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ARGUS METAL PRICES

Contents:

Methodology overview	2
The report	5
Base metals	
Aluminium	6
Copper and brass	10
Nickel	12
Zinc and lead	13
Ferrous	
Ferrous scrap — global	14
Ferrous scrap freight	15
US ferrous scrap — monthly	15
Ferrous scrap specifications — del consumer	16
Ferrous scrap specifications — del foundry	16
US ferrous scrap — weekly	17
Steel feedstocks	18
Steel billet	18
Finished steel	18
Stainless steel	19
Stainless steel scrap specifications	19
Stainless steel coil specifications	19
Special alloys	
Ferro-alloys	20
Tool steel scrap	20
Cupro-nickel and super alloys scrap	20
Minor metals	21
Titanium scrap	21

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The most up-to-date Argus Metal Prices Methodology and Specification Guide is available on www.argusmedia.com

Methodology overview

Methodology rationale

Argus strives to construct methodologies that reflect the way the market trades. Argus aims to produce price assessments which are reliable and representative indicators of commodity market values and are free from distortion. As a result, the specific currencies, volume units, locations and other particulars of an assessment are determined by industry conventions.

In the ferrous scrap, steel feedstocks, stainless steel scrap, ferro-alloys, aluminium, copper, brass, minor metals, zinc, titanium scrap, nickel and super alloys scrap markets, Argus publishes physical market prices in the open market as laid out in the specifications and methodology guide. Argus uses the trading period deemed by Argus to be most appropriate, in consultation with industry, to capture market liquidity.

In order to be included in the assessment process, deals must meet the minimum volume, delivery, timing and specification requirements in our methodology. In illiquid markets, and in other cases where deemed appropriate, Argus assesses the range within which product could have traded by applying a strict process outlined later in this methodology.

Survey process

Argus price assessments are informed by information received from a wide cross section of market participants, including producers, consumers and intermediaries. Argus reporters engage with the industry by proactively polling participants for market data. Argus will contact and accept market data from all credible market sources including front and back office of market participants and brokers. Argus will also receive market data from electronic trading platforms and directly from the back offices of market participants. Argus will accept market data by telephone, instant messenger, email or other means.

Argus encourages all sources of market data to submit all market data to which they are a party that falls within the Argus stated methodological criteria for the relevant assessment. Argus encourages all sources of market data to submit transaction data from back office functions.

Throughout all markets, Argus is constantly seeking to increase the number of companies willing to provide market data. Reporters are mentored and held accountable for expanding their pool of contacts. The number of entities providing market data can vary significantly from day to day based on market conditions.

For certain price assessments identified by local management, if more than 50pc of the market data involved in arriving at a price assessment is sourced from a single party the supervising editor will engage in an analysis of the market data with the primary reporter to ensure that the quality and integrity of the assessment has not been affected.

Market data usage

In each market, Argus uses the methodological approach deemed to be the most reliable and representative for that market. Argus will utilise various types of market data in its methodologies, to include:

- Transactions
- Bids and offers
- Other market information, to include spread values between grades, locations, timings, and many other data.

In many markets, the relevant methodology will assign a relatively higher importance to transactions over bids and offers, and a relatively higher importance to bids and offers over other market information. Certain markets however will exist for which such a hierarchy would produce unreliable and non-representative price assessments, and so the methodology must assign a different relative importance in order to ensure the quality and integrity of the price assessment. And even in markets for which the hierarchy normally applies, certain market situations will at times emerge for which the strict hierarchy would produce non-representative prices, requiring Argus to adapt in order to publish representative prices.

Verification of transaction data

Reporters carefully analyse all data submitted to the price assessment process. These data include transactions, bids, offers, volumes, counterparties, specifications and any other information that contributes materially to the determination of price. This high level of care described applies regardless of the methodology employed. Specific to transactions, bids, and offers, reporters seek to verify the price, the volume, the specifications, location basis, and counterparty. In some transactional average methodologies, reporters also examine the full array of transactions to match counterparties and arrive at a list of unique transactions. In some transactional average methodologies, full details of the transactions verified are published electronically and are accessible by subscribers. The deals are also published in the daily report.

Several tests are applied by reporters in all markets to transactional data to determine if it should be subjected to further scrutiny. If a transaction has been identified as failing such a test, it will receive further scrutiny. For assessments used to settle derivatives and for many other assessments, Argus has established internal procedures that involve escalation of inquiry within the source's company and escalating review within Argus management. Should this process determine that a transaction should be excluded from the price assessment process, the supervising editor will initiate approval and, if necessary, documentation procedures.

Primary tests applied by reporters

- Transactions not transacted at arm's length, including deals between related parties or affiliates.
- Transaction prices that deviate significantly from the mean of all transactions submitted for that day.
- Transaction prices that fall outside of the generally observed lows and highs that operated throughout the trading day.
- Transactions that are suspected to be a leg of another

transaction or in some way contingent on an unknown transaction.

- Single deal volumes that significantly exceed the typical transaction volume for that market.
- Transaction details that are identified by other market participants as being for any reason potentially anomalous and perceived by Argus to be as such.
- Transaction details that are reported by one counterparty differently than the other counterparty.
- Any transaction details that appear to the reporter to be illogical or to stray from the norms of trading behaviour. This could include but is not limited to divergent specifications, unusual delivery location and counterparties not typically seen.
- Transactions that involve the same counterparties, the same price and delivery dates are checked to see that they are separate deals and not one deal duplicated in Argus records.

Secondary tests applied by editors for transactions identified for further scrutiny

Transaction tests

- The impact of linkage of the deal to possible other transactions such as contingent legs, exchanges, options, swaps, or other derivative instruments. This will include a review of transactions in markets that the reporter may not be covering.
- The nature of disagreement between counterparties on transactional details.
- The possibility that a deal is directly linked to an offsetting transaction that is not publicly known, for example a "wash trade" which has the purpose of influencing the published price.
- The impact of non-market factors on price or volume, including distressed delivery, credit issues, scheduling issues, demurrage, or containment.

Source tests

- The credibility of the explanation provided for the outlying nature of the transaction.
- The track record of the source. Sources will be deemed more credible if they
 - Regularly provide transaction data with few errors.
 - Provide data by Argus' established deadline.
 - Quickly respond to queries from Argus reporters.
 - Have staff designated to respond to such queries.
- How close the information receipt is to the deadline for information, and the impact of that proximity on the validation process.

Assessment guidelines

When insufficient, inadequate, or no transaction information exists, or when Argus concludes that a transaction based methodology will not produce representative prices, Argus reporters will make an assessment of market value by applying intelligent judgment based on a broad array of factual market information. Reporters must use a high degree of care in gathering and validating all market data used in determining price assessments, a degree of care equal to that applying to gathering and validating transactions. The informa-

tion used to form an assessment could include deals done, bids, offers, tenders, spread trades, exchange trades, fundamental supply and demand information and other inputs.

The assessment process employing judgment is rigorous, replicable, and uses widely accepted valuation metrics. These valuation metrics mirror the process used by physical commodity traders to internally assess value prior to entering the market with a bid or offer. Applying these valuation metrics along with sound judgment significantly narrows the band within which a commodity can be assessed, and greatly increases the accuracy and consistency of the price series. The application of judgment is conducted jointly with the supervising editor, in order to be sure that guidelines below are being followed. Valuation metrics include the following:

Relative value transactions

Frequently transactions occur which instead of being an outright purchase or sale of a single commodity, are instead exchanges of commodities. Such transactions allow reporters to value less liquid markets against more liquid ones and establish a strong basis for the exercise of judgment.

- Exchange one commodity for a different commodity in the same market at a negotiated value.
- Exchange delivery dates for the same commodity at a negotiated value.
- Exchange a commodity in one location for the same commodity at another location at a negotiated value.

Bids and offers

If a sufficient number of bids and offers populate the market, then in most cases the highest bid and the lowest offer can be assumed to define the boundaries between which a deal could be transacted.

Comparative metrics

- The relative values between compared commodities are readily discussed in the market and can be discovered through dialogue with market participants. These discussions are the precursor to negotiation and conclusion of transactions.
- Comparison to the same commodity in another market centre.
- Comparison to a more actively traded but slightly different specification commodity in the same market centre.
- Comparison to the same commodity traded for a different delivery timing.
- Comparison to the commodity's primary feedstock or primary derived product(s).
- Comparison to trade in the same commodity but in a different modality (as in barge versus oceangoing vessel) or in a different total volume (as in full cargo load versus partial cargo load).

Volume minimums and transaction data thresholds

Argus typically does not establish thresholds strictly on the basis of a count of transactions, as this could lead to unreliable and non-representative assessments and because of the varying transportation infrastructure found in all commodity markets. Instead, minimum volumes are typically established which may

apply to each transaction accepted, to the aggregate of transactions, to transactions which set a low or high assessment or to other volumetrically relevant parameters.

For price assessments used to settle derivatives, Argus will seek to establish minimum transaction data thresholds and when no such threshold can be established Argus will explain the reasons. These thresholds will often reflect the minimum volumes necessary to produce a transaction-based methodology, but may also establish minimum deal parameters for use by a methodology that is based primarily on judgment.

Should no transaction threshold exist, or should submitted data fall below this methodology's stated transaction data threshold for any reason, Argus will follow the procedures outlined elsewhere in this document regarding the exercise of judgment in the price assessment process.

Transparency

Argus values transparency in energy markets. As a result, where available, we publish lists of deals in our reports that include price, basis, counterparty and volume information. The deal tables allow subscribers to cross check and verify the deals against the prices. Argus feels transparency and openness is vital to developing confidence in the price assessment process.

Swaps and forwards markets

Argus publishes forward assessments for numerous markets. These include forward market contracts that can allow physical delivery and swaps contracts that swap a fixed price for the average of a floating published price. Argus looks at forward swaps to inform physical assessments but places primary emphasis on the physical markets.

Publications and price data

Argus ferrous scrap, steel feedstocks, stainless steel scrap, ferro-alloys, aluminium, copper, brass, minor metals, zinc, titanium scrap, nickel and super alloys scrap prices are published in the Argus Metal Prices report. Subsets of these prices appear in other Argus market reports and newsletters in various forms. The price data are available independent of the text-based report in electronic files that can feed into various databases. These price data are also supplied through various third-party data integrators. The Argus website also provides access to prices, reports and news with various web-based tools. All Argus prices are kept in a historical database and available for purchase. Contact your local Argus office for information.

A publication schedule is available at www.argusmedia.com

Corrections to assessments

Argus will on occasion publish corrections to price assessments after the publication date. We will correct errors that arise from clerical mistakes, calculation errors, or a misapplication of our stated methodology. Argus will not retroactively assess markets based on new information learned after the assessments are published. We make our best effort to assess markets based on the information we gather during the trading day assessed.

Ethics and compliance

Argus operates according to the best practices in the publishing field, and maintains thorough compliance procedures throughout the firm. We want to be seen as a preferred provider by our sub-subscribers, who are held to equally high standards, while at the same time maintaining our editorial integrity and independence. Argus has a strict ethics policy that applies to all staff. The policy can be found on our website at www.argusmedia.com. Included in this policy are restrictions against staff trading in any energy commodity or energy related stocks, and guidelines for accepting gifts. Argus also has strict policies regarding central archiving of email and instant messenger communication, maintenance and archiving of notes, and archiving of spreadsheets and deal lists used in the price assessment process. Argus publishes prices that report and reflect prevailing levels for open-market arms length transactions (please see the [Argus Global Compliance Policy](#) for a detailed definition of arms length).

Consistency in the assessment process

Argus recognises the need to have judgment consistently applied by reporters covering separate markets, and by reporters replacing existing reporters in the assessment process. In order to ensure this consistency, Argus has developed a programme of training and oversight of reporters. This programme includes:

- A global price reporting manual describing among other things the guidelines for the exercise of judgment
- Cross-training of staff between markets to ensure proper holiday and sick leave backup. Editors that float between markets to monitor staff application of best practices
- Experienced editors overseeing reporting teams are involved in daily mentoring and assisting in the application of judgment for illiquid markets
- Editors are required to sign-off on all price assessments each day, thus ensuring the consistent application of judgment.

Review of methodology

The overriding objective of any methodology is to produce price assessments which are reliable and representative indicators of commodity market values and are free from distortion. As a result, Argus editors and reporters are regularly examining our methodologies and are in regular dialogue with the industry in order to ensure that the methodologies are representative of the market being assessed. This process is integral with reporting on a given market. In addition to this ongoing review of methodology, Argus conducts reviews of all of its methodologies and methodology documents on at least an annual basis.

Argus market report editors and management will periodically and as merited initiate reviews of market coverage based on a qualitative analysis that includes measurements of liquidity, visibility of market data, consistency of market data, quality of market data and industry usage of the assessments. Report editors will review:

- Appropriateness of the methodology of existing assessments
- Termination of existing assessments
- Initiation of new assessments.

The report editor will initiate an informal process to examine viability. This process includes:

- Informal discussions with market participants
- Informal discussions with other stakeholders
- Internal review of market data

Should changes, terminations, or initiations be merited, the report editor will submit an internal proposal to management for review and approval. Should changes or terminations of existing assessments be approved, then formal procedures for external consultation are begun.

Changes to methodology

Formal proposals to change methodologies typically emerge out of the ongoing process of internal and external review of the methodologies. Formal procedures for external consultation regarding material changes to existing methodologies will be initiated with an announcement of the proposed change published in the relevant Argus report. This announcement will include:

- Details on the proposed change and the rationale
- Method for submitting comments with a deadline for submissions
- For prices used in derivatives, notice that all formal comments will be published after the given consultation period unless submitter requests confidentiality.

Argus will provide sufficient opportunity for stakeholders to analyse and comment on changes, but will not allow the time needed to follow these procedures to create a situation wherein unrepresentative or false prices are published, markets are disrupted, or market participants are put at unnecessary risk. Argus will engage with industry throughout this process in order to gain acceptance of proposed changes to methodology. Argus cannot however guarantee universal acceptance and will act for the good order of the market and ensure the continued integrity of its price assessments as an overriding objective.

Following the consultation period, Argus management will commence an internal review and decide on the methodology change. This will be followed by an announcement of the decision, which will be published in the relevant Argus report and include a date for implementation. For prices used in derivatives, publication of stakeholders' formal comments that are not subject to confidentiality and Argus' response to those comments will also take place.

The report

Argus publishes metal prices that report and reflect prevailing levels for open-market arms length transactions.

Various methodological approaches are employed in reporting metals markets to produce the most representative price assessments.

These include volume-weighted averages of deals done, lows and highs of deals done, and other methods.

In illiquid markets, Argus assesses the range within which metals could have traded, based on bids and offers, movements of similar or related grades, and extensive polling of market participants.

Formula-priced deals, market fundamentals and information regarding trade in material that does not meet specifications also inform assessments, but a primary emphasis is placed on the physical markets.

To be included in the price formation process, deals must meet the strict delivery, timing and specification requirements in the methodology, and must be executed at arms length between a willing buyer and seller.

In markets where liquidity is split across several locations, information may be normalised to a single reference hub, for example by making adjustments for transportation costs, where appropriate and in line with market practice.

Publication schedule

Should a holiday fall on the day a price would normally be assessed, the assessment will be made and published on the next Argus publication date.

A publication schedule is available at www.argusmedia.com

Survey method and verification

Price assessments rely on a wide variety of sources for information, including refiners, marketers, importers, traders and brokers.

Argus does not restrict itself to one subsection of the market, such as a single trading platform or a single informational channel, for the market information collected. Market surveys are intended to be balanced in approach and are conducted by experienced industry specialists.

In most cases, information relating to material that falls outside of the stated specifications will not be used in the assessment process. Exceptions may be made if an acceptable and appropriate normalisation process can be applied.

In markets where liquidity is split across several locations, verified spot trades may be normalised to a single reference hub, for example by making adjustments for transportation costs, where appropriate and in line with market practice.

Truckloads

Argus assesses full truckloads — market activity for partial or mixed truckloads is excluded from assessments.

Aluminium

Introduction

Argus Metal Prices publishes price assessments and market commentary on aluminium markets.

Basis of assessment

Assessments are for the named material delivered by truck, meeting the quantity and timing criteria listed in the table below. Assessments are of the range in which repeatable trade took place or in which it could have taken place in the absence of transactions since the last assessment.

Notes

- P1020 US midwest premium: assessed at a differential to LME official cash price for aluminium
- Primary 6061 US billet premium: assessed at a differential to P1020 US midwest assessment
- Primary 6063 US billet premium: assessed at a differential to P1020 US midwest assessment
- International spot premiums: assessed at a differential to the LME official cash price for aluminium
- International forward/three-month premiums: assessed at a differential to the LME official cash price for aluminium on the day of shipment

Timing of assessment

Prices are assessed and published weekly on the day specified in the table below.

US markets

Market information received after 4pm Houston time on the day of assessment may not be included in the assessment process.

European markets

Market information received after 5pm London time on the day of assessment may not be included in the assessment process.

Asia-Pacific markets

Market information received after 5pm Beijing time on the day of assessment may not be included in the assessment process.

Rounding

Assessments are published to up to four decimal places, ending in 0 or 5.

Currency and unit

Prices are assessed and published in the currencies and units specified below.

Aluminium specifications							
Assessment	Quality	Transacted/ transactable	Day of assessment	Min lot size	Timing	Currency/ unit	Delivery
Aluminium premiums							
P1020 duty paid cif Japan forward quarter	LME P1020A, 99.7% purity	on day of assessment	Wednesday	250t	3 months forward	\$/t	cif Osaka, Tokyo, Norita
P1020 duty paid spot cif Japan	LME P1020A, 99.7% purity	on day of assessment	Wednesday	250t	30 days	\$/t	cif Osaka, Tokyo, Norita
P1020 duty paid 3-month in-warehouse Rotterdam	LME P1020A, 99.7% purity	on day of assessment	Wednesday	25t	3 months forward	\$/t	in-warehouse
P1020 duty paid spot in-warehouse Rotterdam	LME P1020A, 99.7% purity	on day of assessment	Wednesday	25t	30 days	\$/t	in-warehouse
P1020 duty unpaid 3-month in-warehouse Rotterdam	LME P1020A, 99.7% purity	on day of assessment	Wednesday	25t	3 months forward	\$/t	in-warehouse
P1020 duty unpaid spot in-warehouse Rotterdam	LME P1020A, 99.7% purity	on day of assessment	Wednesday	25t	30 days	\$/t	in-warehouse
P1020 US midwest spot	LME P1020A, 99.7% purity	on day of assessment	Wednesday	truckload	30 days	\$/lb	by truck to Indiana, Missouri, Wisconsin, Kentucky or Tennessee
P1020 US midwest transaction	calculated as the LME cash price settlement + the Argus P1020 US midwest premium assessment						
6061 billet US spot	Aluminum Association 6061	on day of assessment	Wednesday	truckload	30 days	\$/lb	by truck to Indiana, Missouri, Wisconsin, Kentucky or Tennessee
6061 billet del US transaction	calculated as the Argus P1020 US midwest spot transaction price + the Argus 6061 billet price assessment						
6063 billet del US spot	Aluminum Association 6063	on day of assessment	Wednesday	truckload	30 days	\$/lb	by truck to Indiana, Missouri, Wisconsin, Kentucky or Tennessee
6063 billet del US transaction	calculated as the Argus P1020 US midwest transaction price + the Argus 6063 billet price assessment						
6063 extrusion duty paid spot in-warehouse Rotterdam	Aluminum Association 6063, primary billet premium	on day of assessment	Wednesday	25t	30 days	\$/t	in-warehouse
Aluminium mill, extruder scrap delivered US							
10/10 extrusions	ISRI Toto	on day of assessment	Tuesday	truckload	30 days	\$/lb	by truck to Indiana, Missouri, Wisconsin, Kentucky or Tennessee
1100 & 3003	ISRI Tooth; Aluminum Association 1100 and 3003	on day of assessment	Tuesday	truckload	30 days	\$/lb	by truck to Indiana, Missouri, Wisconsin, Kentucky or Tennessee
5052 clips	ISRI Tooth; Aluminum Association 5052	on day of assessment	Tuesday	truckload	30 days	\$/lb	by truck to Indiana, Missouri, Wisconsin, Kentucky or Tennessee
6061 new, bare	Aluminum Association 6061, new bare extrusion scrap	on day of assessment	Tuesday	truckload	30 days	\$/lb	by truck to Indiana, Missouri, Wisconsin, Kentucky or Tennessee
6061 truck wheels	ISRI Troma; Aluminum Association 6061; alloy truck wheels	on day of assessment	Tuesday	truckload	30 days	\$/lb	by truck to Indiana, Missouri, Wisconsin, Kentucky or Tennessee
6063 new, bare	ISRI Tata; Aluminum Association 6063; new bare extrusion	on day of assessment	Tuesday	truckload	30 days	\$/lb	by truck to Indiana, Missouri, Wisconsin, Kentucky or Tennessee
A356 wheels	ISRI Troma; Aluminum Association A356; alloy wheels	on day of assessment	Tuesday	truckload	30 days	\$/lb	by truck to Indiana, Missouri, Wisconsin, Kentucky or Tennessee
Cans (UBC)	ISRI Taldon; used aluminium beverage cans	on day of assessment	Tuesday	truckload	30 days	\$/lb	by truck to Indiana, Missouri, Wisconsin, Kentucky or Tennessee

Assessment	Quality	Transacted/ transactable	Day of assessment	Min lot size	Timing	Currency/ unit	Delivery
EC wire	ISRI Talon; Electrical Conductor wire	on day of assessment	Tuesday	truckload	30 days	\$/lb	by truck to Indiana, Missouri, Wisconsin, Kentucky or Tennessee
Litho sheet	ISRI Tabloid	on day of assessment	Tuesday	truckload	30 days	\$/lb	by truck to Indiana, Missouri, Wisconsin, Kentucky or Tennessee
MLC	ISRI Taboo; mixed low copper aluminium alloy clips and/or solids for processing in mill	on day of assessment	Tuesday	truckload	30 days	\$/lb	by truck to Indiana, Missouri, Wisconsin, Kentucky or Tennessee
Painted siding	ISRI Tale for processing in mill	on day of assessment	Tuesday	truckload	30 days	\$/lb	by truck to Indiana, Missouri, Wisconsin, Kentucky or Tennessee
Aluminium secondary smelter scrap, delivered US							
1-1-3 sows	ISRI Throb	since last assessment	Thursday	truckload	30 days	\$/lb	by truck to Indiana, Missouri, Wisconsin, Kentucky or Tennessee
Aluminium-copper radiators	ISRI Talk	since last assessment	Thursday	truckload	30 days	\$/lb	by truck to Indiana, Missouri, Wisconsin, Kentucky or Tennessee
High grade turnings	ISRI Telic; zinc max. 1.5%	since last assessment	Thursday	truckload	30 days	\$/lb	by truck to Indiana, Missouri, Wisconsin, Kentucky or Tennessee
Mixed 2000/7000 solids	ISRI:Tough; Aluminum Association 2000 series, 7000 series	since last assessment	Thursday	truckload	30 days	\$/lb	by truck to Indiana, Missouri, Wisconsin, Kentucky or Tennessee
Mixed 2000/7000 turnings	ISRI:Tough; Aluminum Association 2000 series, 7000 series	since last assessment	Thursday	truckload	30 days	\$/lb	by truck to Indiana, Missouri, Wisconsin, Kentucky or Tennessee
MLC secondary	ISRI Taboo; mixed low copper aluminium alloy clips and/or solids for processing in secondary smelter	since last assessment	Thursday	truckload	30 days	\$/lb	by truck to Indiana, Missouri, Wisconsin, Kentucky or Tennessee
Old cast	ISRI Tense	since last assessment	Thursday	truckload	30 days	\$/lb	by truck to Indiana, Missouri, Wisconsin, Kentucky or Tennessee
Old sheet	ISRI Taint/tabor	since last assessment	Thursday	truckload	30 days	\$/lb	by truck to Indiana, Missouri, Wisconsin, Kentucky or Tennessee
Painted siding	ISRI Tale for processing in secondary smelter	since last assessment	Thursday	truckload	30 days	\$/lb	by truck to Indiana, Missouri, Wisconsin, Kentucky or Tennessee
Tweak	ISRI Tweak	since last assessment	Thursday	truckload	30 days	\$/lb	by truck to Indiana, Missouri, Wisconsin, Kentucky or Tennessee
Twitch	ISRI Twitch	since last assessment	Thursday	truckload	30 days	\$/lb	by truck to Indiana, Missouri, Wisconsin, Kentucky or Tennessee
Aluminium secondary smelter scrap, global							
Taint/Tabor cif Asia port	ISRI Taint/Tabor	on day of assessment	Friday	38,000lbs	30-60 days	\$/lb (out-right)	cif major ports in China, Taiwan, South Korea and Japan
Taint/Tabor cif China	ISRI Taint/Tabor	on day of assessment	Friday	38,000lbs	30-60 days	\$/lb (out-right)	cif Shanghai, Ningbo, Tianjin, Dalian, Guangzhou

Assessment	Quality	Transacted/ transactable	Day of assessment	Min lot size	Timing	Currency/ unit	Delivery
Tense cif China	ISRI Tense	on day of assessment	Friday	38,000lbs	30-60 days	\$/lb (outright)	cif Shanghai, Ningbo, Tianjin, Dalian, Guangzhou
Zorba cif China	ISRI Zorba	on day of assessment	Friday	38,000lbs	30-60 days	\$/lb (outright)	cif Shanghai, Ningbo, Tianjin, Dalian, Guangzhou
Taint/Tabor del European smelter	ISRI Taint/Tabor	on day of assessment	Friday	38,000lbs	30-60 days	€/t (outright)	delivered smelter Germany, Austria, Italy
Tense del European smelter	ISRI Tense	on day of assessment	Friday	38,000lbs	30-60 days	€/t (outright)	delivered smelter Germany, Austria, Italy
Aluminium secondary alloys							
Aluminium-alloy die castings ADC12 fob China	Si 9.6-12%, Fe 1.3%max, Cu 1.5-3.5% Mg 0.3%max, Mn 0.5%max, Zn 1%max, Ni 0.5%max, Sn 0.2%max, Al: remainder. Ingot, packaged in container	since last assessment	Thursday	20t	four weeks	\$/lb (outright)	fob China main ports (Ningbo, Shanghai and Tianjin port, China), duty unpaid
Aluminium-alloy die castings ADC12 cif Japan	Si 9.6-12%, Fe 1.3%max, Cu 1.5-3.5% Mg 0.3%max, Mn 0.5%max, Zn 1%max, Ni 0.5%max, Sn 0.2%max, Al: remainder. Ingot, packaged in container	since last assessment	Thursday	20t	four weeks	\$/lb (outright)	cif Japanese main ports, duty unpaid
319.1	Aluminum Association 319.1	since last assessment	Thursday	truckload	30 days	\$/lb	by truck to Indiana, Missouri, Wisconsin, Kentucky or Tennessee
A356.1	Aluminum Association A356.1	since last assessment	Thursday	truckload	30 days	\$/lb	by truck to Indiana, Missouri, Wisconsin, Kentucky or Tennessee
A360.1	Aluminum Association A360.1	since last assessment	Thursday	truckload	30 days	\$/lb	by truck to Indiana, Missouri, Wisconsin, Kentucky or Tennessee
A380.1	Aluminum Association A380.1	since last assessment	Thursday	truckload	30 days	\$/lb	by truck to Indiana, Missouri, Wisconsin, Kentucky or Tennessee
A413.1	Aluminum Association A413.1	since last assessment	Thursday	truckload	30 days	\$/lb	by truck to Indiana, Missouri, Wisconsin, Kentucky or Tennessee
B390	Aluminum Association B390	since last assessment	Thursday	truckload	30 days	\$/lb	by truck to Indiana, Missouri, Wisconsin, Kentucky or Tennessee
LM6 del consumer works, UK	BS LM6	on day of assessment	Monday	38,000lbs	30 days	£/t (outright)	UK
LM24 del consumer works, UK	BS LM24	on day of assessment	Monday	38,000lbs	30 days	£/t (outright)	UK
LM25 del consumer works, UK	BS LM25	on day of assessment	Monday	38,000lbs	30 days	£/t (outright)	UK
DIN 226 del consumer works, Europe	EN 1706 46200, VAR: 226	on day of assessment	Monday	38,000lbs	30 days	€/t (outright)	Germany, Austria, Italy
DIN 230 del consumer works, Europe	EN 1706 44100, VAR: 230	on day of assessment	Monday	38,000lbs	30 days	€/t (outright)	Germany, Austria, Italy
DIN 231 del consumer works, Europe	EN 1706 47000, VAR: 231	on day of assessment	Monday	38,000lbs	30 days	€/t (outright)	Germany, Austria, Italy
DIN 239 del consumer works, Europe	EN 1706 43100, VAR: 239	on day of assessment	Monday	38,000lbs	30 days	€/t (outright)	Germany, Austria, Italy

Copper and brass

Introduction

Argus Metal Prices publishes price assessments and market commentary on the copper and brass markets.

Basis of assessment

Assessments are for the named material meeting the lot size, timing and delivery criteria listed in the table below. Assessments are of the range in which repeatable trade took place or in which it could have taken place in the absence of transactions since the last assessment.

Notes

- Cathode premiums and cash spreads, which are assessed as:
 - US and Asia: a differential to the Comex current month (spot) copper settlement
 - Europe: a differential to LME official cash settlement
- Brass alloy copper next active month spread: the price of the copper component only, expressed as a differential to the Comex next active month settlement (the nearest base contract month following the current delivery month).
- Brass alloy copper cash spread: the price of the copper component only, expressed as a differential to the Comex current month (spot) settlement.
- Brass alloy zinc cash spread: the price of the zinc component only, expressed as a differential to the LME official current month (spot) settlement.

- Brass alloy scrap transaction prices: calculated using the relevant exchange prices for copper and zinc with Argus assessments for copper and zinc spreads in brass scrap applied to each metal's future price and combined in the proportion of the alloy: (% copper * (Comex Copper spot settlement + the Argus C200-series copper cash spread assessment)) + (% zinc * (LME Zinc cash price + the Argus C200-series zinc cash spread))

Timing of assessment

Prices are assessed and published weekly on the day specified in the table below.

US markets

Market information received after 4pm Houston time on the day of assessment may not be included in the assessment process.

European markets

Market information received after 5pm London time on the day of assessment may not be included in the assessment process.

Rounding

Assessments are published to up to four decimal places, ending in 0 or 5.

Copper and brass specifications

Assessment	Quality	Transacted/ transactable	Day of assessment	Minimum quantity	Timing	Basis	Currency/ unit
Brass/bronze alloys							
C83600	CDA C83600	since last assessment	Thursday	truckload	30 days	del US	\$/lb
C84400	CDA C84400	since last assessment	Thursday	truckload	30 days	del US	\$/lb
C87300	CDA C87300	since last assessment	Thursday	truckload	30 days	del US	\$/lb
C87500	CDA C87500	since last assessment	Thursday	truckload	30 days	del US	\$/lb
C89833	CDA C89833	since last assessment	Thursday	truckload	30 days	del US	\$/lb
C89836	CDA C89836	since last assessment	Thursday	truckload	30 days	del US	\$/lb
C95800	CDA C95800	since last assessment	Thursday	truckload	30 days	del US	\$/lb
Brass alloy scrap							
C200-series del US cash spread	ISRI Label	since last assessment	Wednesday	truckload	30 days	del US	\$/lb
C200-series del US next active spread	ISRI Label	since last assessment	Wednesday	truckload	30 days	del US	\$/lb
C200-series del US zinc cash spread	ISRI Label	since last assessment	Wednesday	truckload	30 days	del US	\$/lb
C260 (70:30) del US transaction	calculated as (0.7* (Comex Copper spot settlement + the Argus C200-series copper cash spread assessment)) + (0.3 * (LME Zinc cash price + the Argus C200-series zinc cash spread))						
C260 (70:30) cash spread del Europe	ISRI Label, 68.5- 71.5% copper	day of assessment	Tuesday	38,000lbs	30 days	Germany, Belgium, Italy	\$/t
C260 (70:30) del Europe transaction	calculated as (0.7* (Comex Copper spot settlement + the Argus C200-series copper cash spread assessment)) + (0.3 * (LME Zinc cash price + the Argus C200-series zinc cash spread))						
C210 cash transaction del US	calculated as (0.95* (Comex Copper spot settlement + the Argus C200-series copper cash spread assessment)) + (0.05 * (LME Zinc cash price + the Argus C200-series zinc cash spread))						
C220 cash transaction del US	calculated as (0.9* (Comex Copper spot settlement + the Argus C200-series copper cash spread assessment)) + (0.1 * (LME Zinc cash price + the Argus C200-series zinc cash spread))						
C230 cash transaction del US	calculated as (0.85* (Comex Copper spot settlement + the Argus C200-series copper cash spread assessment)) + (0.15 * (LME Zinc cash price + the Argus C200-series zinc cash spread))						

Assessment	Quality	Transacted/ transactable	Day of assessment	Minimum quantity	Timing	Basis	Currency/ unit
C240 cash transaction del US	calculated as $(0.8 * (\text{Comex Copper spot settlement} + \text{the Argus C200-series copper cash spread assessment})) + (0.2 * (\text{LME Zinc cash price} + \text{the Argus C200-series zinc cash spread}))$						\$/lb
C270 cash transaction del US	calculated as $(0.65 * (\text{Comex Copper spot settlement} + \text{the Argus C200-series copper cash spread assessment})) + (0.35 * (\text{LME Zinc cash price} + \text{the Argus C200-series zinc cash spread}))$						\$/lb
Copper, brass scrap							
#1 wire and tube cif Asia cash spread	ISRI Berry/Candy	since last assessment	Tuesday	42,000lbs	30-60 days	cif major ports in China, Taiwan, South Korea and Japan	\$/lb
#1 wire and tube cif Asia next active month spread	ISRI Berry/Candy	since last assessment	Tuesday	42,000lbs	30-60 days	cif major ports in China, Taiwan, South Korea and Japan	\$/lb
#1 wire and tube cif Asia transaction	calculated as the Comex copper spot settlement + the Argus #1 wire and tube cif Asia cash spread assessment						
#1 wire and tube del Europe cash spread	ISRI Berry/Candy	day of assessment	Tuesday	38,000lbs	30 days	Netherlands, Germany, Greece, Spain, Italy	\$/t
#1 wire and tube del US cash spread	ISRI Berry/Candy	since last assessment	Wednesday	truckload	30 days	del US	\$/lb
#1 wire and tube del US next active month spread	ISRI Berry/Candy	since last assessment	Wednesday	truckload	30 days	del US	\$/lb
#1 wire and tube del US transaction	calculated as the Comex copper spot settlement + the Argus #1 wire and tube cash spread assessment						\$/lb
#2 cif Asia ports cash spread	ISRI Birch/Cliff	since last assessment	Tuesday	42,000lbs	30-60 days	cif major ports in China, Taiwan, South Korea and Japan	\$/lb
#2 cif Asia ports next active month spread	ISRI Birch/Cliff	since last assessment	Tuesday	42,000lbs	30-60 days	cif major ports in China, Taiwan, South Korea and Japan	\$/lb
#2 cif Asia ports transaction	calculated as the Comex copper settlement + the Argus #2 copper cash spread assessment						\$/t
#2 del Europe cash spread	ISRI Birch/Cliff	day of assessment	Tuesday	38,000lbs	30 days	Netherlands, Germany, Greece, Spain, Italy	\$/t
#2 del Europe transaction	calculated as the LME copper cash settlement + the Argus #2 copper del Europe cash spread assessment						
Bare bright cif Asia cash spread	ISRI Barley	since last assessment	Tuesday	42,000lbs	30-60 days	cif major ports in China, Taiwan, South Korea and Japan	\$/lb
Bare bright cif Asia next active month spread	ISRI Barley	since last assessment	Tuesday	42,000lbs	30-60 days	cif major ports in China, Taiwan, South Korea and Japan	\$/lb
Bare bright cif Asia transaction	calculated as the Comex copper spot settlement + the Argus bare bright cif Asia cash spread assessment						
Bare bright del Europe cash spread	ISRI Barley	day of assessment	Tuesday	38,000lbs	30 days	Netherlands, Germany, Greece, Spain, Italy	\$/t
Bare bright del US cash spread	ISRI Barley	since last assessment	Wednesday	truckload	30 days	del US	\$/lb
Bare bright del US next active month spread	ISRI Barley	since last assessment	Wednesday	truckload	30 days	del US	\$/lb
Bare bright del US transaction	calculated as the Comex copper spot settlement + the Argus bare bright cash spread assessment						\$/lb
Motors cif China	ISRI Elmo	day of assessment	Tuesday	42,000lbs	30-60 days	cif Shanghai, Ningbo, Tianjin, Dalian, Guangzhou	\$/lb
Radiators del US	ISRI Ocean	since last assessment	Wednesday	truckload	30 days	del US	\$/lb
Red brass solids del US	ISRI Ebony	since last assessment	Wednesday	truckload	30 days	del US	\$/lb
360 rod borings del US	ISRI Niche, CDA: C36000 alloy scrap	since last assessment	Wednesday	truckload	30 days	del US	\$/lb
Yellow brass cif Asia ports	ISRI Honey	since last assessment	Tuesday	42,000lbs	30-60 days	cif China, Taiwan, South Korea, Japan	\$/lb
Copper cathode premiums							
Grade A del US midwest	ASTM B115-00	since last assessment	Wednesday	truckload	30 days	del Iowa, Illinois, Ohio	\$/lb
Grade A del US midwest transaction	calculated as the Comex copper spot settlement + the Argus grade A del US midwest price assessment						\$/lb
Grade A del southern Europe	LME copper grade A	day of assessment	Tuesday	25t	prompt	Spain, Italy, Greece	\$/t
Grade A in-warehouse Rotterdam	LME copper grade A	day of assessment	Tuesday	25t	prompt	Rotterdam	\$/t

Nickel

Introduction

Argus Metal Prices publishes price assessments and market commentary on the US nickel markets.

Basis of assessment

Assessments are for the named material meeting the lot size, timing and delivery criteria listed in the table below. Assessments are of the range in which repeatable trade took place or in which it could have taken place in the absence of transactions since the last assessment.

Note

- Nickel cathode premiums are assessed as a differential to the LME official cash price

Timing of assessment

Nickel prices are assessed and published weekly, on Thursday.

US markets

Market information received after 4pm Houston time on the day of assessment may not be included in the assessment process.

European markets

Market information received after 5pm London time on the day of assessment may not be included in the assessment process.

Rounding

Assessments are published to up to four decimal places, ending in 0 or 5.

Nickel specifications

Assessment	Quality	Minimum quantity	Currency/unit	Assessment frequency	Transacted/transactable	Timing	Basis
Nickel premiums							
1x1 inch (small lots) del US	nickel 99.8% minimum, 1x1inch cut cathodes, plating grade	5,000lbs	\$/lb	weekly	since last assessment	30 days	del US
1x1 inch (truckloads) del US	nickel 99.8% minimum, 1x1inch cut cathodes, plating grade	truckload	\$/lb	weekly	since last assessment	30 days	del US
4x4 inch (small lots) del US	nickel 99.8% minimum, 4x4inch cut cathodes, melting grade	5,000lbs	\$/lb	weekly	since last assessment	30 days	del US
4x4 inch (truckloads) del US	nickel 99.8% minimum, 4x4inch cut cathodes, melting grade	truckload	\$/lb	weekly	since last assessment	30 days	del US
4x4 inch (truckloads) del US transaction	calculated as the LME zinc cash settlement + the Argus 4x4 inch (truckloads) price assessment						
4x4inch in-warehouse Rotterdam	nickel 99.8% minimum, 4x4inch cut cathodes	truckload	\$/t	weekly	on day of assessment	prompt	in-warehouse Rotterdam
Full plate in-warehouse Rotterdam	nickel 99.8% minimum, full plate uncut cathode	truckload	\$/t	weekly	on day of assessment	prompt	in-warehouse Rotterdam
Briquettes in-warehouse Rotterdam	nickel 99.8% minimum, briquette	truckload	\$/t	weekly	on day of assessment	prompt	in-warehouse Rotterdam

Zinc and lead

Introduction

Argus Metal Prices publishes price assessments and market commentary on the zinc and lead markets.

Basis of assessment

Assessments are of delivered consumer prices for the named material meeting the lot size, timing and delivery criteria listed in the table below. Assessments are of the range in which repeatable trade took place or in which it could have taken place in the absence of transactions since the last assessment.

Note

- Special high grade zinc premiums are assessed as a differential to the LME official cash price

- Lead ingot premiums are assessed as a differential to the LME official cash price

Timing of assessment

Special high grade zinc ingot, scrap and ingot prices are assessed and published weekly, on Monday. Lead ingot and scrap prices are assessed and published weekly, on Tuesday.

Market information received after 4pm Houston time on the day of assessment may not be included in the assessment process.

Rounding

Assessments are published to up to four decimal places, ending in 0 or 5.

Zinc and lead specifications

Assessment	Quality	Minimum quantity	Currency/unit	Assessment frequency	Transacted/transactable	Timing	Basis
Zinc							
Special high grade del US premium 99.995%	LME Zinc	truckload	\$/lb	weekly	since last assessment	30 days	del US
Special high grade del US transaction	calculated as the LME zinc cash settlement + the Argus special high grade del US premium price assessment						
Scrap old zinc diecast del US	ISRI: saves	truckload	\$/lb	weekly	since last assessment	30 days	del US
Scrap new zinc diecast del US	ISRI: scabs	truckload	\$/lb	weekly	since last assessment	30 days	del US
Galvanizers top dross del US	ISRI: seal	truckload	\$/lb	weekly	since last assessment	30 days	del US
Galvanizers bottom dross del US	ISRI: seam	truckload	\$/lb	weekly	since last assessment	30 days	del US
Die casting alloys							
ZAMAK #3	ASTM: AG 40A	truckload	\$/lb	weekly	since last assessment	30 days	del US
ZAMAK #5	ASTM: AC 41A	truckload	\$/lb	weekly	since last assessment	30 days	del US
ZAMAK #7	ASTM: AG 40B	truckload	\$/lb	weekly	since last assessment	30 days	del US
ZAMAK #2	ASTM: AC 43A	truckload	\$/lb	weekly	since last assessment	30 days	del US
ZA #8	UNS: Z35635	truckload	\$/lb	weekly	since last assessment	30 days	del US
ZA #12	UNS: Z35630	truckload	\$/lb	weekly	since last assessment	30 days	del US
ZA #27	UNS: Z35840	truckload	\$/lb	weekly	since last assessment	30 days	del US
Lead							
Lead ingot primary 99.97% premium del US	LME Lead	truckload	\$/lb	weekly	since last assessment	30 days	del US
Lead ingot primary 99.97% del US transaction	calculated as the LME lead cash settlement + the Argus del US premium price assessment						
Lead scrap, soft del US	ISRI: racks	truckload	\$/lb	weekly	since last assessment	30 days	del US
Lead scrap, mixed del US	ISRI: radio	truckload	\$/lb	weekly	since last assessment	30 days	del US
Undrained, whole old batteries	ISRI: rink	truckload	\$/lb	weekly	since last assessment	30 days	del US

Ferrous scrap — global

Introduction

Argus Metal Prices publishes daily and weekly price assessments, market commentary and shipping costs on the international and domestic Russian spot markets for ferrous scrap.

Basis of assessment

Assessments cover the most traded grades of ferrous scrap. Argus does not exclusively rely upon transactions to establish market prices.

Information on transactions, bids and offers that lie outside the specifications of timing, size and quality will be taken into account but information that lies within the specifications of the assessment will be given the most weight. Argus applies editorial judgment to the surveys and will eliminate information that is not judged to be representative of the market in its final assessment of the price.

These specifications standardise the assessment around key criteria relating to cargo size and location.

Timing of assessment

Assessments are the average of the trading day's of week's activity. Transactions completed after the timestamp listed in the table below will not be considered for inclusion in the assessment.

Differentials to HMS1/2 (80:20) cfr Turkey

Argus also publishes scrap grade differentials to the HMS 1/2 (80:20) cfr Turkey price assessment.

Differentials are published for

- HMS 1/2 (75:25)
- HMS 1/2 (85:15)
- HMS 1/2 (90:10)
- Shredded
- P&S
- Bonus
- Bundles
- Bushelling
- #1 HMS
- New cutting

Ferrous scrap specifications — global

Assessment	Quality	Minimum quantity	Location	Timing	Assessment time stamp	Measure
International ferrous scrap - daily						
HMS 1/2 (80:20), cfr Turkey	HMS 1 (ISRI 200, 201, 202); HMS 2 (ISRI 203, 204, 205, 206)	10,000t	cfr Turkish ports	2-6 weeks	4.30pm London time	\$/t
HMS 1/2 (75:25), fob Rotterdam	HMS 1 (ISRI 200, 201, 202); HMS 2 (ISRI 203, 204, 205, 206)	10,000t	fob Rotterdam	2-6 weeks	4.30pm London time	\$/t
A3, cif Marmara	GOST 2787-75	1,000t	cif Marmara Sea ports	0-30 days	4.30pm London time	\$/t
A3, fob Russia/Ukraine Black Sea	GOST 2787-75	10,000t	fob Russia/Ukraine Black Sea ports	0-30 days	4.30pm London time	\$/t
HMS 1/2 (80:20) fob Rotterdam differential to 75:25	HMS 1 (ISRI 200, 201, 202); HMS 2 (ISRI 203, 204, 205, 206)	10,000t	fob Rotterdam	2-6 weeks	4.30pm London time	\$/t
Shredded, fob Rotterdam ISRI**	ISRI 211, E40	10,000t	fob Rotterdam	2-6 weeks	4.30pm London time	\$/t
#1 HMS cfr Turkey*	HMS 1 (ISRI 200, 201, 202)	5,000t	cfr Turkish ports	2-6 weeks	4.30pm London time	\$/t
HMS 1/2 (90:10) cfr Turkey*	HMS 1 (ISRI 200, 201, 202); HMS 2 (ISRI 203, 204, 205, 206)	5,000t	cfr Turkish ports	2-6 weeks	4.30pm London time	\$/t
HMS 1/2 (85:15) cfr Turkey*	HMS 1 (ISRI 200, 201, 202); HMS 2 (ISRI 203, 204, 205, 206)	5,000t	cfr Turkish ports	2-6 weeks	4.30pm London time	\$/t
HMS 1/2 (75:25) cfr Turkey*	HMS 1 (ISRI 200, 201, 202); HMS 2 (ISRI 203, 204, 205, 206)	5,000t	cfr Turkish ports	2-6 weeks	4.30pm London time	\$/t
Shredded, cfr Turkey*	ISRI 210-211	5,000t	cfr Turkish ports	2-6 weeks	4.30pm London time	\$/t
P&S, 5ft cfr Turkey*	ISRI 231-232	5,000t	cfr Turkish ports	2-6 weeks	4.30pm London time	\$/t
Bonus cfr Turkey*	ISRI 231-232	5,000t	cfr Turkish ports	2-6 weeks	4.30pm London time	\$/t
#1 bundles cfr Turkey*	ISRI 208	5,000t	cfr Turkish ports	2-6 weeks	4.30pm London time	\$/t
#1 bushelling cfr Turkey*	ISRI 207	5,000t	cfr Turkish ports	2-6 weeks	4.30pm London time	\$/t
New cuttings cfr Turkey*	ISRI 207	5,000t	cfr Turkish ports	2-6 weeks	4.30pm London time	\$/t
International ferrous scrap - weekly						
HMS 1/2 (80:20) containerised cfr Taiwan	HMS 1 (ISRI 200, 201, 202); HMS 2 (ISRI 203, 204, 205, 206)	500t	cfr Taiwan port	2-6 weeks	4pm Houston time, Friday	\$/t
Shredded containerised cfr India	ISRI 210-211	500t	cfr Nhava Sheva	2-6 weeks	4pm Houston time, Friday	\$/t

Ferrous scrap specifications - global

Assessment	Quality	Minimum quantity	Location	Timing	Assessment time stamp	Measure
Shredded containerised cfr Pakistan	ISRI 210-211	500t	cfr Pakistan port	2-6 weeks	4pm Houston time, Friday	\$/t
Shredded containerised cfr Bangladesh	ISRI 210-211	500t	cfr Bangladesh port	2-6 weeks	4pm Houston time, Friday	\$/t
Shredded, N Europe del mill	E40, ISRI 210-211	250t	delivered to the mill	0-30 days	4.30pm London time, Friday	€/t
Shredded, S Europe del mill	E40, ISRI 210-211	205t	delivered to the mill	0-30 days	4.30pm London time, Friday	€/t
A3 fca for central European Russian mills (\$/t equivalent)	GOST 2787-75	100t	fca for shipment to central European Russia mills	0-30 days	4.30pm London time, Friday	\$/t
A3 fca for central European Russian mills (Rbs/t)	GOST 2787-75	100t	fca for shipment to central European Russia mills	0-30 days	4.30pm London time, Thursday	Rbs/t
A3 fca for Urals mills (\$/t equivalent)	GOST 2787-75	100t	fca for shipment to Urals mills	0-30 days	4.30pm London time, Thursday	\$/t
A3 fca for Urals mills (Rbs/t)	GOST 2787-75	100t	fca for shipment to Urals mills	0-30 days	4.30pm London time, Thursday	Rbs/t

*Calculated as the sum of the published HMS 1/2 (80:20), cfr Turkey and the relevant published differential

** Calculated as the sum of: the published HMS 1/2 75:25 fob Rotterdam assessment, the published differential between the HMS 1/2 75:25 fob Rotterdam and HMS 1/2 80:20 fob Rotterdam assessments and the published ferrous scrap shredded differential cfr Turkey assessment

Ferrous scrap freight
Introduction

Argus Metal Prices publishes ferrous scrap freight rates.

Basis of assessment

Assessments are for transportation meeting the lot size, modality, load and discharge port listed. Assessments are of the range in which repeatable trade took place or in which it could have taken place in the absence of transactions since the last assessment.

Timing of assessment

Bulk freight prices are assessed weekly, on Friday. Containerised scrap freight prices are assessed monthly, on the last working day of the month. Market information received after 4pm Houston time on the day of assessment may not be included in the assessment process.

Rounding

Ferrous scrap freight rates are rounded to two decimal places, ending in 0 or 5.

Ferrous scrap freight specifications

Assessment	Modality	Quantity	Load port	Discharge port
Ferrous scrap bulk export New York-Turkey	Bulk	36,000-44,000t	New York	Turkey all
Ferrous scrap bulk export Los Angeles-South Korea	Bulk	36,000-44,000t	Los Angeles	South Korea all
Ferrous scrap containerised export New York-Mumbai	Container	22-27t	New York	Mumbai
Ferrous scrap containerised export Los Angeles-Taiwan	Container	22-27t	Los Angeles	Taiwan all
Ferrous scrap containerised export San Francisco-Taiwan	Container	22-27t	San Francisco	Taiwan all
Ferrous scrap containerised export Seattle-Taiwan	Container	22-27t	Seattle	Taiwan all

US ferrous scrap — monthly
Introduction

Argus Metal Prices publishes monthly price assessments and market commentary on the US ferrous scrap markets.

Basis of assessment

Assessments are for the named material meeting the lot size, timing and delivery criteria listed in the table below. Assessments are published as a single price at which repeatable trade took place or at which it could have taken place in the absence of transactions since the last assessment.

National average prices

National average prices are the arithmetic average of published price assessments for each product in the regions outlined below. Averages may include regional prices for more than one calendar month, depending on whether each location has concluded trade for the month at the time of publication.

Timing of assessment

Prices are assessed and published on or before the 10th day of the calendar month, depending on when the majority of trade for a given location is completed. Market information received after 4pm Houston time on the day of assessment may not be included in the assessment process.

Foundry, specialty consumer grades are assessed and published on or before the 15th day of the calendar month, depending on when the majority of trade for a given location is completed.

Ferrous scrap specifications — del consumer, monthly

Assessment	Minimum quantity	Timing	Currency/unit
US delivered consumer			
Birmingham			
#1 HMS	500gt	30 days	\$/gt
#2 HMS	500gt	30 days	\$/gt
#1 busheling	500gt	30 days	\$/gt
Factory bundles	500gt	30 days	\$/gt
Shredded	500gt	30 days	\$/gt
P&S, 5ft	500gt	30 days	\$/gt
Machine shop turnings	500gt	30 days	\$/gt
Carolinas			
#1 HMS	500gt	30 days	\$/gt
#1 busheling	500gt	30 days	\$/gt
Shredded	500gt	30 days	\$/gt
P&S, 5ft	500gt	30 days	\$/gt
Machine shop turnings	500gt	30 days	\$/gt
Chicago			
#1 HMS	500gt	30 days	\$/gt
#1 busheling	500gt	30 days	\$/gt
#1 bundles	500gt	30 days	\$/gt
Shredded	500gt	30 days	\$/gt
P&S, 5ft	500gt	30 days	\$/gt
Machine shop turnings	500gt	30 days	\$/gt
Cincinnati/Indianapolis			
#1 HMS	500gt	30 days	\$/gt
#1 busheling	500gt	30 days	\$/gt
#1 bundles	500gt	30 days	\$/gt
Shredded	500gt	30 days	\$/gt
P&S, 5ft	500gt	30 days	\$/gt
Machine shop turnings	500gt	30 days	\$/gt
Cleveland/Youngstown			
#1 HMS	500gt	30 days	\$/gt
#1 busheling	500gt	30 days	\$/gt
Factory bundles	500gt	30 days	\$/gt
#1 bundles	500gt	30 days	\$/gt
Shredded	500gt	30 days	\$/gt
P&S, 5ft	500gt	30 days	\$/gt
Machine shop turnings	500gt	30 days	\$/gt
Tin can bundles	500gt	30 days	\$/gt
Dallas			
#1 HMS	500gt	30 days	\$/gt
#1 busheling	500gt	30 days	\$/gt
Shredded	500gt	30 days	\$/gt
P&S, 5ft	500gt	30 days	\$/gt
Machine shop turnings	500gt	30 days	\$/gt
Detroit			
#1 HMS	500gt	30 days	\$/gt
#1 busheling	500gt	30 days	\$/gt
Factory bundles	500gt	30 days	\$/gt
#1 bundles	500gt	30 days	\$/gt
Shredded	500gt	30 days	\$/gt
P&S, 5ft	500gt	30 days	\$/gt
Machine shop turnings	500gt	30 days	\$/gt
Tin can bundles	500gt	30 days	\$/gt
Houston/San Antonio			
#1 HMS	500gt	30 days	\$/gt
#1 busheling	500gt	30 days	\$/gt
Shredded	500gt	30 days	\$/gt

Assessment	Minimum quantity	Timing	Currency/unit
P&S, 5ft	500gt	30 days	\$/gt
Machine shop turnings	500gt	30 days	\$/gt
Philadelphia			
#1 HMS	500gt	30 days	\$/gt
#2 HMS	500gt	30 days	\$/gt
#1 busheling	500gt	30 days	\$/gt
Factory bundles	500gt	30 days	\$/gt
#1 bundles	500gt	30 days	\$/gt
Shredded	500gt	30 days	\$/gt
P&S, 5ft	500gt	30 days	\$/gt
Machine shop turnings	500gt	30 days	\$/gt
Pittsburgh			
#1 HMS	500gt	30 days	\$/gt
#2 HMS	500gt	30 days	\$/gt
#1 busheling	500gt	30 days	\$/gt
Factory bundles	500gt	30 days	\$/gt
Shredded	500gt	30 days	\$/gt
P&S, 5ft	500gt	30 days	\$/gt
Machine shop turnings	500gt	30 days	\$/gt
Tin can bundles	500gt	30 days	\$/gt

Ferrous scrap specifications — del foundry, monthly

Assessment	Minimum Quantity	Timing	Currency/unit
Delivered foundry, specialty consumer			
Chicago			
Black/foundry busheling	500gt	30 days	\$/gt
Clean auto cast	500gt	30 days	\$/gt
Clean fresh cast iron borings	500gt	30 days	\$/gt
Ductile-quality shredded clips	500gt	30 days	\$/gt
Low-alloy punchings	500gt	30 days	\$/gt
#1 machine cast	500gt	30 days	\$/gt
P&S, 2ft	500gt	30 days	\$/gt
Cleveland/Youngstown			
Clean auto cast	500gt	30 days	\$/gt
Philadelphia			
Black/foundry busheling	500gt	30 days	\$/gt
P&S, 2ft	500gt	30 days	\$/gt
Dealer selling prices			
Houston (fob)			
#1 HMS	500gt	30 days	\$/gt
#1 busheling	500gt	30 days	\$/gt
Shredded	500gt	30 days	\$/gt
P&S, 5ft	500gt	30 days	\$/gt
Machine shop turnings	500gt	30 days	\$/gt
St Louis (fob)			
#1 HMS	500gt	30 days	\$/gt
#1 busheling	500gt	30 days	\$/gt
#1 bundles	500gt	30 days	\$/gt
Shredded	500gt	30 days	\$/gt
P&S, 5ft	500gt	30 days	\$/gt
Machine shop turnings	500gt	30 days	\$/gt

US ferrous scrap — weekly

Introduction

Argus Metal Prices publishes weekly price assessments and market commentary on the US ferrous scrap markets.

Basis of assessment

Assessments are for the named material meeting the lot size, timing

and delivery criteria listed in the table below. Assessments are of the range in which repeatable trade took place or in which it could have taken place in the absence of transactions since the last assessment.

Timing of assessment

Prices are assessed and published weekly, on Friday. Market information received after 4pm Houston time on the day of assessment may not be included in the assessment process.

Ferrous scrap specifications

Assessment	Minimum quantity	Timing	Currency/unit
Regional ferrous scrap			
US eastern (del Philadelphia, Pittsburgh, Cleveland/Youngstown)			
#1 HMS	500gt	30 days	\$/gt
#2 HMS	500gt	30 days	\$/gt
Shredded	500gt	30 days	\$/gt
P&S, 5ft	500gt	30 days	\$/gt
#1 busheling	500gt	30 days	\$/gt
US midwest (del Chicago, Detroit, St Louis, Cincinnati/Indianapolis)			
#1 HMS	500gt	30 days	\$/gt
#2 HMS	500gt	30 days	\$/gt
Shredded	500gt	30 days	\$/gt
P&S, 5ft	500gt	30 days	\$/gt
#1 busheling	500gt	30 days	\$/gt
US southeast (del Birmingham, Carolinas)			
#1 HMS	500gt	30 days	\$/gt
#2 HMS	500gt	30 days	\$/gt
Shredded	500gt	30 days	\$/gt
P&S, 5ft	500gt	30 days	\$/gt
#1 busheling	500gt	30 days	\$/gt
Ferrous containerized scrap			
New York container (fas New York)			
HMS 1/2 (80:20)	500t	2-6 weeks	\$/t
Shredded	500t	2-6 weeks	\$/t
P&S, 5ft	500t	2-6 weeks	\$/t
Los Angeles container (fas Los Angeles)			
HMS 1/2 (80:20)	500t	2-6 weeks	\$/t
Shredded	500t	2-6 weeks	\$/t
P&S, 5ft	500t	2-6 weeks	\$/t
San Francisco container (fas San Francisco)			
HMS 1/2 (80:20)	500t	2-6 weeks	\$/t
Shredded	500t	2-6 weeks	\$/t
P&S, 5ft	500t	2-6 weeks	\$/t
Seattle container (fas Seattle)			
HMS 1/2 (80:20)	500t	2-6 weeks	\$/t
Shredded	500t	2-6 weeks	\$/t
P&S, 5ft	500t	2-6 weeks	\$/t
Ferrous scrap export yard buying prices			
Boston (delivered, includes Providence)			
#1 HMS	500gt	30 days	\$/gt
P&S, 5ft	500gt	30 days	\$/gt
Shredder feed	500gt	30 days	\$/gt
Albany (delivered)			
#1 HMS	500gt	30 days	\$/gt
P&S, 5ft	500gt	30 days	\$/gt
Shredder feed	500gt	30 days	\$/gt

Assessment	Minimum quantity	Timing	Currency/unit
New York (delivered, includes New Haven)			
#1 HMS	500gt	30 days	\$/gt
P&S, 5ft	500gt	30 days	\$/gt
Shredder feed	500gt	30 days	\$/gt
Philadelphia (delivered)			
#1 HMS	500gt	30 days	\$/gt
P&S, 5ft	500gt	30 days	\$/gt
Shredder feed	500gt	30 days	\$/gt
Houston (delivered)			
#1 HMS	500gt	30 days	\$/gt
P&S, 5ft	500gt	30 days	\$/gt
Shredder feed	500gt	30 days	\$/gt
Los Angeles (delivered)			
#1 HMS	500gt	30 days	\$/gt
P&S, 5ft	500gt	30 days	\$/gt
Shredder feed	500gt	30 days	\$/gt
San Francisco (delivered)			
#1 HMS	500gt	30 days	\$/gt
P&S, 5ft	500gt	30 days	\$/gt
Shredder feed	500gt	30 days	\$/gt
Seattle/Portland (delivered)			
#1 HMS	500gt	30 days	\$/gt
P&S, 5ft	500gt	30 days	\$/gt
Shredder feed	500gt	30 days	\$/gt
Ferrous scrap prices			
US east coast bulk (fob New York)			
HMS 1/2 (80:20)	5,000t	2-8 weeks	\$/t
Shredded	5,000t	2-8 weeks	\$/t
P&S, 5ft	5,000t	2-8 weeks	\$/t
US west coast bulk (fob Los Angeles)			
HMS 1/2 (80:20)	5,000t	2-8 weeks	\$/t
Shredded	5,000t	2-8 weeks	\$/t
P&S, 5ft	5,000t	2-8 weeks	\$/t
Composite delivered US consumer			
<i>Composite prices are calculated on Fridays as the average of monthly prices published for the named material in the markets listed below. Composite prices are published as a single value.</i>			
#1 HMS	Birmingham, Chicago, Philadelphia, Pittsburgh		
Shredded	Birmingham, Chicago, Cleveland, Detroit, Pittsburgh		
#1 busheling	Birmingham, Chicago, Cleveland, Detroit		
P&S, 5ft	Birmingham, Chicago, Philadelphia, Pittsburgh		

Steel feedstocks

Introduction

Argus Steel Feedstocks publishes weekly price assessments on the international steel feedstocks markets

fob Black Sea

Assessments are the average of the trading week's activity. Transactions completed after the time stamp for physical transactions (5.30pm London time on Thursday) will not be considered for inclusion in the assessment.

China domestic

Assessments are the average of the trading week's activity. Transactions completed after the time stamp for physical transactions (5.30pm Singapore time on Friday) will not be considered for inclusion in the assessment.

US

Assessments are for the named material meeting the lot size, timing and delivery criteria listed in the table below. Assessments are of the range in which repeatable trade took place or in which it could have taken place in the absence of transactions since the last assessment.

Prices are assessed and published weekly, on Thursday. Market information received after 4pm Houston time on the day of assessment may not be included in the assessment process.

Iron ore fines

Argus Metal Prices includes daily iron ore fines prices republished from Argus Steel Feedstocks.

See the [Argus Steel Feedstocks methodology](#).

Iron ore fines

- Iron ore fines 62% Fe (ICX) cfr Qingdao

Steel billet

Introduction

Argus Metal Prices includes daily and weekly steel billet prices republished from Argus Steel Feedstocks.

See the [Argus Steel Feedstocks methodology](#).

Steel billet

- fob Black Sea (daily)
- Tangshan ex-works inc VAT (daily)

Finished steel

Argus Metal Prices includes daily and weekly finished steel prices republished from Argus Steel Feedstocks.

See the [Argus Steel Feedstocks methodology](#).

Daily price assessments

- HRC cfr Asean
- HRC fob China
- Rebar fob China
- Rebar cfr Asean
- Rebar fob Turkey
- Wire rod export, fob China

Weekly price assessments

- Plate fob Black Sea
- Rebar ex-works Turkey (inc. VAT)
- Rebar ex-works Turkey (inc. VAT) TL/t
- Rebar cpt Moscow
- Rebar cpt Moscow Rbs/t
- Rebar fob Black Sea
- Wire rod fob Black Sea

Steel feedstocks specifications

Assessment	Quality	Minimum quantity	Location	Timing	Measure
Basic pig iron (weekly)					
ex-works Tangshan (Hebei) domestic inc VAT	basic pig iron, including VAT, L8-10	3,000t	Tangshan ex works	immediate	Yn/t
Russian fob Black Sea	GOST 805-95, PL-1, PL-2 grades	3,000t	fob Russia Black Sea ports	2-6 weeks	\$/t
Ukrainian fob Black Sea	GOST 805-95, PL-1, PL-2 grades	3,000t	fob Ukraine Black Sea ports	2-6 weeks	\$/t
New Orleans, cfr (weekly)					
Hot briquetted iron (HBI)		5,000t	cfr New Orleans	2-8 weeks	\$/t
Basic pig iron (all regions)		5,000t	cfr New Orleans	2-8 weeks	\$/t
Basic pig iron (Ukrainian/Russian)		5,000t	cfr New Orleans	2-8 weeks	\$/t
Basic pig iron (Brazilian)		5,000t	cfr New Orleans	2-8 weeks	\$/t
Nodular pig iron		5,000t	cfr New Orleans	2-8 weeks	\$/t
Chicago pig iron, del (weekly)					
Basic		1,270t	del Chicago	30 days	\$/t
Nodular		1,270t	del Chicago	30 days	\$/t
Pittsburgh pig iron, del (weekly)					
Basic		1,270t	del Pittsburgh	30 days	\$/t
Nodular		1,270t	del Pittsburgh	30 days	\$/t

Stainless steel

Introduction

Argus Metal Prices publishes daily, weekly and monthly price assessments and market commentary on the US stainless steel scrap and flat rolled coil markets.

Basis of assessment

Assessments are for the named material meeting the lot size, timing and delivery criteria listed in the table below. Assessments are of the range in which repeatable trade took place or in which it could have taken place in the absence of transactions since the last assessment.

Flat rolled coil producer surcharges are the arithmetic average of surcharges announced by US producers.

Stainless steel scrap nickel contained in 304/316 scrap solids spread del US consumer is expressed as a differential to the LME official nickel cash price.

Timing

Weekly price assessments are published each Thursday.

Monthly stainless steel scrap price assessments are published on the first publication date on or after the 15th of the calendar month.

Monthly stainless steel coil price assessments are published on the first publication date of the calendar month.

US markets

Market information received after 4pm Houston time on the day of assessment may not be included in the assessment process.

European markets

Market information received after 5pm London time on the day of assessment may not be included in the assessment process.

Asia-Pacific Markets

Market information received after 4pm Houston time on the day of assessment may not be included in the assessment process.

Stainless steel scrap specifications

Assessment	Quality	Quantity	Currency/ unit	Assessment frequency	Transacted/ transactable	Timing	Basis
Delivered US processor							
304 (18-8) solids	ISRI Sabot, unprocessed	truckload	\$/lb	daily	on day of assessment	30 days	del US
304 (18-8) turnings	ISRI Ultra, unprocessed	truckload	\$/lb	daily	on day of assessment	30 days	del US
316 solids	SSINA S31600 scrap clips/solids, unprocessed	truckload	\$/lb	daily	on day of assessment	30 days	del US
316 turnings	SSINA S31600 turnings, unprocessed	truckload	\$/lb	daily	on day of assessment	30 days	del US
409/410 solids	SSINA S40900/S41000 scrap clips/solids, unprocessed	truckload	\$/gross ton	weekly	since last assessment	30 days	del US
430 solids	SSINA S43000 scrap clips/solids, unprocessed	truckload	\$/gross ton	weekly	since last assessment	30 days	del US
Delivered import port							
304 (18-8) solids cif Rotterdam	ISRI Sabot	full container load	\$/lb	weekly	on day of assessment	30-60 days	cif Rotterdam
304 (18-8) solids cif Taiwan	ISRI Sabot	full container load	\$/lb	weekly	on day of assessment	30-60 days	cif Taipei, Kaohsiung
304 (18-8) solids cif Japan	ISRI Sabot	full container load	\$/lb	weekly	on day of assessment	30-60 days	cif Osaka, Tokyo, Norita
304 (18-8) solids cif South Korea	ISRI Sabot	full container load	\$/lb	weekly	on day of assessment	30-60 days	cif Seoul, Incheon, Busan
Delivered US consumer							
Chrome contained in 304/316 solids	High-carbon ferro-chrome in 304/316 scrap clips/solids	one truck-load min	\$/lb	monthly	since last assessment	30 days	del US
Iron contained in 304/316 solids	Ferrous scrap in 304/316 scrap clips/solids	one truck-load min	\$/lb	monthly	since last assessment	30 days	del US
Molybdenum contained in 316 solids	Molybdenum oxide in 316 scrap clips/solids	one truck-load min	\$/lb	monthly	since last assessment	30 days	del US
Nickel contained in 304/316 solids	Nickel in 304/316 scrap clips/solids	one truck-load min	\$/lb	monthly	since last assessment	30 days	del US

Stainless steel coil specifications

Assessment	Quality	Minimum quantity	Currency/ unit	Assessment frequency	Transacted/ transactable	Timing	Basis
301 flat rolled coil	SSINA S30100; gauge 7-14	truckload	\$/lb	monthly	on day of assessment	30 days	ex-works US
301 flat rolled coil surcharge	SSINA S30100	truckload	\$/lb	monthly	on day of assessment	30 days	ex-works US
304 flat rolled coil	SSINA S30400; gauge 7-14	truckload	\$/lb	monthly	on day of assessment	30 days	ex-works US
304 flat rolled coil surcharge	SSINA S30400	truckload	\$/lb	monthly	on day of assessment	30 days	ex-works US
316 flat rolled coil	SSINA S31600; gauge 7-14	truckload	\$/lb	monthly	on day of assessment	30 days	ex-works US
316 flat rolled coil surcharge	SSINA S31600	truckload	\$/lb	monthly	on day of assessment	30 days	ex-works US

Ferro-alloys

Introduction

Argus Metal Prices includes weekly ferro-alloys prices republished from Argus Metals International.

See the [Argus Metals International methodology](#).

Ferro-alloys prices

- Charge chrome fob US warehouse
- Ferro-boron 17% B fob US warehouse
- Ferro-chrome HC min 60-65% Cr 6-8% C fob US warehouse (per lb Cr)
- Ferro-chrome LC 60% Cr 0.15% C fob US warehouse
- Ferro-chrome LC min 60-65% Cr 0.05% C max 1.5% Si fob US warehouse (per lb Cr)
- Ferro-chrome LC min 60-65% Cr 0.10% C max 1.5% Si fob US warehouse (per lb Cr)
- Ferro-manganese HC min 80% Mn 6-8% C fob North America warehouse
- Ferro-manganese MC 80% Mn 1-2% C fob North America warehouse
- Molybdenum oxide min 57% fob US warehouse
- Ferro-molybdenum min 65% Mo max 1.5% Si fob North America warehouse (per lb Mo)
- Ferro-silicon min 75% Si max 0.1% C fob US warehouse (per lb Si)
- Ferro-titanium 70% Ti fob North America warehouse
- Ferro-tungsten 75% W fob North America warehouse
- Ferro-vanadium 78-82% V max 1.5% Si fob North America warehouse (per lb V)
- Silico-manganese min 65% Mn 16% Si fob North America warehouse

Cupro-nickel and super alloys scrap

Argus Metal Prices publishes calculated prices for cupro-nickel and super alloys scrap.

Prices are calculated by weighting the price of component and feedstock metals according to formulas developed from collaboration with the industry. Prices are calculated only on those days when one or more component price has changed. Prices are expressed as a low-high range and in US dollars per pound (lb).

Cupro-nickel

- C70600 (90:10)
- C71500 (70:30)
- Monel 400 (R)

Super alloys

- Hastelloy C air melted
- Hastelloy X air melted
- Inconel 600 vacuum melted
- Inconel 601 vacuum melted
- Inconel 607 vacuum melted
- Inconel 625 vacuum melted
- Inconel 718 vacuum melted
- Waspaloy vacuum melted

Tool steel scrap

Argus Metal Prices publishes calculated prices for tool steel scrap.

Prices are calculated by weighting the price of component and feedstock metals according to formulas developed from collaboration with the industry. Prices are calculated only on those days when one or more component price has changed. Prices are expressed as a low-high range and in US dollars per pound (lb).

Prices are assessed for

- H13
- M1
- M2
- M42
- T1
- T15

Minor metals

Introduction

Argus Metal Prices includes weekly and monthly minor metals prices republished from Argus Metals International.

See the [Argus Metals International methodology](#).

Minor metals — weekly, fob US warehouse

- Antimony min 99.65% cif US (\$/lb)
- Bismuth ingot min 99.99% (\$/lb)
- Cadmium min 99.95% (\$/lb)
- Cobalt min 99.8% (\$/lb)
- Indium ingot min 99.99% (\$/kg)
- Magnesium min 99.9% (\$/t)
- Manganese electrolytic metal min 99.7% (\$/lb)
- Selenium min 99.5% (\$/lb)
- Silicon 5-5-3 min 98.5% Si (30 days) (\$/lb)
- Silicon 5-5-3 min 98.5% Si (90 days) (\$/lb)
- Tellurium min 99.95% (\$/kg)

Minor metals — monthly

- Chrome aluminothermic fob US warehouse
- Molybdenum scrap 99.7% airmelt del US consumer
- Molybdenum scrap 99.9% pure vacuum del US processor
- Nickel-Cobalt refinery scrap cobalt contained del US processor
- Nickel-Cobalt refinery scrap nickel contained del US processor
- Niobium (columbium) scrap vacuum del US consumer
- Niobium (columbium) scrap vacuum del US processor
- Tantalum scrap 99.9% vacuum melted del US consumer
- Tantalum scrap 99.9% vacuum melted del US processor
- Titanium 6Al 4V ingot fob US producer
- Titanium 6Al 4V ingot in-warehouse Rotterdam
- Tungsten 99.9% scrap del US processor
- Tungsten 99.9% scrap solids consumer price fob US processor
- Tungsten carbide scrap inserts fob US processor
- Tungsten carbide scrap rounds fob US processor

Titanium scrap

Introduction

Argus Metal Prices includes weekly titanium scrap prices republished from Argus Metals International.

See the [Argus Metals International methodology](#).

Titanium scrap — weekly, delivered US dealer/processor

- 6Al 4V bulk weldable
- 6Al 4V clips
- 6Al 4V turnings aero quality
- CP1 solids
- CP2 solids
- CP3/4 solids
- Min 85% Ti non-tin-bearing mixed turnings
- Min 85% Ti tin-bearing mixed turnings
- Turnings 90/6/4 max 0.5% Tin ddp UK