, EPP) LME SHG cash and three-month bid and asked prices, averaged on a daily basis.

MW Alloyer No. 3 – US alloyer quote for No. 3 die casting alloy, 30,000-lb lots and over, delivered, based on LME cash price plus premiums for alloying. Varies on a daily basis.

Europe – SHG Rotterdam: Weekly estimated $/mt premium over LME cash for Special High Grade zinc on an in-warehouse Rotterdam basis, 0-60-day terms, prompt delivery. Based on a survey of producers, traders and consumers of zinc. Assessed every other week, usually on Tuesdays.

In-Warehouse Singapore Premium – Daily estimated premium for 99.995% minimum material of mainly Chinese origin, in-warehouse Singapore. Cargo released immediately upon payment.

BACKGROUND

Since January 2, 1930, Platts Metals Week (originally E&MJ Metal & Mineral Markets) has served as an independent price authority for the international nonferrous metals industry. Platts Metals Week’s prices are widely used by the industry and government for evaluating pricing of metals and ores, levying taxes and tariffs, determining freight rates, and evaluating new projects.

Because of the large variety of prices and the different methods used to determine each, it is important to understand the ground rules which Platts Metals Week uses to keep the price series as consistent as possible. An overview of how the Platts Metals Week prices are gathered, computed, and averaged follows.

Types of prices

As distinguished by frequency, Platts Metals Week publishes the following types of prices:

- Daily
- Weekly averages of dailies
- Monthly averages of dailies
- Weekly (set or quoted once a week)
- Bi-weekly (set or quoted twice a week, e.g. NY Dealer Tin)
- Monthly averages of weeklies
- Monthly mean averages of select weeklies
- Annual averages of monthly averages

These prices, according to their source or method of calculation, may be further categorized as follows (examples in parentheses):

- Producer list prices (Lead North American Secondary)
- Consumer buying prices (Silver-Handy & Harman)
- Platts Metals Week canvas of dealers, producers, and consumers (Molybdenum-MW Dealer Oxide)
- Platts Metals Week weighted averages calculated using confidential prices and tonnages (Lead-MW NA Producer)
- Platts Metals Week weighted averages calculated using published prices and estimated tonnages (Copper-MW Composite)
- Prices computed by a formula (Tin-MW Composite)
- Consensus prices set by specialized groups (Gold-London Final)
- Quoted prices on metal and commodity exchanges (Zinc-LME SHG Cash)

FOREIGN EXCHANGE

Pound Sterling (Spot) and Three-Month Midpoint, Deutschmark, Canadian dollar, and Yen. The exchange rates as quoted by the New York Federal Reserve Bank. The Pound Sterling, Deutschmark, Canadian dollar spot, and Yen are set at noon New York time, while the Pound Sterling and Canadian Dollar Three-Month 10 AM Midpoint are set at 10 AM New York time. The Malaysian ringgit is the Citibank selling rate taken at approximately 10:15 AM New York time. The London Metal Exchange Sterling, Three-Month Sterling, LME Deutschmark and LME Yen are as quoted on LME Official morning session.
Prices converted from other currencies and units (Copper-MW c.i.f. Europe)

Exclusive Platts Metals Week quotations are usually preceded by MW in the price description. Weekly averages of the quoted prices on the London Metal Exchange, the New York Mercantile Exchange’s NYMEX/COMEX divisions also are published in Platts Metals Week.

Price descriptions usually refer to the source of the price, although they may also include references to the form or purity of the metal as well as to quantity and delivery information.

Effective dates

The fact that there are many types of prices makes it necessary to use three dating conventions: 1) the producer list price effective date, 2) the day the market was last surveyed, and 3) the day a price last changed.

Producer prices usually carry effective dates. When more than one producer is involved, the date is the last time a producer price change affected the price published in Platts Metals Week.

The day the market was last surveyed is usually the next-to-last business day of the week. Most dealer prices and others that change frequently are dated in this manner.

The day a price last changed is used for prices which do not have effective dates and which may change infrequently. It is also occasionally used with certain inactive dealer prices.

Foreign exchange rates

Four daily foreign exchange rates are published by Platts: the British pound sterling (both spot and three-months), the Canadian dollar (both spot and three-months), the London Metal Exchange sterling (both spot and three-months), the LME European Euro and the Japanese yen. The British (spot), Canadian (spot) and Japanese exchange rates are the official noon buying rates as quoted by the New York Federal Reserve Bank. These rates are averaged to six decimal places on a weekly, monthly and annual basis.

The British pound sterling spot exchange rate is used to convert Platts Metals Week weekly prices into pounds sterling on a weekly basis and to convert several London prices into US dollars on a daily basis. When an exchange rate is not available (because of a US holiday which does not apply in London, for example) the previous day’s exchange rate is used. This procedure minimizes fluctuations in the converted price. The Malaysian dollar exchange rate is used to convert Malaysian tin prices into US dollars and to calculate the MW Composite tin price.

High/low prices

Most of the “High” and “Low” price listings which appear on the monthly and annual price pages of Metals Week apply to the quoted daily prices. Exceptions to this rule are: 1) for weekly prices, the high/low quotes are determined by the bottom of the weekly range if one exists; 2) for London Metal Exchange prices, the high/low applies to the daily bid/asked quotation; and 3) for monthly LME settlement prices (which are monthly averages of the applicable daily LME cash asked price), the high/low is the applicable monthly LME Settlement price.

Futures trading positions

The New York Mercantile Exchange’s NYMEX/COMEX divisions quote constantly changing futures positions on several metals. Platts Metals Week has selected convenient positions and reduced them to numerical designations (1st positions, 2nd position, etc.). The actual trading months quoted are footnoted each week in Platts Metals Week. The nearest (spot), three months, and approximate twelve months from spot positions are generally quoted.

When trading months shift in the middle of a week, the quoted prices reflect the new trading month applicable to the numerical position designation.

Calculation of averages

There are three types of Platts Metals Week averages: 1) those derived from daily prices, 2) those derived from weekly prices, and 3) those derived from monthly prices.

1) All prices quoted on a daily basis are arithmetically averaged to create weekly and monthly averages in the currency and units in which the prices originate. For bid and ask prices, the mean of the bid and ask price is used for the calculation, holidays, and other no-quote situations are excluded from the calculation.

2) In calculating monthly averages, prices quoted only on a weekly basis are considered to represent the full business week (beginning Monday) and therefore are weighted according to the number of business days in that week for which the New York Federal Reserve Bank published an exchange rate.

For example, the monthly averages for March 1993 were based on four weeks with five business days and one week with three business days; the price quoted for each week is weighted by the number of business days in that week, and the total is divided by the number of business days in the month – in this case 21.

Monthly averages of weekly prices in most cases use the low end of a price range, if one exists. The exceptions to this rule are prices that are listed as mean. The mean price is an average of the low and high end of a range. Platts Metals Week reserves the right to drop a low quote at any time it becomes unrepresentative of the market.

Because monthly averages must be available to industry on the first day of the following month, a discrepancy can result in the monthly average for prices
set weekly when the month ends early in a given week. In such an instance, when a month ends on Monday, Tuesday, or Wednesday, the previous week’s price applies to those days. If the month ends on Thursday or Friday, that week’s price applies to the entire week. (In particularly volatile markets, Platts Metals Week may set a given week’s price earlier than usual to assure that the resulting monthly average more accurately reflects the market.) Weekly prices are intended to apply to the week as a whole, and producer effective dates are not taken into consideration in calculating monthly averages. This is done to minimize the problem of having arbitrarily to determine which of several producer effective dates should be applied.

3) Annual averages are arithmetic averages of monthly quotations in the currency and units in which the price originates.

Conversion into other currencies

The way a price is converted from one currency and measure of weight into another depends on whether the price is a daily, weekly, or monthly one. (see page 13 for a description of the different types of prices.)

1) Prices which originate as weekly quotations are converted into other currencies using the applicable exchange rates for the next to last business day of the week (usually Thursday). Monthly averages of weekly prices are converted into other currencies by using the published average monthly exchange rates, which reflect the New York Federal Reserve Bank business day schedule.

2) Weekly and monthly averages of daily prices are converted using an average of the daily exchange rates as they apply to each individual price. Because of differing holiday schedules from one country or industry to another, a number of different (unpublished) average exchange rates may be used to convert weekly and monthly averages of daily prices into other currencies. For any month in which there are no holidays, the published weekly and monthly average exchange rates are used to convert the daily prices into other currencies.

3) Annual averages are converted into other currencies using arithmetic averages of the published monthly exchange rates. It should be noted that only annual averages stated in the originating currency are true averages. The conversion of these averages into other currencies is accomplished using a single average annual exchange rate. As a result, that conversion will not exactly agree with an annual average (which one might calculate for oneself) of monthly averages which are not stated in the originating currency. The same is true of monthly averages of prices which originate as weekly prices.

Conversion tables

To convert a price from a per-unit basis to a per-ton-of-ore basis, multiply the unit price by the percentage of unit-based material in the ore. For example, if 50% manganese ore were priced at $1.00 per long ton unit, the price per long ton of ore would be $50.00.
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>CT</td>
<td>Connecticut</td>
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<tr>
<td>Cu</td>
<td>copper</td>
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<td>DC</td>
<td>District of Columbia</td>
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<td>DE</td>
<td>Delaware</td>
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<td>del</td>
<td>delivered</td>
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<td>DM</td>
<td>German Deutschmark</td>
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<tr>
<td>electrolytic</td>
<td>electrolytic</td>
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<td>EPA</td>
<td>(US)Environmental Protection Agency</td>
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<td>eqv</td>
<td>equivalent</td>
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<td>F</td>
<td>fluorine</td>
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<td>f.a.s.</td>
<td>free alongside ship</td>
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<td>Fe</td>
<td>iron</td>
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<td>ferromoly</td>
<td>ferromolybdenum</td>
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<td>FeSi</td>
<td>ferrosilicon</td>
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<tr>
<td>FL</td>
<td>Florida</td>
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<tr>
<td>fl</td>
<td>Flask. A unit of measure for mercury, equal to 76 lb.</td>
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<tr>
<td>fndry</td>
<td>foundry</td>
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<tr>
<td>f.o.b.</td>
<td>Free on board. Consignment to customer with all prior charges onto customer’s conveyance, usually ship, railcar, or truck.</td>
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<tr>
<td>force majeure</td>
<td>act of God</td>
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<td>FTC</td>
<td>(US)Federal Trade Commission</td>
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<td>GA</td>
<td>Georgia</td>
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<tr>
<td>GAO</td>
<td>(US) General Accounting Office</td>
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<td>Ge</td>
<td>germanium</td>
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<td>gm</td>
<td>gram</td>
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<tr>
<td>GOB</td>
<td>good ordinary brand [European prime western-grade zinc]</td>
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<td>H</td>
<td>hydrogen</td>
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<td>He</td>
<td>helium</td>
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<td>Hf</td>
<td>hafnium</td>
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<tr>
<td>HG</td>
<td>high grade [copper, tin, and zinc]</td>
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<td>mercury</td>
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<td>HI</td>
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<td>IL</td>
<td>Illinois</td>
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<tr>
<td>ILZSG</td>
<td>International Lead and Zinc Study Group</td>
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<tr>
<td>IMF</td>
<td>International Monetary Fund</td>
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<td>IMM</td>
<td>International Monetary Market. Also known as the Chicago Mercantile Exchange.</td>
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<td>impt</td>
<td>imported</td>
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<td>IN</td>
<td>Indiana</td>
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<td>Ir</td>
<td>iridium</td>
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<tr>
<td>IRS</td>
<td>(US) Internal Revenue Service</td>
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<td>ITA</td>
<td>International Trade Administration</td>
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<td>ITC</td>
<td>(US) International Trade Commission</td>
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<td>K</td>
<td>potassium</td>
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<td>kg</td>
<td>kilogram</td>
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<tr>
<td>KLCE</td>
<td>Kuala Lumpur Commodity Exchange</td>
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<td>KLTM</td>
<td>Kuala Lumpur Tin Market</td>
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<tr>
<td>KS</td>
<td>Kansas</td>
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<tr>
<td>kW</td>
<td>kilowatt</td>
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<td>kWh</td>
<td>kilowatt-hour</td>
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<tr>
<td>KY</td>
<td>Kentucky</td>
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<td>œ</td>
<td>British pound sterling</td>
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<tr>
<td>LA</td>
<td>Louisiana</td>
</tr>
<tr>
<td>lb</td>
<td>pound</td>
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<tr>
<td>Li</td>
<td>lithium</td>
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<tr>
<td>LIA</td>
<td>Lead Industries Association</td>
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<td>lo</td>
<td>low</td>
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<tr>
<td>lt</td>
<td>long ton or gross ton (2,240 lb).</td>
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<tr>
<td>ltpy</td>
<td>long tons per year</td>
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<td>ltu</td>
<td>long ton unit</td>
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<td>(IM)</td>
<td>New York Mercantile Exchange footnote</td>
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<tr>
<td>MA</td>
<td>Massachusetts</td>
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<td>maj</td>
<td>major</td>
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<td>mast</td>
<td>master</td>
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<td>max</td>
<td>maximum</td>
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<td>MD</td>
<td>Maryland</td>
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<tr>
<td>ME</td>
<td>Maine</td>
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<tr>
<td>mean</td>
<td>averaged high and low price</td>
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<tr>
<td>med</td>
<td>medium</td>
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<tr>
<td>Merc Ex</td>
<td>New York Mercantile Exchange</td>
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<tr>
<td>mesh</td>
<td>The number of wires per linear inch of a screen. Used for fine sizing.</td>
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<tr>
<td>Mg</td>
<td>magnesium</td>
</tr>
<tr>
<td>MI</td>
<td>Michigan</td>
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<tr>
<td>micro</td>
<td>One-millionth of a meter. Used for fine sizing.</td>
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<tr>
<td>min</td>
<td>minimum</td>
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<tr>
<td>MITI</td>
<td>Ministry of International Trade and Industry, a Japanese government body</td>
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<td>MN</td>
<td>Minnesota</td>
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<tr>
<td>Mn</td>
<td>manganese</td>
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<tr>
<td>MO</td>
<td>Missouri</td>
</tr>
<tr>
<td>Mo</td>
<td>molybdenum</td>
</tr>
<tr>
<td>MS</td>
<td>Mississippi</td>
</tr>
<tr>
<td>MT</td>
<td>Montana</td>
</tr>
<tr>
<td>mt</td>
<td>metric ton (2204.62 lb)</td>
</tr>
</tbody>
</table>
MMT is the abbreviation for metric tons per day.

MTM is the abbreviation for metric tons per month.

MTPY is the abbreviation for metric tons per year.

MTU is the abbreviation for metric ton unit.

MW is the abbreviation for Megawatt. A unit of power equal to one-million watts. Often used in describing the capacity of a power plant; e.g., "a 300-MW hydroelectric plant."

METALS Week or Mid West

N is the abbreviation for nitrogen.

NA is the abbreviation for North America.

N is the abbreviation for not available.

Na is the abbreviation for sodium.

Nb is the abbreviation for niobium.

NC is the abbreviation for North Carolina.

ND is the abbreviation for North Dakota.

NE is the abbreviation for Nebraska.

NH is the abbreviation for New Hampshire.

Ni is the abbreviation for nickel.

NJ is the abbreviation for New Jersey.

NM is the abbreviation for New Mexico.

NUM is the abbreviation for (South African) National Union of Mineworkers.

NV is the abbreviation for Nevada.

NY is the abbreviation for New York.

NYMEX is the abbreviation for New York Mercantile Exchange.

O is the abbreviation for oxygen.

Official session is the morning session of the London Metal Exchange.

OH is the abbreviation for Ohio.

OK is the abbreviation for Oklahoma.

OPIC is the abbreviation for Overseas Private Investment Corp. Authorized by the US government to provide expropriation insurance for private corporations operating outside the US.

OR is the abbreviation for Oregon.

Os is the abbreviation for osmium.

OSHA is the abbreviation for Occupational Safety and Health Administration.

P is the abbreviation for phosphorous.

p is the abbreviation for British pence.

PA is the abbreviation for Pennsylvania.

Pb is the abbreviation for lead.

Pd is the abbreviation for palladium.

pelt is the abbreviation for pellet.

pos is the abbreviation for position.

prem is the abbreviation for premium.

Primary production is the process of producing metal from its ore, as distinct from secondary production from scrap metal.

prod is the abbreviation for producer.

Pt is the abbreviation for platinum.

PW is the abbreviation for prime western [zinc].

Rb is the abbreviation for rubidium.

Re is the abbreviation for rhenium.

ref is the abbreviation for refinery.

refinery is the abbreviation for a plant which further purifies metal produced in a smelter. In zinc, a plant which produces purer metal than could be produced in a smelter. In aluminum, a plant which refines bauxite into alumina.

Rh is the abbreviation for rhodium.

RI is the abbreviation for Rhode Island.

Ring dealer is a member of the London Metal Exchange allowed to trade metal in the ring.

Ru is the abbreviation for ruthenium.

S is the abbreviation for sulfur.

Sb is the abbreviation for antimony.

SC is the abbreviation for South Carolina.

SD is the abbreviation for South Dakota.

Se is the abbreviation for selenium.

Settlement price is the last price at which a commodity is traded in a particular session.

SG is the abbreviation for standard grade.

SHG is the abbreviation for special high grade.

Si is the abbreviation for silicon.

Smelter is a plant which reduces concentrate to metal. In aluminum, a plant which upgrades alumina into metal.

Sn is the abbreviation for tin.

Sr is the abbreviation for strontium.

Stu is the abbreviation for short ton unit.

Ta is the abbreviation for tantalum.

Ta2O5 is tantalum pentoxide, not the mineral tantalite.

Te is the abbreviation for tellurium.

Thr-mo is three-month.

TiO2 is titanium dioxide, a paint base.

TN is the abbreviation for Tennessee.

Ton is the abbreviation for short ton (2,000 lb).

Tpm is the abbreviation for short tons per month.

Tpy is the abbreviation for short tons per year.

Tr oz is the abbreviation for troy ounce.

TVA is the abbreviation for Tennessee Valley Authority.

TX is the abbreviation for Texas.

U is the abbreviation for Uranium.

UAW is the abbreviation for United Auto Workers.

UNCTAD is the abbreviation for United Nations Conference on Trade and Development.

Unfab is the abbreviation for unfabricated.

USBM is the abbreviation for United States Bureau of Mines.

USTR is the abbreviation for United States Trade Representative.

USW is the abbreviation for (US) United Steelworkers Union.

UT is the abbreviation for Utah.

V is the abbreviation for vanadium.
<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>V205</td>
<td>vanadium pentoxide</td>
<td>WD3</td>
<td>tungsten trioxide, common designation for tungsten content</td>
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<td>Virginia</td>
<td>WV</td>
<td>West Virginia</td>
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