

# ARGUS FREIGHT

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The most up-to-date Argus Freight methodology 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 freight 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 information 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**

Freight rates are published in the Argus Freight 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 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 <a href="https://www.argusmedia.com">www.argusmedia.com</a>. 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.

## Introduction

Argus Freight is a daily market report that publishes prices and market commentary on the international shipping spot market for crude, petroleum products, LPG, coal, petroleum coke and fertilizers.

Assessments are of typical and repeatable freight rates discussed in the market. The assessed prices are based on prices from the open spot market whenever possible. Argus Freight assessments are of the prices at which vessels have been fixed and could be fixed. A fixture does not need to be concluded with subjects lifted in order for a rate to be taken into account when making an assessment. Offers of and bids for tonnage and discussed market levels will also be considered for inclusion in the assessment if deemed to be representative of an achievable market rate.

Argus assessments are of the prevailing market rate within the parameters defined in this document.

Rates are based on fixtures and market discussion for forward periods specified below. Argus takes into account liquidity outside this period and market structure.

Argus does not independently calculate or include an allowance for low-sulphur fuel costs within the Baltic and North Sea, North America and Caribbean Emissions Control Areas (ECAs). If the market in a given sector evolves to incorporate an allowance for increased fuel costs within the ECA as a convention, Argus will exercise its discretion in assessing the prevailing spot price.

Argus market specialists conduct comprehensive daily surveys of key industry participants to collect trade information and gauge prevailing market sentiment. Argus price assessments for Argus Freight include market information gathered on fixtures and daily bid/ask spreads for each route under standardised specifications and under the general terms and conditions employed for the standard contracts in common use.

The market surveys are balanced in their approach and are conducted by well-trained specialists who are part of a dedicated team responsible for the Argus Freight report.

The Argus methodology relies on a common sense approach and informed analysis of all market data. The market surveys involve more than 30 market participants contacted by telephone or electronically. Market participants each day include ship owners, oil company charterers and ship brokers. The information is verified and analysed. The approach is methodical and standardised and the assessments are tested against the views of other market participants. Argus Freight does not use the Baltic Exchange for its freight assessments.

Factors including but not limited to vessel age (often from 15 years and older for certain vessel classes and in certain markets), the last cargo carried, an absence of Sire certificate, recent dry docking, non-standard cargoes and positioning considerations may affect the agreed rate. Argus will, where possible, remove discounts or premiums from rates considered for inclusion in an assessment, following discussion with the market.

Information from the survey is verified as best possible and archived in databases.

Assessments are of prevailing market levels at the end of the trading day or week as specified in the tables below.

Regional freight data will become available at the close of business in Asia, Europe-Africa, and the Americas.



## Oil and refined products

Argus Freight contains assessments of the prevailing Worldscale spot rates for generic routes for dirty and clean tankers and also US dollars per tonne costs for all routes reported. Market commentary is provided for the main routes. The key benchmark Mideast Gulf\* to east route is based on double hull ships.

The assessment, whenever possible, will be based on tonnage that has passed two major oil companies' vetting procedure in the previous 12 months. If fixing activity for well approved tonnage constitutes a minority of the total market activity in a sector, Argus will consider any other relevant market information in making the Argus assessment. Fixtures and bid/ask ranges outside of the Argus specifications are considered when assessing prices if market participants believe they have affected market values for the routes under the standardised terms reported in the Argus Freight report.

All day information is taken into account but if the market shows high intra-day volatility, Argus will weight the assessments towards trading activity at the end of the working day up to the cut-off times in the specifications listed below.

\* This stretch of water is traditionally referred to as the Persian Gulf but some reference prices used by the industry refer to it as the Arab Gulf. Argus Freight uses Mideast Gulf to avoid any contractual confusion.

## **Units of measurement**

Argus Freight assessments for dirty and clean tankers are made in Worldscale spot rates and are inter-regional (regions defined below) and are not port specific. The conversion from Worldscale spot rates assessed by Argus to a \$/t figure in the Argus Freight report is made using an average of the three most typically-used Worldscale flat rates in a region. The Mideast Gulf-Singapore 55,000t gasoil and Guyana-Panama 130,000t rates are exceptions, based on an average of the two most typically-used Worldscale flat rates in each region. This does not mean that only fixtures for those routes are taken into account; these routes are used only to derive a typical Worldscale flat rate which is then applied to the inter-regional Worldscale spot assessment.

All assessments and formulas refer to the price of the product on the day of the published report and expressed in Worldscale spot rates and/or US dollars a tonne unless otherwise stated. The prices are for contracts under whatever general terms and conditions are accepted as standard and prevailing in that particular market. Price changes refer to the last published report.

All rates are published in \$/t. Indicated rates are assessed and published as lump sums and converted to \$/t, except for the US Gulf Coast Aframax reverse lightering assessment. References to t or tonnes are metric tonnes.

## Clean and dirty vessels

Unless otherwise specified in the description of assessed rates below, "dirty" refers to shipping that is chartered for the shipment of crude, or of dirty petroleum products (DPP), which are fuel oil and vacuum gasoil. "Clean" refers to shipping that is chartered for the shipment of "clean petroleum products" (CPP), which are gasoline, naphtha and middle distillates. LPG rates are assessed separately.

## Vessel type

To be considered for inclusion in oil and refined products freight rate assessments, vessels must be double hull and double bottomed with segregated ballast tanks.

Clean rates in the Mediterranean and Black Sea assume a base rate for gasoil.

See the complete list of assessed clean and dirty oil and refined freight rates and their specifications below.

## Oil and products calculated rates

Argus publishes a series of calculated time-charter equivalent and voyage rates for clean and dirty vessels on specified routes. Time-charter equivalent rates are based on assessed \$/t freight rates, bunker fuel costs and Argus assessments of other costs involved with the voyage. Calculated voyage rates are based on assessed one-year time-charter rates, bunker fuel costs and Argus assessments of other costs involved with the voyage.

All time-charter equivalent rates are calculated using the same generalised formula: TCE (\$/day) = (Voyage rate (\$/t) x Cargo size (t) - Costs (\$)) / Voyage duration

All voyage rates are calculated using the same generalised formula: Voyage rate (\$/t) = (Time-charter rate (\$/d) \* Voyage duration - Costs (\$)) / Cargo size (t)

## **Bunker fuel**

Published time-charter equivalent rates are based on vessels burning 0.5pc sulphur fuel oil. VLCC and Suezmax rates are also published for scrubber-equipped vessels burning 3.5pc sulphur fuel oil.

Fuel prices are the latest Argus assessments at the named fuelling location (Singapore, Fujairah, South Korea, far east Russia, Rotterdam, Gibraltar and Houston) available at the time of publication. See the Argus Marine Fuels methodology for more information about Argus bunker fuel price assessments.

## Time charter assessments

The time-charter rates used in the voyage rate calculations are the \$/ day cost of hiring a standard tanker for a duration of 12 months. The time-charter rates exclude bunker costs, port fees, canal tolls, and other voyage-related fees. Argus assesses time-charter rates on Monday of every week and on the following day if Monday is a holiday.

#### Time-charter rates are assessed for

- Dirty Aframax tanker
- Dirty Panamax tanker

## **Assumptions**

In addition to those specified below, Argus also assumes standard sea margins, and standard address and broker commissions. All routes assume two days for each loading and discharge and 36 hours of waiting time added to the duration of the voyage.



Unless otherwise specified, all voyages are assumed to take the shortest-distance route, via canals if possible. Canals costs are included where necessary. Panama Canal transits are assumed to have been pre-booked and to add two days to the voyage time, one in transit and one waiting. Suez Canal transits are assumed to add one day to the voyage time, 12 hours in transit and 12 hours waiting.

All assumptions are under continual review and are updated at least once a year.

Vessel assumptions and port costs – VLCC			
Term	Value	Port	Cost
Deadweight tonnage (dwt)	319,000	Bonny	60,000
Length (m)	333	Corpus Christi	250,000
Beam (m)	60	LOOP	40,000
Speed (knots)	12.5	Ningbo	194,000
Ballast fuel consumption (t/d)	47	Ras Tanura	80,000
Laden fuel consumption (t/d)	65	Rotterdam	312,000
Loading operation fuel consumption (t/d)	20		
Discharging operation fuel consumption (t/d)	110		
Idle consumption (t/d)	10		

Vessel assumptions and port costs – Suezmax			
Term	Value	Port	Cost
Deadweight tonnage (dwt)	158,000	Basrah	295,000
Length (m)	275	Bonny	40,000
Beam (m)	48	Houston	127,000
Speed (knots)	12.5	Ningbo	115,000
Ballast fuel consumption (t/d)	39	Novorossiysk - CPC	53,000
Laden fuel consumption (t/d)	49	Qingdao	65,000
Loading operation fuel consumption (t/d)	12	Ras Tanura	25,000
Discharging operation fuel consumption (t/d)	68	Rotterdam	168,000
Idle consumption (t/d)	10	Singapore	57,500
		Trieste	87,000

Vessel assumptions and port costs – Panamax and LR1			
Term	Value	Port	Cost
Deadweight tonnage (dwt)	74,000	Panamax port	costs
Length (m)	228	Esmeraldas	33,000
Beam (m)	32	Houston	60,000
Speed (knots)	12.5	LR1 port costs	3
Ballast fuel consumption (t/d)	28	Arzew	124,000
Laden fuel consumption (t/d)	32	Chiba	57,500
Loading operation fuel consumption (t/d)	5	Oita	40,700
Discharging operation fuel consumption (t/d)	32	Ras Tanura	30,000
Idle consumption (t/d)	5	Rotterdam	86,400
		Sikka	58,700
		Singapore	25,000
		Yanbu	8,800

Load port	Discharge	Cargo	Bunker	Vessel start-
	port	size (t)	Price	ing position
Dirty tanker TCE a				
Ras Tanura*	LOOP*	280,000	Singapore	Ningbo
Ras Tanura**	Rotterdam**	280,000	Singapore	Ningbo
Corpus Christi	Ningbo	270,000	Singapore	Ningbo
Ras Tanura	Ningbo	270,000	Singapore	Ningbo
Bonny	Ningbo	260,000	Singapore	Ningbo
Houston	Rotterdam	150,000	Rotterdam	Rotterdam
Basrah	Trieste	140,000	Singapore	Ningbo
Novorossiysk-CPC	Ningbo	135,000	Singapore	Ningbo
Bonny	Rotterdam	130,000	Rotterdam	Rotterdam
Ras Tanura	Qingdao	130,000	Singapore	Qingdao
Ras Tanura	Singapore	130,000	Singapore	Singapore
Kozmino	Longkou	100,000	Far east Russia	Longkou
Arzew	Trieste	80,000	Gibraltar	Trieste
Fujairah	Singapore	80,000	Singapore	Singapore
Bukit Tua	Kikuma	80,000	Singapore	Kikuma
Kimanis	Geelong	80,000	Singapore	Geelong
Dos Bocas	Houston	70,000	Houston	Houston
Houston	Rotterdam	70,000	Houston	Rotterdam
* Laden leg via Cap	e of Good Hope	ballast lea v	ria Suez	
** Laden leg and ba				
Dirty tanker voyag	,		,	
Esmeraldas	Los Angeles	100,000	Los Angeles	Los Angeles
Esmeraldas	Houston	50,000	Houston	Houston
Clean tanker TCE	assessments			
Ras Tanura	Rotterdam	90,000	Rotterdam	Rotterdam
Sikka	Rotterdam	90,000	Rotterdam	Rotterdam
Yanbu	Rotterdam	90,000	Rotterdam	Rotterdam
Arzew	Oita	80,000	Singapore	Rotterdam
Ras Tanura	Chiba	75,000	Singapore	Chiba
Ras Tanura	Rotterdam	65,000	Rotterdam	Rotterdam
Sikka	Rotterdam	65,000	Fujairah	Rotterdam
Yanbu	Rotterdam	65,000	Rotterdam	Rotterdam
Arzew	Oita	60,000	Singapore	Rotterdam
Ras Tanura	Chiba	55,000	Singapore	Chiba
Ras Tanura	Singapore	55,000	Singapore	Singapore
Houston	Pozos	38,000	Houston	Pozos
Houston	Coronel	38,000	Houston	Coronel
Rotterdam	New York	· · ·	Rotterdam	Rotterdam
		37,000		
Daesan Pac Tanura	Port Botany	35,000	South Korea	Port Botany
Ras Tanura	Chiba	35,000	Singapore	Singapore
Ras Tanura	Singapore	35,000	Singapore	Singapore
Ras Tanura	Dar es Salaam	35,000	Fujairah	Dar es Salaan
Singapore	Port Botany	35,000	Singapore	Port Botany
Yeosu	Los Angeles	35,000	South Korea	Los Angeles

Yeosu

Arzew

Brojforden

Singapore

Rotterdam

Trieste

35,000

30,000

30,000

South Korea

Gibraltar

Rotterdam

Hong Kong

Rotterdam

Trieste



Vessel assumptions and	port costs – Afi	ramax and LR	2
Term	Value	Port	Cost
Deadweight tonnage (dwt)	115,000	Aframax port	costs
Length (m)	250	Arzew	175,000
Beam (m)	44	Bukit Tua	43,750
Speed (knots)	12.5	Dos Bocas	63,000
Ballast fuel consumption (t/d)	34	Fujairah	46,000
Laden fuel consumption (t/d)	40	Geelong	128,000
Loading operation fuel consumption (t/d)	10	Houston	86,000
Discharging operation fuel consumption (t/d)	49	Kikuma	82,000
Idle consumption (t/d)	5	Kimanis	115,500
Maintain heat (t/d)	10	Kozmino	90,000
Heat up (t/d)	17.5	Longkou	82,000
		Rotterdam	127,000
		Singapore	32,500
		Trieste	65,000
		LR2 port cost	s
		Arzew	194,000
		Chiba	69,000
		Oita	46,000
		Ras Tanura	40,000
		Rotterdam	115,200
		Santos	110,000
			92,200
		Yanbu	9,800

Vessel assumptions and port costs – MR			
Term	Value	Port	Cost
Deadweight tonnage (dwt)	51,000	Chiba	37,500
Length (m)	183	Coronel	84,000
Beam (m)	32.2	Daesan	35,000
Speed (knots)	12.5	Dar es Salaam	30,000
Ballast fuel consumption (t/d)	22	Houston	42,000
Laden fuel consumption (t/d)	26	Los Angeles	40,600
Loading operation fuel consumption (t/d)	5	New York	42,000
Discharging operation fuel consumption (t/d)	25	Port Botany	60,000
Idle consumption (t/d)	5	Pozos	87,000
		Ras Tanura	20,000
		Rotterdam	56,000
		Singapore	20,000
		Yeosu	30,000

Vessel assumptions and port costs – handysize			
Term	Value	Port	Cost
Deadweight tonnage (dwt)	37,500	Arzew	71,400
Length (m)	175	Brofjordan	42,000
Beam (m)	27.5	Rotterdam	56,000
Speed (knots)	12.5	Trieste	36,300
Ballast fuel consumption (t/	20		
day)			
Laden fuel consumption (t/d)	24		
Loading operation fuel con-	5		
sumption (t/d)			
Discharging operation fuel	20		
consumption (t/d)			
Idle consumption (t/d)	5		

# Jones Act freight rates

Argus publishes \$/bl assessments of Jones Act-compliant freight rates between US ports for medium range tankers (MR) and ocean-going articulated tug barges (ATB). Jones Act-compliant vessels are US-flagged, built and crewed.

In the absence of spot activity, changes in time charter rates may be taken into account.

Rates are assessed weekly. See the complete list of assessed Jones Act freight rates and their specifications below.



## Crude-specific freight rates

Argus publishes freight rates for individual crude oil grades on relevant routes, in \$/ bl. These are calculated as the \$/bl cost of shipment of the named crude on the named route using the latest available bl/t density figure for each grade.

#### Arab Heavy

Mideast Gulf to Asia Pacific 270,000t

Mideast Gulf to China 130,000t

Mideast Gulf to Europe 280,000t

Mideast Gulf to Med 140,000t

Mideast Gulf to Singapore 130,000t

Mideast Gulf to Singapore 270,000t

Mideast Gulf to Singapore 80,000t

Mideast Gulf to USGC 280,000t

Mideast Gulf to west coast India 130,000t

Mideast Gulf to west coast India 270,000t

Mideast Gulf to west coast India 80,000t

#### Arab Light

Mideast Gulf to Asia Pacific 270,000t

Mideast Gulf to China 130,000t

Mideast Gulf to Europe 280,000t

Mideast Gulf to Med 140,000t

Mideast Gulf to Singapore 130,000t

Mideast Gulf to Singapore 270,000t

Mideast Gulf to USGC 280,000t

Mideast Gulf to west coast India 130,000t

Mideast Gulf to west coast India 270,000t

Mideast Gulf to west coast India 80,000t

## Arab Light (Sidi K)

Med to Med 80,000t

Med to UKC 80,000t

#### Arah Medium

Mideast Gulf to Asia Pacific 270,000t

Mideast Gulf to China 130.000t

Mideast Gulf to Europe 280,000t

Mideast Gulf to Med 140,000t

Mideast Gulf to Singapore 130,000t

Mideast Gulf to Singapore 270,000t

Mideast Gulf to USGC 280,000t

Mideast Gulf to west coast India 130.000t

Mideast Gulf to west coast India 270,000t

Mideast Gulf to west coast India 80,000t

## Azeri Light (Supsa)

Black Sea to Med 80,000t

Black Sea to UKC 80,000t

#### Basrah Heavy

Mideast Gulf to Asia Pacific 270,000t

Mideast Gulf to China 130,000t

Mideast Gulf to Europe 280,000t

Mideast Gulf to Med 140 000t

Mideast Gulf to Singapore 130,000t

Mideast Gulf to Singapore 270,000t

Mideast Gulf to USGC 280,000t

Mideast Gulf to west coast India 130 000t

Mideast Gulf to west coast India 270,000t Mideast Gulf to west coast India 80,000t

#### Rasrah Medium

Mideast Gulf to Asia Pacific 270 000t

Mideast Gulf to China 130,000t

Mideast Gulf to Europe 280,000t

Mideast Gulf to Med 140,000t

Mideast Gulf to Singapore 130,000t

Mideast Gulf to Singapore 270,000t

Mideast Gulf to USGC 280,000t

Mideast Gulf to west coast India 130.000t

Mideast Gulf to west coast India 270 000t

Mideast Gulf to west coast India 80,000t

#### **Bonny Light**

west Africa to China 260,000t

west Africa to UKCM 130.000t

west Africa to east coast India 130,000t

west Africa to east coast India 260,000t

west Africa to west coast India 130.000t

west Africa to west coast India 260.000t

## втс

Med to Med 135,000t

Med to Med 80 000t

Med to UKC 80,000t

Med/Black Sea to east Asia 135,000t

#### Cabinda

west Africa to China 260,000t

west Africa to UKCM 130.000t

west Africa to east coast India 130,000t

west Africa to east coast India 260 000t

west Africa to west coast India 130,000t

west Africa to west coast India 260,000t

## Castilla

Caribbean to China 270,000t

Caribbean to west coast India 270,000t

Caribbean to Panama 130,000t

Caribbean to USGC 130,000t

Caribbean to USGC 50 000t

Caribbean to USGC 70,000t

#### CPC

Black Sea to Med 135,000t

Black Sea to USGC 135,000t

Med/Black Sea to east Asia 135,000t

Black Sea to Med 80.000t

Black Sea to UKC 80,000t

#### Dalia

west Africa to China 260,000t

west Africa to UKCM 130,000t

west Africa to USGC 130,000t

west Africa to USGC 260,000t

west Africa to east coast India 130 000t

west Africa to east coast India 260,000t

west Africa to west coast India 130,000t

west Africa to west coast India 260 000t

#### Dieno

west Africa to China 260,000t

west Africa to UKCM 130,000t

west Africa to east coast India 130.000t

west Africa to east coast India 260,000t

west Africa to west coast India 130,000t

west Africa to west coast India 260,000t

#### Egina

west Africa to China 260,000t

west Africa to UKCM 130,000t

west Africa to east coast India 130,000t

west Africa to east coast India 260,000t

west Africa to west coast India 130,000t

west Africa to west coast India 260,000t

#### **Ekofisk**

North Sea to east Asia 270,000t

UKC to UKC 80,000t

UKC to Med 80,000t

UKC to USAC 80 000t

#### Es Sider

Med to Med 80,000t

Med to UKC 80,000t

Med to USGC 80,000t

Med to USGC 135,000t

Med/Black Sea to east Asia 135,000t

# Escravos

west Africa to China 260,000t

west Africa to UKCM 130 000t

west Africa to east coast India 130,000t

west Africa to east coast India 260,000t

west Africa to west coast India 130,000t

## west Africa to west coast India 260 000t **ESPO**

Kozmino to north China 100.000t

Kozmino to Chiba 100,000t

Kozmino to Yeosu 100.000t

Kozmino to Singapore 100,000t

## Forcados

west Africa to China 260,000t

west Africa to UKCM 130,000t

west Africa to east coast India 130,000t

west Africa to east coast India 260,000t



west Africa to west coast India 130,000t west Africa to west coast India 260,000t

**Forties** 

North Sea to east Asia 270,000t

UKC to UKC 80.000t

UKC to Med 80,000t

UKC to USAC 80,000t

Girassol

west Africa to China 260,000t

west Africa to UKCM 130,000t

west Africa to east coast India 130,000t

west Africa to east coast India 260.000t

west Africa to west coast India 130,000t

west Africa to west coast India 260,000t

Isthmus

east coast Mexico to USGC 50,000t

east coast Mexico to USGC 70,000t

Johan Sverdrup

North Sea to east Asia 270,000t

UKC to UKC 80,000t

UKC to Med 80,000t

UKC to USAC 80,000t

Kuwait

Mideast Gulf to Asia Pacific 270,000t

Mideast Gulf to China 130,000t

Mideast Gulf to Europe 280,000t

Mideast Gulf to Med 140,000t

Mideast Gulf to Singapore 130,000t

Mideast Gulf to Singapore 270,000t

Mideast Gulf to USGC 280,000t

Mideast Gulf to west coast India 130,000t

Mideast Gulf to west coast India 270.000t

Mideast Gulf to west coast India 80,000t

Mars

USGC to China 130,000t

USGC to China 270,000t

USGC to Europe 150,000t

USGC to Rotterdam 270,000t

USGC to Singapore 270,000t

USGC to South Korea/Japan 270,000t

USGC to UKC 70,000t

USGC to UKC 70,000t futures \$/t month 1

USGC to east coast Canada 70,000t

USGC to west coast India 270,000t

Maya

east coast Mexico to USGC 50,000t

east coast Mexico to USGC 70,000t

Murban

Mideast Gulf to Asia Pacific 270,000t

Mideast Gulf to China 130,000t

Mideast Gulf to Europe 280,000t

Mideast Gulf to Med 140,000t

Mideast Gulf to Singapore 130,000t

Mideast Gulf to Singapore 270,000t

Mideast Gulf to USGC 280,000t

Mideast Gulf to west coast India 130,000t Mideast Gulf to west coast India 270,000t

Mideast Gulf to west coast India 80 000t

Napo

Esmeraldas to Houston 50,000t

Esmeraldas to Los Angeles 100,000t

Oman

Mideast Gulf to Asia Pacific 270,000t

Mideast Gulf to China 130,000t

Mideast Gulf to Europe 280,000t

Mideast Gulf to Med 140,000t

Mideast Gulf to Singapore 130,000t

Mideast Gulf to Singapore 270,000t

Mideast Gulf to USGC 280,000t

Mideast Gulf to west coast India 130,000t

Mideast Gulf to west coast India 270,000t

Mideast Gulf to west coast India 80,000t

Oriente

Ecuador to USWC 50,000t

Esmeraldas to Houston 50,000t

Esmeraldas to Los Angeles 100,000t

Qua Iboe

west Africa to China 260,000t

west Africa to UKCM 130,000t

west Africa to USGC 130,000t

west Africa to USGC 260,000t

west Africa to east coast India 130,000t

west Africa to east coast India 260,000t

west Africa to west coast India 130,000t

west Africa to west coast India 260,000t

Saharan

Med to Med 135,000t

Med to Med 80,000t

Med to UKC 80,000t

Med to USGC 80,000t

Med to USGC 135,000t

Med/Black Sea to east Asia 135,000t

Tupi

Brazil to China 260,000t

Urals

Primorsk to UKC 100,000t

Baltic to Med 100,000t

Novorossiysk to Med 140,000t

Black Sea to USGC 135,000t

Med/Black Sea to east Asia 135,000t

Black Sea to Med 80,000t

Black Sea to UKC 80,000t

Vasconia

Caribbean to Panama 130,000t

Panama to USWC 130,000t

WCS

USGC to China 130,000t

USGC to China 270,000t

USGC to Europe 150,000t

USGC to Rotterdam 270,000t

USGC to Singapore 270,000t

USGC to South Korea/Japan 270,000t

USGC to UKC 70,000t

USGC to UKC 70 000t futures \$/t month 1

USGC to west coast India 270,000t

WT

USGC to China 130,000t

USGC to China 270,000t

USGC to Europe 150,000t

USGC to Rotterdam 270,000t

USGC to Singapore 270,000t

USGC to South Korea/Japan 270,000t

USGC to UKC 70,000t

USGC to UKC 70.000t futures \$/t month 1

USGC to east coast Canada 70.000t

USGC to west coast India 270.000t



#### **LPG**

Argus Freight includes LPG freight rates assessed and published in \$/t.

## VLGC Houston-Chiba propane

The cost of shipping propane from Houston to Chiba, Japan on a refrigerated Very Large Gas Carrier (VLGC).

## VLGC Houston-Flushing propane

The cost of shipping propane from Houston to Flushing, in the Netherlands, on a refrigerated Very Large Gas Carrier (VLGC).

### VLGC Ras Tanura-Chiba

The cost of shipping LPG from Ras Tanura in the Mideast Gulf to Chiba, Japan on a refrigerated very large gas carrier (VLGC) size cargoes contracted for loading in 10-53 days

## VLGC Ras Tanura-India (Ras Tanura-Chiba basis)

The cost of shipping LPG from Ras Tanura in the Mideast Gulf to India on a refrigerated very large gas carrier (VLGC). Cargoes contracted for loading in 15-30 days forward of assessment date. The rate is assessed and published on a Ras Tanura-Chiba basis — the amount that a standard Ras Tanura to Chiba voyage would cost, if using the same time charter equivalent (TCE) as the market rate for shipments into India.

#### 1,800t Tees-Lisbon

The cost of shipping from Tees, UK, to Lisbon, Portugal on an 1,800t pressurised LPG carrier contracted on the day of publication

## 1,800t Tees-ARA

The cost of shipping from Tees, UK, to ARA (Amsterdam-Rotterdam-Antwerp), on an 1,800t pressurised LPG carrier contracted on day of publication

## 4,000t Tees-Morocco butane

The cost of shipping from Tees, UK, to Mohammedia, Morocco a 4,000t butane cargo loading in 5-15 days

## **VLGC** calculated rates

Argus publishes a series of daily calculated rates for very-large gas carriers (VLGCs) on routes that do not have sufficient spot liquidity to support a daily assessment.

Rates for these routes are derived from one of four VLGC spot rate assessments, converted to a Time Charter Equivalent (TCE), using the basic formula:

TCE (\$/day) = (Voyage rate (\$/t) x Cargo size (t) - Costs (\$))/Voyage duration

This TCE is then used to calculate rates for other routes, reversing the calculation with costs and duration corresponding to the target route:

All routes are assumed to be round voyages with a laden leg and a ballast leg back to the port of origin, with the exception of Marcus Hook to Flushing in which the ship is assumed to ballast to Houston after discharge. Cargo size is the maximum permissible under a 44,000t +/- 5pc contract.

VLGC routes for 46,200t cargoes		
Load port	Discharge port	Assessment used for cal- culation
Houston	Mohammedia (Morocco)	Houston-Flushing
Marcus Hook	Flushing	Houston-Flushing
Houston	Suape	Houston-Flushing
Houston	Quintero	Houston-Chiba
Houston	San Pedro	Houston-Flushing
Ras Tanura	New Mangalore	Ras Tanura-India (basis RT-Chiba)
Ras Tanura	New Mangalore and Haldia	Ras Tanura-India (basis RT-Chiba)
Houston	Suape and Santos	Houston-Flushing
Prince Rupert	Chiba	Ras Tanura-Chiba
Bonny	Chiba	Ras Tanura-Chiba + \$3/t*
*premium revie	wed annually	

Sea margin of 5pc and a 1.25pc broker commission are factored into the calculation. Address commission is not included.

Vessels are assumed to bunker before the laden leg of the journey, and to use 0.5pc sulphur bunker fuel oil, or 0.1pc sulphur marine gasoil (MGO) in sulphur emissions control areas (SECA) around western Europe and North America. A small additional MGO consumption is included to power auxiliary systems on board the vessel. The bunker price used for each route is the Argus assessment for the loading port, or nearest bunkering hub, for example, Fujairah for voyages starting in Ras Tanura. The Bonny-Chiba rate assumes a Fujairah bunker price.

Vessels on the Houston-Chiba and Houston-Quintero routes are assumed to transit the Panama Canal on the ballast and laden legs, with associated costs included in the calculation.

The Ras Tanura-New Mangalore and Ras Tanura-New Mangalore and Haldia routes include Additional War Risk Premium (AWRP) of \$60,000. The Bonny-Chiba route include AWRP of \$46,000.

VLGC specification	
Term	Value
Deadweight tonnage (DWT)	55,000
Gross tonnage	46,750
Net register tonnage (NRT)	17,000
Length (m)	224.5
Beam (m)	36
Speed (knots)	16
Laden bunker fuel consumption (t/day)	48
Ballast bunker fuel consumption (t/day)	46
Bunker fuel consumption in port (t/day)	10.5
Idle bunker fuel consumption (t/day)	6.5
MGO consumption laden (t/day)	0.2
MGO consumption ballast (t/day)	0.2
MGO consumption in port (t/day)	0.25



Unless noted, all routes assume a single load/discharge, 6 hours Notice of Readiness per port is also included. Sea margin of 5pc is factored into the calculation for each route. The following port costs and timings are assumed, based on discussions with market participants and observations from vessel tracking data.

Port fees are reviewed annually and updated on 1 April. Exchange rates are as of 4pm London time on the day of publication or the latest available on UK holidays.

VLGC port costs and times		
Port	Cost	Days loading/ discharging
Houston	\$30,700	2
Marcus Hook	\$50,200	2
Ras Tanura	1 SAR/cargo tonne + \$17,318	2
Flushing	€68,600	2
Chiba	\$75,000	2
Prince Rupert	\$45,000	2
New Mangalore	\$77,000	3 or 4*
Haldia	\$90,000	4
Quintero	\$171,300	2
Mohammedia	MAD 1,210,500	3
Santos	\$76,250	1.5
Suape	\$86,500	2
San Pedro	\$48,000	2

<sup>\*</sup>Ras Tanura to New Mangalore route assumes three-day discharge at New Mangalore, Ras Tanura to New Mangalore + Haldia assumes four day discharge at New Mangalore and Haldia (eight days total). Note, the Bonny-Chiba route does not include port costs at Bonny

## **VLGC TCEs**

The VLGC TCE rates described above for Ras Tanura-Chiba, Houston-Chiba, and Houston-Flushing are published as standalone values in dollars per day.

## VLGC demurrage

Argus publishes a \$/day VLGC demurrage rate for the Atlantic basin calculated as the sum of the Houston-Flushing TCE and the cost of bunkers associated with idling the vessel on the high seas.

#### **MGC** calculated rates

Argus publishes daily calculated rates for medium-sized gas carriers (MGCs) on routes that do not have sufficient spot liquidity to support a daily assessment. Rates for these routes are derived from a weekly assessment of 12-month period charter rates for a 38,000m³ MGC converted to a day rate with bunkering and port costs added.

All routes are assumed to be round voyages with a ballast and laden leg. Cargo size is 98pc of a 38,000m³ gas carrier converted to tonnes based on the stated composition of the cargo.

Vessels are assumed to bunker before the laden leg of the journey, and to use 0.5pc sulphur bunker fuel oil, or 0.1pc sulphur marine gasoil (MGO) in sulphur emissions control areas (SECA) around western Europe and North America. A small additional MGO con-

sumption is included to power auxiliary systems on board the vessel. The bunker price used for each route is the Argus assessment for the loading port, or nearest bunkering hub, for example, Fujairah for voyages starting in Ras Tanura.

Vessels on the Houston-Pisco and Callao route are assumed to transit the Panama Canal via the Panama Canal's Panamax Locks, with associated costs included in the calculation. A fixed transit time of 2 days is assumed, one day in transit and one day of waiting time for a vessel that has pre-booked transit through the canal. Pre booking costs are included. The Ras Tanura to New Mangalore route includes Additional War Risk Premium (AWRP) of \$12,500. The Houston to Lagos and Rotterdam to Lagos routes include a cost of \$74,750 for armed guards during the vessel's discharge in Lagos and for one day either side.

MGC routes and cargo sizes			
Route	Cargo	Cargo size (t)	
Ras Tanura to New Mangalore	50/50 propane/butane	22,000	
Marcus Hook to Flushing	Propane	21,700	
Mongstad to Flushing	50/50 propane/butane	22,000	
Houston to Tuxpan	Propane	21,700	
Houston to Suape	Propane	21,700	
Houston to Pisco and Callao	75/25 propane/butane	21,900	
Houston to Flushing	Propane	21,700	
Houston-Lagos	Butane*	22,300	
Rotterdam-Lagos	Butane*	22,300	

<sup>\*</sup>For Houston-Lagos and Rotterdam-Lagos, a "propane differential", for a 21,700 cargo size and all other variables the same, is also published.

MGC specification	
Deadweight tonnage (DWT)	28,000
Gross tonnage	25,000
Net register tonnage (NRT)	7,500
Length (m)	175
Beam (m)	28
Speed (knots)	16
Laden bunker fuel consumption (t/day)	33
Ballast bunker fuel consumption (t/day)	29
Bunker fuel consumption in port (t/day)	4
MGO consumption laden (t/day)	0.1
MGO consumption ballast (t/day)	0.1
MGO consumption in port (t/day)	0.1

All routes assume a single load/discharge, with the exception of Houston and Rotterdam to Lagos, where a split discharge at two terminals is assumed. Additional towage costs within the port are factored in. All routes include 6 hours Notice of Readiness per port and 12 hours bunkering per round voyage.

The following port costs and timings are assumed, based on discussions with market participants and observations from vessel tracking data. Port fees are reviewed annually and updated on 1 April. Exchange rates are as of 4pm London time on the day of publication or the latest available on UK holidays.



MGC port costs	MGC port costs and times				
Port	Cost	Days loading/ discharging			
Houston	\$26,000	1			
Marcus Hook	\$35,600	1			
Ras Tanura	1 SAR/cargo tonne + \$16,230	1			
Flushing	€34,300	1			
Mongstad	\$55,000	1			
Callao	\$32,000	1.5			
Pisco	\$44,470	2			
New Mangalore	\$34,200	2			
Suape	\$56,500	2			
Tuxpan	\$52,765	2			
Rotterdam	€30,500	1			
Lagos	\$267,900	4*			
*split discharge at tw	vo terminals				

## **Agriculture**

Argus Freight includes freight rates for major grains shipment routes. These freight rates are assessed and published in \$/t. Information about fixtures in \$/day and about port costs, assumed fuel consumption and costs, sea margins, broker commission, and any other information relevant to the \$/t cost of freight may be considered for inclusion in the assessment.

Assessment are of contracts that include +/-10pc cargo size flexibility. See the complete list of assessed agriculture freight rates and their specifications below.

## Dry bulk

Argus Freight includes freight rates for the main coal and iron ore trading routes for Capesize and Panamax vessels in the Atlantic and Pacific basins.

All dry bulk freight assessment are of contracts that include +/-10pc cargo size flexibility.

These freight rates are assessed as a result of communication with leading shipping brokers and international traders of coal and iron ore. Rates may also be calculated according to reported differentials from fixtures on other routes.

Rates are assessed and published in \$/t. Information in other units and currencies, and day and voyage rates may also be considered for inclusion in assessments.

#### Timing

Argus dry-bulk freight assessments are for fixtures contracted on the day of publication for timing over the next 60 days.

See the complete list of assessed dry bulk freight rates and their specifications below.

## Petroleum coke

Argus Freight includes petroleum coke freight rates. Rates are assessed and published daily in \$/t. Information about fixtures in \$/d and about port costs, assumed fuel consumption and costs, sea margins, broker commission, and any other information relevant to the \$/t cost of freight may be considered for inclusion in the assessment.

See the complete list of assessed petroleum coke freight rates and their specifications below.

## Dry bulk time-charter equivalent

## Capesize time-charter equivalent

Argus publishes a series of calculated time-charter equivalent rates for Capesize dry bulk vessels on specified routes. Time-charter equivalent rates are based on \$/t freight rates, bunker fuel costs and Argus assessments of other costs involved with the voyage.

All time-charter equivalent rates are calculated using the same generalised formula: TCE (\$/day) = (Voyage rate (\$/t) x Cargo size (t) - Costs (\$))/Voyage duration

## Fuel, sulphur and scrubbers

For each route, two time-charter equivalent rates are published, one for scrubber-equipped vessels burning 3.5pc sulphur fuel oil and another for vessels burning 0.5pc sulphur fuel oil. While in the US and European sulphur emissions control areas (SECAs) and in ports in those regions, all vessels are assumed to consume 0.1pc MGO. Vessels are assumed to consume 0.5pc sulphur fuel oil in all other ports, with no scrubber use in port.

Fuel prices are the latest Argus assessments at the named fuelling location (Singapore, Rotterdam or Zhoushan) available at the time of publication. See the Argus Marine Fuels methodology for more information about Argus bunker fuel price assessments.

## Assumptions

In addition to those specified below, Argus also assumes standard sea margins, broker commissions, bunkering charges per bunkering port visit, time spent in port for loading, unloading and bunkering, and other costs. All assumptions are under continual review and are updated at least once a year.

No TCE broker commission is added when the TCE is less than zero. TCE rates can fall below zero if shipowners' costs are larger than the lumpsum for the voyage.

## Routes

Each route is described with reference to three or more locations, the starting position of the vessel and the bunkering port (ballast origin in the table below), the port at which cargo is loaded (origin) and the port at which cargo is unloaded (destination). Voyages are not assumed to be round-trip unless specified. Voyages to/from east Australia avoid the Torres strait, which is impassable for Capesize vessels. The route from Richards Bay to Kandla sails west of Madagascar.



Dry bulk TCE vessel assumptions	
Term	Value
Deadweight tonnage	180,000dwt
Max draught	18.2m
Tonnes per centimetre (The weight that must be loaded or discharged to change the ship's draught by 1cm)	121 t/cm
Constants (weight of crew, stores, etc)	3,500t
Fuel consumption (Ballast)	43t/d
Fuel consumption (Laden)	43t/d
Fuel consumption (In port)	5 t/d
Ballast speed	13 knots
Laden speed	12 knots

Dry bulk TCE por	t assumptio	ons	
Loading port	Cost	Load rate (t/day)	Turn time (hours)
Gladstone	\$125,000	40,000	12
Hay Point	\$110,000	45,000	12
Newcastle	\$130,000	40,000	12
Tubarao	\$75,000	60,000	6
Puerto Bolivar	\$100,000	50,000	12
Richards Bay	\$60,000	50,000	18
Saldanha Bay	\$60,000	90,000	18
Port Hedland	\$150,000	80,000	6
Receiving port	Cost	Unload rate (t/day)	Turn time (hours)
Qingdao	\$120,000	30,000	24
Fangcheng	\$120,000	30,000	24
Zhoushan	\$120,000	30,000	24
Rotterdam	\$150,000	30,000	12
Krishnapatnam	\$365,000	20,000	24
Kandla (anchorage)	\$65,000	18,000	24

## Cargo sizes

The cargo size is typical for each route, taking into account the contracted volume (which includes a  $\pm$ 10pc flexibility), stowage factor and any draught restrictions at the load or discharge port.

## Canals

All routes assume avoidance of the Suez and Panama canals. No canal costs are included in the calculation of time-charter equivalent rates.

## Fertilizer freight rates

Argus publishes prices for international bulk shipping markets for fertilizers and their raw materials. Assessments of the prevailing spot rates for the major bulk fertilizer trade routes and relevant vessel sizes are published on a Thursday evening, London time, alongside Argus spot physical fertilizer assessments in the relevant weekly report. For example, spot freight rate assessments for phosphates will be published in the Argus Phosphates report. Argus fertilizer freight assessments are repeated in full on the following Friday in the Argus Freight report.

For each assessment, Argus stipulates the product, route and tonnage.

Mideast Gulf assessments include Iranian fixtures. Mideast Gulf excluding Iran assessments exclude Iranian fixtures. Rates include charges for loading or unloading at standard market loading and discharging rates including bunkering costs, and any other costs relating to shipment. Assessments are made at assumed market average loading and discharge rates.

Dry bulk TCE assessments				
Route	Cargo size (t)	Bunkering port	Ballast leg	Laden leg
Port Hedland-Qingdao	176,500	Zhoushan	Qingdao-Zhoushan-Port Hedland	Port Hedland-Qingdao
Saldanha Bay-Qingdao	176,500	Singapore	Qingdao-Singapore-Saldanha Bay	Saldanha Bay-Qingdao
Tubarao-Qingdao	176,500	Singapore	Qingdao-Singapore-Tubarao	Tubarao-Qingdao
Tubarao-Rotterdam (backhaul)	176,500	Singapore	Qingdao-Singapore-Tubarao	Tubarao-Rotterdam
Puerto Bolivar-Rotterdam	160,000	Rotterdam	Rotterdam-Puerto Bolivar	Puerto Bolivar-Rotterdam
Gladstone-Zhoushan	170,000	Zhoushan	Qingdao-Zhoushan-Gladstone	Gladstone-Zhoushan
Gladstone-Fangcheng	170,000	Zhoushan	Qingdao-Zhoushan-Gladstone	Gladstone-Fangcheng
Hay Point-Zhoushan	170,000	Zhoushan	Qingdao-Zhoushan-Hay Point	Hay Point-Zhoushan
Hay Point-Fangcheng	170,000	Zhoushan	Qingdao-Zhoushan-Hay Point	Hay Point-Fangcheng
Hay Point-Rotterdam	170,000	Zhoushan	Qingdao-Zhoushan-Hay Point	Hay Point-Rotterdam
Newcastle-Zhoushan	140,000	Zhoushan	Qingdao-Zhoushan-Newcastle	Newcastle-Zhoushan
Newcastle-Fangcheng	140,000	Zhoushan	Qingdao-Zhoushan-Newcastle	Newcastle-Fangcheng
Richards Bay-Krishnapatnam (basis Qingdao)	160,000	Singapore	Qingdao-Singapore-Richards Bay	Richards Bay-Krishnapatnam
Richards Bay-Kandla (basis Qingdao)	160,000	Singapore	Qingdao-Singapore-Richards Bay	Richards Bay-Kandla
Richards Bay-Rotterdam (backhaul)	160,000	Singapore	Qingdao-Singapore-Richards Bay	Richards Bay-Rotterdam
Richards Bay-Fangcheng	160,000	Singapore	Qingdao-Singapore-Richards Bay	Richards Bay-Fangcheng



#### Urea

- Mideast Gulf-US Gulf\*
- Mideast Gulf-Thailand\*
- Mideast Gulf-Brazil\*
- · Baltic-east coast Mexico
- · Baltic-west coast Mexico
- · Baltic-Brazil
- · China-west coast Mexico
- Egypt-French bay
- Nigeria-Brazil

See the Argus Nitrogen methodology

#### Finished phosphates

- Tampa-west coast India
- Baltic-Brazil
- Egypt-Brazil
- Morocco-Brazil
- Tampa-Brazil
- Baltic-India
- · Saudi Arabia-east coast India

See the Argus Phosphates methodology

#### Phosphate rock

- · Morocco-south Brazil
- · Red Sea-west coast/east coast India
- Red Sea-Indonesia
- Morocco-US

See the Argus Phosphates methodology

#### Potash

- Baltic-US Nola
- Baltic-China
- Hamburg-Brazil
- · Red Sea-west coast India
- Vancouver-Brazil
- · Vancouver-China
- Vancouver-southeast Asia

See the Argus Potash methodology

## Sulphur

- Vancouver-China
- Mideast Gulf-east coast India
- Mideast Gulf-North river China
- Mideast Gulf-south China
- Mideast Gulf-Brazil
- Mideast Gulf-north Africa
- Mideast Gulf-South Africa
- Black Sea-north Africa
- Black Sea-Brazil
- Baltic-Brazil
- · Baltic-north Africa
- Baltic-US Gulf
- US Gulf-Brazil

See the Argus Sulphur methodology

## **Chemical tankers**

Rates are assessed and published daily in \$/t.

## **US Gulf coast-east coast Mexico ethanol**

The cost of moving 5,000-10,000t of ethanol from the US Gulf coast to the east coast of Mexico aboard a chemical carrier. The loading window is 10-30 days from the day on which the vessel was fixed.

## US Gulf coast-Itaqui ethanol

The cost of moving 10,000-20,000t of ethanol from the US Gulf coast to Itaqui aboard a chemical carrier. The loading window is 7-21 days from the day on which the vessel was fixed.

## Freight futures

Prices are of freight forward agreements (FFA), which are financially settled futures contracts.

Prices are published for the prompt month and two forward months. The prompt month rolls on the first working day of the month. For example, Argus begins publishing the January contract as the prompt month from the first working day in January.

Assessments are made in Worldscale rates and converted to \$/t using the flat rate basket for the corresponding spot market assessment.

#### **Routes**

Dirty USGC-UKC 70kt

## Panama Canal wait times

Assessed daily as the number of days a vessel without a booked slot must wait before it can transit the specified set of locks in the named direction. Wait times are assessed as of 5pm New York time.

Northbound and southbound wait times are assessed for

- Neopanamax locks for vessels with a beam exceeding 107ft
- Panamax locks for vessels with a 91-107ft beam

## **Carbon costs**

Argus Freight publishes the cost of CO<sub>2</sub> emissions credits under the EU Emissions Trading System (EU ETS) for crude, products, LPG, coal, iron ore, grain, and petroleum coke routes beginning and/or ending at EU ports. The cost is calculated for one-way and round-trip voyages using the following formula:

Carbon cost (\$) = voyage CO<sub>2</sub> emissions (t) x CO<sub>2</sub> emissions allowance price (\$/t)

CO2 emissions costs are published as lumpsums and in \$/t for all routes, and in \$/bl for crude routes.

<sup>\*</sup>excluding Iran



For routes beginning and ending at EU ports, all CO<sub>2</sub> emissions are assumed to require permits and are included in the calculation. For routes beginning or ending at EU ports, half of the CO<sub>2</sub> emissions are assumed to require permits and are included in the calculation.

## CO<sub>2</sub> emissions price

The CO<sub>2</sub> price is the Argus assessment of the December-delivery EU ETS allowance price converted to US dollars/t. See the Argus European Emissions Markets methodology.

## **Assumptions**

Voyage CO<sub>2</sub> emissions are based on the type and amount of fuel consumed on each voyage, which varies depending on ship operation and whether at sea, within Emissions Control Areas (ECAs) or at port.

Vessel speeds, loading and unloading times, preferences for or against canal transits, and other components of the calculations are the same as those assumed in other calculated freight rates for

- Crude
- Products
- LPG
- Dry bulk

Note, Argus assumes the following for Panamax and Supramax drybulk CO2 calculations.

Dry bulk Panamax and Supramax assumptions						
	Panamax	Supramax				
Laden consumption (t/d)	22	33				
Ballast consumption (t/d)	23	32				
Idle/port consumption (t/d)	3.5	3.5				
Laden speed (knots)	11.5	14				
Ballast speed (knots)	12.5	14				

Argus assumes the following CO<sub>2</sub> emissions per tonne of fuel burned:

HSFO: 3.114t CO<sub>2</sub>/t fuel
LSFO: 3.151t CO<sub>2</sub>/t fuel
MGO: 3.206t CO<sub>2</sub>/t fuel

All assumptions are under continual review and are updated at least once a year.

#### **Routes covered**

Note, dirty tanker \$/bl costs assume the vessel is carrying the named crude.

#### Dirty

- Ras Tanura-Rotterdam (via Suez) 280kt VLCC (Arab Light)
- Bonny-Rotterdam 130kt Suezmax (Bonny Light)
- Houston-Rotterdam 70kt Aframax (WTI)

#### Clean

- Ras Tanura-Rotterdam (via Suez) 65kt LR1
- Rotterdam-New York 37kt MR
- Houston-Rotterdam 38kt MR

#### **LPG**

- Rotterdam-Lagos 22,300t MGC
- Mongstad-Flushing 22,000t MGC
- Houston-Flushing 21,700t MGC
- Houston-Flushing 46,200t VLGC

#### Coal

- Hay Point-Rotterdam (via Suez) 160kt Capesize
- Hampton Roads-Rotterdam 120kt Capesize
- Houston-Rotterdam 75kt Panamax

#### Iron ore

• Tubarao-Rotterdam 170kt Capesize

## Grain

• Houston-Rotterdam 65kt Panamax

#### Petroleum coke

• Port Arthur-Rotterdam 50kt Supramax



# METHODOLOGY AND SPECIFICATIONS GUIDE

Dirty freight rate specifications					
Assessment	Origin	Destination	Cargo size	Timing (ahead)	Assessment time
Middle East/East Asia				, ,	
Mideast Gulf-East (double hull) 270,000t	all ports in the Arab Gulf/Persian Gulf up to Quoin Island (Straits of Hormuz)	China (including Hong Kong), South Korea, Taiwan and Japan	270,000t	15-30 days	London, 5pm
Mideast Gulf-East VLCC demurrage \$/day	The price of demurrage for a VLCC loading in the Mideast Gulf and discharg	ing in Asia		15-30 days	London, 5pm
Mideast Gulf-Singapore (double hull) 270,000t	all ports in the Arab Gulf/Persian Gulf up to Quoin Island (Straits of Hormuz)	Singapore	270,000t	15-30 days	London, 5pm
Mideast Gulf-west coast India 270,000t	all ports in the Arab Gulf/Persian Gulf up to Quoin Island (Straits of Hormuz)	west coast India	270,000t	15-30 days	London, 5pm
Mideast Gulf-UKC/Med 280,000t	all ports in the Arab Gulf/Persian Gulf up to Quoin Island (Straits of Hormuz)	Northwest Europe from Le Havre to Hamburg, centred on ARA (Amsterdam-Rotterdam-Antwerp), and the North Sea ports; Mediterranean from Gibraltar to Canakkale/Dardanelles	280,000t	15-30 days	London, 5pm
Mideast Gulf-US Gulf 280,000t	all ports in the Arab Gulf/Persian Gulf up to Quoin Island (Straits of Hormuz)	Gulf of Mexico centred on the Loop crude discharge terminal.	280,000t	15-30 days	London, 5pm
Mideast Gulf-Med 140,000t	all ports in the Arab Gulf/Persian Gulf up to Quoin Island (Straits of Hormuz)	Mediterranean from Gibraltar to Canakkale/Dardanelles	140,000t	15-30 days	London, 5pm
Mideast Gulf-east Asia 130,000t	all ports in the Arab Gulf/Persian Gulf up to Quoin Island (Straits of Hormuz)	China (including Hong Kong), South Korea, Taiwan and Japan	130.000t	15-30 days	Singapore, 4.30pm
Mideast Gulf-west coast India 130,000t	all ports in the Arab Gulf/Persian Gulf up to Quoin Island (Straits of Hormuz)	west coast India	130.000t	10-20 days	Singapore, 4.30pm
Mideast Gulf-Singapore 130,000t*	all ports in the Arab Gulf/Persian Gulf up to Quoin Island (Straits of Hormuz)	Singapore	130.000t	15-30 days	Singapore, 4.30pm
Mideast Gulf-China 130,000t*	all ports in the Arab Gulf/Persian Gulf up to Quoin Island (Straits of Hormuz)	China (including Hong Kong),	130.000t	15-30 days	Singapore, 4.30pm
*Published in \$/t only					
Mideast Gulf-East – fuel oil 80,000t	all ports in the Arab Gulf/Persian Gulf up to Quoin Island (Straits of Hormuz)	Singapore, China (including Hong Kong), South Korea, Taiwan and Japan	80,000t fuel oil	15-30 days	Singapore, 4.30pm
Mideast Gulf-west coast India 80,000t	all ports in the Arab Gulf/Persian Gulf up to Quoin Island (Straits of Hormuz)	west coast India	80,000t	15-30 days	Singapore, 4.30pm
Mideast Gulf-East Suezmax demurrage \$/day	The price of demurrage for a Suezmax loading in the Mideast Gulf and disch	arging in Asia		15-30 days	London, 5pm
Qatar-southeast Asia 270,000t	Qatar	ports in the region around Indonesia and Malaysia, including Singapore	270,000t	15-30 days	Singapore, 4.30pm
*Published in \$/t only - calculated by apply	ing the most recent Mideast Gulf-East 270,000t Worldscale assessment to a diff	erent basket of flat rates.			
SE Asia-east coast Australia 80,000t	ports in the region around Indonesia and Malaysia, including Singapore	east coast Australia	80,000t	15-30 days	Singapore, 4.30pm
Northwest Australia-SE Asia 80,000t	northwest Australia	ports in the region around Indonesia and Malaysia, including Singapore	80,000t	15-30 days	Singapore, 4.30pm
Red Sea-China 80,000t	Red Sea	China	80,000t	15-30 days	Singapore, 4.30pm
Indonesia-Japan 80,000t	Indonesia	Japan	80,000t	15-30 days	Singapore, 4.30pm
Kozmino-Yosu 100,000t (\$ lumpsum)	the Russian far east port of Kozmino on the Sea of Japan	Yosu, South Korea	100,000t	15-30 days	Singapore, 4.30pm
Kozmino-north China 100,000t (\$ lump-sum)	the Russian far east port of Kozmino on the Sea of Japan	ports located from Yingkou in Liaoning province to Qingdao in Shandong province on the east coast of China	100,000t	15-30 days	Singapore, 4.30pm
Kozmino-Chiba 100,000t (\$ lumpsum)	the Russian far east port of Kozmino on the Sea of Japan	Chiba, Japan	100,000t	15-30 days	Singapore, 4.30pm
Kozmino-Singapore 100,000t (\$ lumpsum)	the Russian far east port of Kozmino on the Sea of Japan	Singapore	100,000t	15-30 days	01 , 1
Kozmino-north China Aframax demurrage \$/day	The price of demurrage for an Aframax loading in Kozmino, Russia and disch		,	-	Singapore, 4.30pm
Northern Europe					
North Sea-northeast Asia 270,000t lumpsum*	loading locations of Hound Point, Scapa Flow Southwold, and Skaw	China, South Korea and Japan	270,000t	30-40 days	London, 5pm
*VLCC fuel oil shipments from ARA (Amste.	rdam-Rotterdam-Antwerp) to Singapore will not contribute to this assessment.				
Cross UKC 80,000t	from one port to another port in northwest Europe from Le Havre to Hamburg, co	entred on ARA (Amsterdam-Rotterdam-Antwerp), and the North Sea ports	80,000t	7-20 days	London, 5pm



Dirty freight rate specifications					
Assessment	Origin	Destination	Cargo size	Timing (ahead)	Assessment time
UKC-Med 80,000t	northwest Europe from Le Havre to Hamburg, centred on ARA (Amsterdam-Rotterdam-Antwerp), and the North Sea ports	Gibraltar to Canakkale/Dardanelles	80,000t	7-20 days	London, 5pm
UKC-USAC 80,000t	northwest Europe from Le Havre to Hamburg, centred on ARA (Amsterdam-Rotterdam-Antwerp), and the North Sea ports	US Atlantic coast north of Cape Hatteras to Portland, Maine centred on Philadelphia, New York and Boston	80,000t	7-20 days	London, 5pm
Primorsk-UKC 100,000t	Primorsk	northwest Europe from Le Havre to Hamburg, centred on ARA (Amsterdam-Rotterdam-Antwerp), and the North Sea ports	100,000t	10-20 days	London, 5pm
Baltic-Med 100,000t	ports in Finland, Baltic Russia, Estonia, Latvia, Lithuania, Poland, Baltic Germany and Baltic Sweden	Gibraltar to Canakkale/Dardanelles	100,000t	7-20 days	London, 5pm
UKC-US Gulf 55,000t fuel oil	northwest Europe from Le Havre to Hamburg, centred on ARA (Amsterdam-Rotterdam-Antwerp), and the North Sea ports	Gulf of Mexico centred on the Loop crude discharge terminal.	55,000t fuel oil	7-10 days	London, 5pm
Baltic-UKC 30,000t fuel oil	ports in Finland, Baltic Russia, Estonia, Latvia, Lithuania, Poland, Baltic Germany and Baltic Sweden	northwest Europe from Le Havre to Hamburg, centred on ARA (Amsterdam-Rotterdam-Antwerp), and the North Sea ports	30,000t fuel oil	7-10 days	London, 5pm
Baltic-Med 30,000t fuel oil	ports in Finland, Baltic Russia, Estonia, Latvia, Lithuania, Poland, Baltic Germany and Baltic Sweden	Gibraltar to Canakkale/Dardanelles	30,000t fuel oil	7-10 days	London, 5pm
West Africa					
West Africa-US Gulf 260,000t	Gulf of Guinea, centred on the crude loading terminals located in the Bight of Bonny and Bight of Benin	Gulf of Mexico centred on the Loop crude discharge terminal.	260,000t	30-40 days	London, 5pm
West Africa-China 260,000t	Gulf of Guinea, centred on the crude loading terminals located in the Bight of Bonny and Bight of Benin	China	260,000t	30-40 days	London, 5pm
West Africa-Singapore 260,000t	Gulf of Guinea, centred on the crude loading terminals located in the Bight of Bonny and Bight of Benin	Singapore	260,000t	30-40 days	London, 5pm
West Africa-west coast India 260,000t lumpsum	Gulf of Guinea, centred on the crude loading terminals located in the Bight of Bonny and Bight of Benin	west coast India	260,000t	30-40 days	London, 5pm
West Africa-east coast India 260,000t lumpsum	Gulf of Guinea, centred on the crude loading terminals located in the Bight of Bonny and Bight of Benin	east coast India	260,000t	30-40 days	London, 5pm
West Africa-west coast India 130,000t lumpsum	Gulf of Guinea, centred on the crude loading terminals located in the Bight of Bonny and Bight of Benin - includes port fees, assuming loading in Nigeria	west coast India	130,000t	15-30 days	London, 5pm
West Africa-east coast India 130,000t lumpsum	Gulf of Guinea, centred on the crude loading terminals located in the Bight of Bonny and Bight of Benin - includes port fees, assuming loading in Nigeria	east coast India	130,000t	15-30 days	London, 5pm
West Africa-India 130,000t lumpsum	Calculated as the average of the 130,000t West Africa-east coast India and Wes	t Africa-west coast India rates	130,000t	15-30 days	London, 5pm
West Africa-US Gulf 130,000t	Gulf of Guinea, centred on the crude loading terminals located in the Bight of Bonny and Bight of Benin - includes port fees, assuming loading in Nigeria	Gulf of Mexico centred on the Loop crude discharge terminal.	130,000t	15-30 days	London, 5pm
West Africa-UKC/Med 130,000t	Gulf of Guinea, centred on the crude loading terminals located in the Bight of Bonny and Bight of Benin	Northwest Europe from Le Havre to Hamburg, centred on ARA (Amsterdam-Rotterdam-Antwerp), and the North Sea ports; Mediterranean from Gibraltar to Canakkale/Dardanelles	130,000t	15-30 days	London, 5pm
Black Sea/Mediterranean					
Novorossiysk-Med 140,000t	the Black Sea port of Novorossiysk	Gibraltar to Canakkale/Dardanelles	140,000t	15-20 days	London, 5pm
Black Sea-Med 135,000t	Black Sea ports north and east of the Bosporus	Gibraltar to Canakkale/Dardanelles	135,000t	15-20 days	London, 5pm



Dirty freight rate specifications					
Assessment	Origin	Destination	Cargo size	Timing (ahead)	Assessment time
Black Sea-UKC 80,000t	Black Sea ports north and east of the Bosporus	northwest Europe from Le Havre to Hamburg, centred on ARA (Amsterdam-Rotterdam-Antwerp), and the North Sea ports	80,000t	15-20 days	London, 5pm
Cross Med 135,000t	from one port to another port in the Mediterranean from Gibraltar to Canak	kale/Dardanelles	135,000t	10-14 days-	London, 5pm
Med-US Gulf 135,000t	Gibraltar to Canakkale/Dardanelles,	Gulf of Mexico centred on the Loop crude discharge terminal.	135,000t	10-14 days	London, 5pm
Med/Black Sea-East 135,000t (lumpsum)	An average of the Med-East 135,000t and Black Sea-East 135,000t dirty tanker ra	tes			
Med-East 135,000t (lumpsum)	Gibraltar to Canakkale/Dardanelles	China (including Hong Kong), South Korea, Taiwan and Japan	135,000t	10-14 days	London, 5pm
Black Sea-East 135,000t (lumpsum)	Black Sea ports north and east of the Bosporus	China (including Hong Kong), South Korea, Taiwan and Japan	135,000t	10-14 days	London, 5pm
Med-Singapore 135,000t (lumpsum)	Gibraltar to Canakkale/Dardanelles	Singapore	135,000t	10-14 days	London, 5pm
Black Sea-Singapore 135,000t (lumpsum)	Black Sea ports north and east of the Bosporus	Singapore	135,000t	10-14 days	London, 5pm
Black Sea-west coast India 135,000t (lumpsum)	Black Sea ports north and east of the Bosporus	west coast India	135,000t	10-14 days	London, 5pm
Cross Med 80,000t	from one port to another port in the Mediterranean from Gibraltar to Canak	kale/Dardanelles	80,000t	10-14 days	London, 5pm
Med-UKC 80,000t	Gibraltar to Canakkale/Dardanelles	northwest Europe from Le Havre to Hamburg, centred on ARA (Amsterdam-Rotterdam-Antwerp), and the North Sea ports	80,000t	5-14 days	London, 5pm
Black Sea-Med 80,000t	Black Sea ports north and east of the Bosporus	Gibraltar to Canakkale/Dardanelles	80,000t	15-20 days	London, 5pm
Med-US Gulf 80,000t	Gibraltar to Canakkale/Dardanelles	Gulf of Mexico centred on the Loop crude discharge terminal.	80,000t	10-25 days	London, 5pn
Med-US Gulf 55,000t fuel oil	Gibraltar to Canakkale/Dardanelles	Gulf of Mexico centred on the Loop crude discharge terminal.	55,000t fuel oil	10-14 days	London, 5pn
Cross Med 30,000t fuel oil	from one port to another port in the Mediterranean from Gibraltar to Canal	kale/Dardanelles	30,000t fuel oil	10-14 days	London, 5pn
Black Sea-Med 30,000t fuel oil	Black Sea ports north and east of the Bosporus	Gibraltar to Canakkale/Dardanelles	30,000t fuel oil	15-20 days	London, 5pn
Black Sea-Med Suezmax demurrage \$/day	Black Sea ports north and east of the Bosporus	Gibraltar to Canakkale/Dardanelles	130,000- 135,000t	15-20 days	London, 5pm
Black Sea-Med Aframax demurrage \$/day	Black Sea ports north and east of the Bosporus	Gibraltar to Canakkale/Dardanelles	70,000-80,000t	15-20 days	London, 5pm
Days delay at Turkish straits – southbound	the Turkish straits are the Bosporus and Dardanelles. The number of days	delay includes the days on the owner's account			London, 5pm
Days delay at Turkish straits - northbound	the Turkish straits are the Bosporus and Dardanelles. The number of days	delay includes the days on the owner's account			London, 5pn
Americas					
Caribbean-Singapore 270,000t (lumpsum)	Venezuela, Colombian Atlantic coast, and Caribbean islands	Singapore	270,000t	20-50 days	New York, 5p
Caribbean-China 270,000t (lumpsum)	Venezuela, Colombian Atlantic coast, and Caribbean islands	Chinese coast from Hong Kong to Ningbo	270,000t	20-50 days	New York, 5p
USGC-China 270,000t (lumpsum)*	US Gulf coast from Texas to Alabama, including US offshore ports	Chinese coast from Hong Kong to Ningbo	270,000t	20-50 days	New York, 5p
USGC-China (STS) 270,000t (lumpsum)**	US Gulf coast loading via ship-to-ship transfer	Chinese coast from Hong Kong to Ningbo	270,000t	20-60 days	New York, 5p
USGC-South Korea/Japan 270,000t (lumpsum)*	US Gulf coast from Texas to Alabama, including US offshore ports	South Korea/Japan	270,000t	20-50 days	New York, 5p
USGC-west coast India 270,000t (lumpsum)*	US Gulf coast from Texas to Alabama, including US offshore ports	Indian west coast	270,000t	20-50 days	New York, 5p
USGC-Singapore 270,000t (lumpsum)*	US Gulf coast from Texas to Alabama, including US offshore ports	Singapore	270,000t	20-50 days	New York, 5p
USGC-Rotterdam 270,000t (lumpsum)*	US Gulf coast from Texas to Alabama, including US offshore ports	Rotterdam	270,000t	20-50 days	New York, 5p
* include port fees associated with partial \	/LCC loadings in the US Gulf coast ** assessed as a differential to the USGC	C-China 270,000t (lumpsum) rate			New York, 5p
Caribbean-west coast India 270,000t (lumpsum)	Venezuela, Colombian Atlantic coast, and Caribbean islands	Indian west coast	270,000t	20-50 days	New York, 5p
Brazil-China 260,000t	Brazil	Chinese coast from Hong Kong to Ningbo	260,000t	20-40 days	New York, 5
Atlantic basin-Asia VLCC demurrage \$/day	The price of demurrage for a VLCC loading in the Atlantic basin and disch			20-50 days	New York, 5p



Dirty freight rate specifications					
Assessment	Origin	Destination	Cargo size	Timing (ahead)	Assessment time
USGC/Caribbean-Singapore 130,000t	US Gulf coast from Texas to Alabama, including US offshore ports, and Venezuela, Colombian Atlantic coast, and Caribbean islands	Singapore	130,000t	7-25 days	New York, 5pm
USGC-China 130,000t (lumpsum)	US Gulf coast from Texas to Alabama, including US offshore ports	Chinese coast from Hong Kong to Ningbo	130,000t	7-25 days	New York, 5pm
USGC-Europe 150,000t	US Gulf coast from Texas to Alabama, including US offshore ports	Europe is from Hamburg, through Gibraltar to Canakkale/Dardanelles on the Mediterranean, and includes the United Kingdom and the North Sea ports	150,000t	7-25 days	New York, 5pm
Panama-US west coast 130,000t	Panamanian Pacific coast	US west coast from Los Angeles to San Francisco	130,000t	10-25 days	New York, 5pm
Guyana-Panama 130,000t	Guyana	Panamanian Atlantic coast	130,000t	7-25 days	New York, 5pm
Caribbean-USGC 130,000t	Venezuela, Colombian Atlantic coast, and Caribbean islands	US Gulf coast from Texas to Alabama, including US offshore ports	130,000t	7-25 days	New York, 5pm
Caribbean-UKC 150,000t	Venezuela, Colombian Atlantic coast, and Caribbean islands	northwest Europe from Le Havre to Hamburg, centred on ARA (Amsterdam-Rotterdam-Antwerp), and the North Sea ports	150,000t	7-25 days	New York, 5pm
Caribbean-Panama 130,000t	Venezuela, Colombian Atlantic coast, and Caribbean islands	Panamanian Atlantic coast	130,000t	7-25 days	New York, 5pm
Caribbean-USGC 70,000t	Venezuela, Colombian Atlantic coast, and Caribbean islands	Gulf of Mexico centred on the Loop crude discharge terminal.	70,000t	7-10 days	New York, 5pm
USGC-UKC 70,000t	US Gulf coast from Texas to Alabama, including US offshore ports	Gibraltar to Hamburg, includes United Kingdom and the North Sea ports. The \$/t rate is normalised to Rotterdam discharge	70,000t	5-22 days	New York, 5pm
USGC-East coast Canada 70,000t	US Gulf coast from Texas to Alabama, including US offshore ports	Canadian coast from New Brunswick to Newfoundland	70,000t	5-22 days	New York, 5pm
East coast Mexico-USGC 70,000t	Mexican Atlantic coast	US Gulf coast from Texas to Alabama, including US offshore ports	70,000t	5-22 days	New York, 5pm
Caribbean-UKC 70,000t	Venezuela, Colombian Atlantic coast, and Caribbean islands	northwest Europe from Le Havre to Hamburg, centred on ARA (Amsterdam-Rotterdam-Antwerp), and the North Sea ports	70,000t	5-22 days	New York, 5pm
Caribbean-USGC 50,000t	Venezuela, Colombian Atlantic coast, and Caribbean islands	US Gulf coast from Texas to Alabama, including US offshore ports	50,000t	5-15 days	New York, 5pm
Ecuador-US west coast 50,000t	Ecuador	US west coast from Los Angeles to San Francisco	50,000t	5-15 days	New York, 5pm
East coast Mexico-USGC 50,000t	Mexican Atlantic coast	US Gulf coast from Texas to Alabama, including US offshore ports	50,000t	5-15 days	New York, 5pm
US Gulf coast Aframax reverse lightering	,	ay period to reverse lighter, or deliver crude via ship-to-ship transfer (STS) onto a larger ta including Corpus Christi, Houston, and Beaumont/Nederland. Ports on the Mississippi riv		2-14 days	New York, 5pm



# METHODOLOGY AND SPECIFICATIONS GUIDE

Clean freight rate specifications					
Assessment	Origin	Destination	Cargo size	Timing (ahead)	Assessment time
Black Sea/Mediterranean				(	
Cross Med 30,000t	from one port to another port in the Mediterranean from Gibraltar to Canakka	le/Dardanelles	30,000t	5-14 days	London, 5pm
Black Sea-Med 30,000t	Black Sea ports north and east of the Bosporus	Gibraltar to Canakkale/Dardanelles	30,000t	5-14 days	London, 5pm
Med-UKC 30,000t	Gibraltar to Canakkale/Dardanelles	northwest Europe from Le Havre to Hamburg, centred on ARA (Amsterdam-Rotterdam-Antwerp), and the North Sea ports	30,000t	5-14 days	London, 5pm
Med-US Atlantic coast 37,000t	Gibraltar to Canakkale/Dardanelles	north of Cape Hatteras to Portland, Maine centred on Philadelphia, New York and Boston	37,000t	5-14 days	London, 5pm
Med 30,000t naphtha premium*	Gibraltar to Canakkale/Dardanelles		30,000t	5-14 days	London, 5pm
*The naphtha premium is the premium tha	t is currently available in the market for naphtha expressed in Worldscale spot rai	tes points			
Med 30,000t mogas premium*	Gibraltar to Canakkale/Dardanelles		30,000t	5-14 days	London, 5pm
*The mogas premium is the premium that	is currently available in the market for motor gasoline expressed in Worldscale sp	oot rates points			
Med 30,000t jet premium*	Gibraltar to Canakkale/Dardanelles		30,000t	5-14 days	London, 5pm
*The jet premium is the premium that is cu	rrently available in the market for jet expressed in Worldscale spot rates points				
Cross Med 30,000t naphtha*	from one port to another port in the Mediterranean from Gibraltar to Canakka	le/Dardanelles	30,000t naphtha	5-14 days	London, 5pm
*Incorporates naphtha premium					
Cross Med 30,000 mogas	from one port to another port in the Mediterranean from Gibraltar to Canakka	le/Dardanelles	30,000t mogas	5-14 days	London, 5pn
*incorporates mogas premium					
Cross Med 30,000 jet	from one port to another port in the Mediterranean from Gibraltar to Canakka	le/Dardanelles	30,000t jet	5-14 days	London, 5pn
*incorporates jet premium					
Med-UKC 30,000t naphtha	Gibraltar to Canakkale/Dardanelles	northwest Europe from Le Havre to Hamburg, centred on ARA (Amsterdam-Rotterdam-Antwerp), and the North Sea ports	30,000t naphtha	5-14 days	London, 5pm
Med-UKC 30,000t mogas	Gibraltar to Canakkale/Dardanelles	northwest Europe from Le Havre to Hamburg, centred on ARA (Amsterdam-Rotterdam-Antwerp), and the North Sea ports	30,000t mogas	5-14 days	London, 5pm
Med-UKC 30,000t jet	Gibraltar to Canakkale/Dardanelles	northwest Europe from Le Havre to Hamburg, centred on ARA (Amsterdam-Rotterdam-Antwerp), and the North Sea ports	30,000t jet	5-14 days	London, 5pm
Med-Japan 60,000t (lumpsum)	Gibraltar to Canakkale/Dardanelles	Japan	60,000t	15-30 days	London, 5pm
Med-Japan 80,000t (lumpsum)	Gibraltar to Canakkale/Dardanelles	Japan	80,000t	15-30 days	London, 5pm
Middle East/East			·	,-	, ,
Mideast Gulf-UKC 90,000t (lumpsum)	all ports in the Arab Gulf/Persian Gulf up to Quoin Island (Straits of Hormuz)	northwest Europe from Le Havre to Hamburg, centred on ARA (Amsterdam-Rotterdam-Antwerp), and the North Sea ports	90,000t	15-30 days	London, 5pm
Mideast Gulf-UKC 65,000t (lumpsum)	all ports in the Arab Gulf/Persian Gulf up to Quoin Island (Straits of Hormuz)	northwest Europe from Le Havre to Hamburg, centred on ARA (Amsterdam-Rotterdam-Antwerp), and the North Sea ports	65,000t	15-30 days	London, 5pm
Mideast Gulf-Japan 75,000t	all ports in the Arab Gulf/Persian Gulf up to Quoin Island (Straits of Hormuz)	Japan	75,000t	15-30 days	Singapore, 4.
Mideast Gulf-Japan 55,000t	all ports in the Arab Gulf/Persian Gulf up to Quoin Island (Straits of Hormuz)	Japan	55,000t	15-30 days	Singapore, 4.
Mideast Gulf-Japan 35,000t	all ports in the Arab Gulf/Persian Gulf up to Quoin Island (Straits of Hormuz)	Japan	35,000t	15-30 days	Singapore, 4
Mideast Gulf-South Korea 75,000t	all ports in the Arab Gulf/Persian Gulf up to Quoin Island (Straits of Hormuz)	South Korea	75,000t	15-30 days	Singapore, 4
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Mideast Gulf-South Korea 55,000t	all ports in the Arab Gulf/Persian Gulf up to Quoin Island (Straits of Hormuz)	South Korea	55,000t	15-30 days	Singapore, 4



Clean freight rate specifications					
Assessment	Origin	Destination	Cargo size	Timing (ahead)	Assessment time
Mideast Gulf-Singapore 35,000t	all ports in the Arab Gulf/Persian Gulf up to Quoin Island (Straits of Hormuz)	Singapore	35,000t	15-30 days	Singapore, 4.30pm
Mideast Gulf-East Africa 35,000t	all ports in the Arab Gulf/Persian Gulf up to Quoin Island (Straits of Hormuz)	a range of ports from Mombasa to Dar es Salaam	35,000t	5-15 days	Singapore, 4.30pm
Mideast Gulf-East Africa 35,000t (including anti-piracy fee)	all ports in the Arab Gulf/Persian Gulf up to Quoin Island (Straits of Hormuz)	a range of ports from Mombasa to Dar es Salaam	35,000t	5-15 days	Singapore, 4.30pm
Mideast Gulf-west coast India 35,000t (lumpsum)*	all ports in the Arab Gulf/Persian Gulf up to Quoin Island (Straits of Hormuz)	west coast India	35,000t	5-20 days	Singapore, 4.30pm
Mideast Gulf-east coast India 35,000t (lumpsum)*	all ports in the Arab Gulf/Persian Gulf up to Quoin Island (Straits of Hormuz)	east coast India	35,000t	5-20 days	Singapore, 4.30pm
*Prices are assessed and published as lun	npsums and are also converted to Worldscale and \$/t values for publication				
Red Sea-Mediterranean 90,000t (lumpsum)	Red Sea	Gibraltar to Canakkale/Dardanelles	90,000t	10-25 days	London, 5pm
Red Sea-Mediterranean 65,000t (lumpsum)	Red Sea	Gibraltar to Canakkale/Dardanelles	65,000t	10-25 days	London, 5pm
Red Sea-UKC 90,000t (lumpsum)	Red Sea	northwest Europe from Le Havre to Hamburg, centred on ARA (Amsterdam-Rotterdam-Antwerp), and the North Sea ports	90,000t	10-25 days	London, 5pm
Red Sea-UKC 65,000t (lumpsum)	Red Sea	northwest Europe from Le Havre to Hamburg, centred on ARA (Amsterdam-Rotterdam-Antwerp), and the North Sea ports	65,000t	10-25 days	London, 5pm
west coast India-south Brazil 90,000t (lumpsum)	west coast India	Brazilian ports to the south of and including Suape	90,000t	10-25 days	London, 5pm
west coast India-south Brazil 65,000t (lumpsum)	west coast India	Brazilian ports to the south of and including Suape	65,000t	10-25 days	London, 5pm
west coast India-UKC 90,000t (lumpsum)	west coast India	northwest Europe from Le Havre to Hamburg, centred on ARA (Amsterdam-Rotterdam-Antwerp), and the North Sea ports	90,000t	10-25 days	London, 5pm
west coast India-UKC 65,000t (lumpsum)	west coast India	northwest Europe from Le Havre to Hamburg, centred on ARA (Amsterdam-Rotterdam-Antwerp), and the North Sea ports	65,000t	10-25 days	London, 5pm
Singapore-Japan 30,000t	Singapore	Japan	30,000t	15-30 days	Singapore, 4.30pm
South Korea-Singapore 35,000t (lumpsum)	South Korea	Singapore	35,000t	15-30 days	Singapore, 4.30pm
South Korea-US west coast 35,000t (lumpsum)	South Korea	US west coast	35,000t	15-30 days	Singapore, 4.30pm
South Korea-Chile 35,000t (lumpsum)	South Korea	Chilean coast from Coronel to but excluding Quintero	35,000t	10-25 days	Singapore, 4.30pm
South Korea-Australia/New Zealand 35,000t	South Korea	east coast Australia and New Zealand	35,000t	15-30 days	Singapore, 4.30pm
South Korea-east coast Australia 35,000t*	South Korea	east coast Australia	35,000t	15-30 days	Singapore, 4.30pm
South Korea-New Zealand 35,000t*	South Korea	New Zealand	35,000t	15-30 days	Singapore, 4.30pm
*Published in \$/t only					
SE Asia-east coast Australia 30,000t	ports in the region around Indonesia and Malaysia, including Singapore	east coast Australia	30,000t	15-30 days	Singapore, 4.30pm
SE Asia-east coast Australia 35,000t	ports in the region around Indonesia and Malaysia, including Singapore	east coast Australia	35,000t	15-30 days	Singapore, 4.30pm
Northern Europe					
UKC-US Atlantic coast 37,000t	northwest Europe from Le Havre to Hamburg, centred on ARA (Amsterdam-Rotterdam-Antwerp), and the North Sea ports	US Atlantic coast north of Cape Hatteras to Portland, Maine centred on Philadelphia, New York and Boston	37,000t	7-10 days	London, 5pm
UKC-east coast of Mexico 37,000t	northwest Europe from Le Havre to Hamburg, centred on ARA (Amsterdam-Rotterdam-Antwerp), and the North Sea ports	ports of Tuxpan, Tampico, Pajaritos and Ciudad Madero	37,000t	5-14 days	London, 5pm



Clean freight rate specifications					
Assessment	Origin	Destination	Cargo size	Timing (ahead)	Assessment time
UKC-South America 37,000t	northwest Europe from Le Havre to Hamburg, centred on ARA (Amsterdam-Rotterdam-Antwerp), and the North Sea ports	Atlantic coast ports ranging from northern Brazil to northern Argentina	37,000t	5-14 days	London, 5pm
UKC-west Africa, 60,000t	northwest Europe from Le Havre to Hamburg, centred on ARA (Amsterdam-Rotterdam-Antwerp), and the North Sea ports	range of ports centred on Bonny and Lagos	60,000t	7-20 days	London, 5pm
UKC-west Africa 37,000t	northwest Europe from Le Havre to Hamburg, centred on ARA (Amsterdam-Rotterdam-Antwerp), and the North Sea ports	range of ports centred on Bonny and Lagos	37,000t	5-14 days	London, 5pm
Cross UKC 22,000t	from one port to another port in northwest Europe from Le Havre to Hamburg	, centred on ARA (Amsterdam-Rotterdam-Antwerp), and the North Sea ports	22,000t	5-14 days	London, 5pm
Cross UKC 30,000t	from one port to another port in northwest Europe from Le Havre to Hamburg	, centred on ARA (Amsterdam-Rotterdam-Antwerp), and the North Sea ports	30,000t	5-14 days	London, 5pm
Baltic-UKC 30,000t	ports in Finland, Baltic Russia, Estonia, Latvia, Lithuania, Poland, Baltic Germany and Baltic Sweden	northwest Europe from Le Havre to Hamburg, centred on ARA (Amsterdam-Rotterdam-Antwerp), and the North Sea ports	30,000t	7-10 days	London, 5pm
Americas					
Caribbean-USAC 38,000t	centred on the export ports in and around northern Venezuela.	US Atlantic coast north of Cape Hatteras to Portland, Maine centred on Philadelphia, New York and Boston	38,000t	3-10 days	New York, 5pm
USGC/Caribbean-UKCM 38,000t	USGC is centred on the export ports around the Gulf of Mexico, Caribbean is centred on the export ports in and around northern Venezuela	Northwest Europe from Le Havre to Hamburg, centred on ARA (Amsterdam-Rotterdam-Antwerp), and the North Sea ports; Mediterranean from Gibraltar to Canakkale/Dardanelles	38,000t	3-10 days	New York, 5pm
USGC-Chile 38,000t (lumpsum)	centred on the export ports around the Gulf of Mexico	Chilean coast from Coronel to but excluding Quintero	38,000t	3-10 days	New York, 5pm
USGC-Quintero 38,000t (lumpsum)*	centred on the export ports around the Gulf of Mexico	Chilean coast from Quintero to but excluding Caldera	38,000t	3-10 days	New York, 5pm
*Assessed as a differential to the USGC-Cl	hile rate. The differential is also published.				
USGC-Caldera 38,000t (lumpsum)*	centred on the export ports around the Gulf of Mexico	Chilean coast from Caldera to but excluding Mejillones/Antofagasta	38,000t	3-10 days	New York, 5pm
*Assessed as a differential to the USGC-Cl	hile rate. The differential is also published.				
USGC-Mejillones/Antofagasta 38,000t (lumpsum)*	centred on the export ports around the Gulf of Mexico	Chilean coast north of and including Mejillones/Antofagasta	38,000t	3-10 days	New York, 5pm
*Assessed as a differential to the USGC-Cl	hile rate. The differential is also published.				
USGC-Calbuco 38,000t (lumpsum)*	centred on the export ports around the Gulf of Mexico	Chilean coast from Calbuco to but excluding Coronel	38,000t	3-10 days	New York, 5pm
*Assessed as a differential to the USGC-Cl	hile rate. The differential is also published.				
USGC-east coast South America 38,000t WS	centred on the export ports around the Gulf of Mexico	Brazil, Argentina, and Uruguay	38,000t	3-10 days	New York, 5pm
USGC-N Brazil 38,000t*	centred on the export ports around the Gulf of Mexico	Brazilian ports to the north of and including Suape	38,000t	3-10 days	New York, 5pm
USGC-S Brazil 38,000t*	centred on the export ports around the Gulf of Mexico	Brazilian ports to the south of and excluding Suape	38,000t	3-10 days	New York, 5pm
USGC-Argentina/Uruguay 38,000t*	centred on the export ports around the Gulf of Mexico	Argentina and Uruguay	38,000t	3-10 days	New York, 5pm
*Published in \$/t only					
USGC-Brazil 60,000t WS	centred on the export ports around the Gulf of Mexico	Brazil	60,000t	5-21 days	New York, 5pm
USGC-N Brazil 60,000t*	centred on the export ports around the Gulf of Mexico	Brazilian ports to the north of and including Suape	60,000t	5-21 days	New York, 5pm
USGC-S Brazil 60,000t*	centred on the export ports around the Gulf of Mexico	Brazilian ports to the south of and including Suape	60,000t	5-21 days	New York, 5pm
*Published in \$/t only					
USGC-UKC 60,000t	centred on the export ports around the Gulf of Mexico	Gibraltar to Hamburg, includes United Kingdom and the North Sea ports, centred on ARA (Amsterdam-Rotterdam-Antwerp)	60,000t	5-21 days	New York, 5pm
USGC-Japan 60,000t (lumpsum)	centred on the export ports around the Gulf of Mexico	Japan	60,000t	5-21 days	New York, 5pm

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Assessment	Origin	Destination	Cargo size	Timing	Assessment
	- 3		<b>g-</b>	(ahead)	time
USGC-Dominican Republic 38,000t (lumpsum)	centred on the export ports around the Gulf of Mexico	Dominican Republic	38,000t	3-10 days	New York, 5pm
USGC-Peru 38,000t	centred on the export ports around the Gulf of Mexico	Peruvian coast south of and excluding Callao and Conchan	38,000t	3-10 days	New York, 5pm
USGC-Callao/Conchan 38,000t (lumpsum)*	centred on the export ports around the Gulf of Mexico	Peruvian coast north of and including ports of Callao and Conchan	38,000t	3-10 days	New York, 5pn
*Assessed as a differential to the USGC-F	Peru rate. The differential is also published.				
USGC-Ecuador 38,000t	centred on the export ports around the Gulf of Mexico	Ecuador	38,000t	3-10 days	New York, 5pn
USGC-east coast Canada 38,000t	centred on the export ports around the Gulf of Mexico	Canadian east coast from New Brunswick to Newfoundland	38,000t	3-10 days	New York, 5pn
USGC-Japan 38,000t	centred on the export ports around the Gulf of Mexico	ports of Mizushima, Chiba and Kashima	38,000t	3-10 days	New York, 5pn
USGC-east coast of Mexico 38,000t (lumpsum)	centred on the export ports around the Gulf of Mexico	ports of Tuxpan, Tampico, Pajaritos and Ciudad Madero	38,000t	3-10 days	New York, 5pr
USGC-Las Minas 38,000t (lumpsum)	centred on the export ports around the Gulf of Mexico	Las Minas on the Atlantic coast of Panama.	38,000t	3-10 days	New York, 5pr
USGC-Pozos 38,000t (lumpsum)	centred on the export ports around the Gulf of Mexico	Pozos, Colorados in Colombia	38,000t	3-10 days	New York, 5pi
USGC-Cartagena 38,000t (lumpsum)*	centred on the export ports around the Gulf of Mexico	Cartagena, Colombia	38,000t	3-10 days	New York, 5p
*Assessed as a differential to the USGC-F	Pozos rate. The differential is also published.				
USGC-Barranquilla 38,000t (lumpsum)*	centred on the export ports around the Gulf of Mexico	Barranquilla, Colombia	38,000t	3-10 days	New York, 5p
*Assessed as a differential to the USGC-F	Pozos rate. The differential is also published.				
USGC-Bolivar 38,000t (lumpsum)*	centred on the export ports around the Gulf of Mexico	Bolivar, Colombia	38,000t	3-10 days	New York, 5p
*Assessed as a differential to the USGC-F	Pozos rate. The differential is also published.				
USAC-UKC 38,000t	US Atlantic coast north of Cape Hatteras to Portland, Maine centred on Philadelphia, New York and Boston	northwest Europe from Le Havre to Hamburg, centred on ARA (Amsterdam-Rotterdam-Antwerp), and the North Sea ports	38,000t	3-10 days	New York, 5pr
East coast Canada-USAC 38,000t	centred on Come by Chance, Newfoundland	US Atlantic coast north of Cape Hatteras to Portland, Maine centred on Philadelphia, New York and Boston	38,000t	3-10 days	New York, 5pr
USGC-Lazaro Cardenas 38,000t	centred on the export ports around the Gulf of Mexico	Mexican west coast south of and including Lazaro Cardenas	38,000t	3-10 days	New York, 5pr
USGC-Rosarito 38,000t	centred on the export ports around the Gulf of Mexico	Rosarito, on the Pacific coast of northern Mexico	38,000t	3-10 days	New York, 5pr
USGC-Guaymas 12,000t*	centered on the export ports around the Gulf of Mexico	Guaymas	12,000t	3-10 days	New York, 5pr
*Assessed in \$/t, medium range (MR) ves	ssels, assumes partial discharge of 12,000t				
USWC-Rosarito 38,000t	US west coast from San Francisco to Los Angeles	Mexican west coast from Rosarito to but excluding Lazaro Cardenas	38,000t	7-15 days	New York, 5pr
USWC-Guaymas 12,000t*	US west coast from San Francisco to Los Angeles	Guaymas	12,000t	7-15 days	New York, 5pr
*Assessed in \$/t, medium range (MR) ves	ssels, assumes partial discharge of 12,000t				
USWC-Topolobampo 19,000t*	US west coast from San Francisco to Los Angeles	Topolobampo	19,000t	7-15 days	New York, 5pr
*Assessed in \$/t, medium range (MR) ves	ssels, assumes partial discharge of 19,000t				
USWC-Lazaro Cardenas 38,000t	US west coast from San Francisco to Los Angeles	Mexican west coast south of and including Lazaro Cardenas	38,000t	7-15 days	New York, 5p
USWC-Chile 38,000t	US west coast from San Francisco to Los Angeles	Chilean coast from Coronel to but excluding Quintero	38,000t	7-15 days	New York, 5p
USWC-Quintero 38,000t (lumpsum)*	US west coast from San Francisco to Los Angeles	Chilean coast from Quintero to but excluding Caldera	38,000t	7-15 days	New York, 5p
*Assessed as a differential to the USWC-C	Chile rate. The differential is also published.				
JSWC-Caldera 38,000t (lumpsum)*	US west coast from San Francisco to Los Angeles	Chilean coast from Caldera to but excluding Mejillones/Antofagasta	38,000t	7-15 days	New York, 5p

<sup>\*</sup>Assessed as a differential to the USWC-Chile rate. The differential is also published.



Clean freight rate specifications					
Assessment	Origin	Destination	Cargo size	Timing (ahead)	Assessment time
USWC-Mejillones/Antofagasta 38,000t (lumpsum)*	US west coast from San Francisco to Los Angeles	Chilean coast north of and including Mejillones/Antofagasta	38,000t	7-15 days	New York, 5pm
*Assessed as a differential to the USWC-0	Chile rate. The differential is also published				
USWC-Calbuco 38,000t (lumpsum)*	US west coast from San Francisco to Los Angeles	Chilean coast from Calbuco to but excluding Coronel	38,000t	7-15 days	New York, 5pm
*Assessed as a differential to the USWC-0	Chile rate. The differential is also published				
Atlantic coast Americas MR demurrage \$/day	The price of demurrage for a medium-range (MR) tanker loading on the Al	clantic coast of the Americas		3-10 days	New York, 5pm
Others					
ARA to Walvis Bay	ARA to Walvis Bay is calculated by multiplying the percentage of the UKC ARA refers to the Antwerp/Rotterdam/Amsterdam range of ports. Assessm	to west Africa 37,000t daily Worldscale spot rate assessments to a basket of typnents are made in \$/t.	ical Worldscale flat	rates for ARA	oorts to Walvis Ba
ARA to Durban	ARA to Durban is calculated by multiplying the percentage of the UKC to verefers to the Antwerp/Rotterdam/Amsterdam range of ports. Assessments	west Africa 37,000t daily Worldscale spot rate assessments to a basket of typical are made in \$/t.	Worldscale flat rat	es for ARA por	s to Durban. ARA
Mideast Gulf to Walvis Bay	, , , , , , ,	the Mideast Gulf to east Africa 35,000t daily Worldscale spot rate assessments to ersian Gulf up to Quoin Island (Straits of Hormuz). Assessments are made in \$/t.	* '	ıl Worldscale fla	at rates for Midea
Mideast Gulf to Walvis Bay (including anti-piracy fee)	, , , , , ,	the Mideast Gulf to east Africa (including anti-piracy fee) 35,000t daily Worldscale ers to all ports in the Arab Gulf/Persian Gulf up to Quoin Island (Straits of Hormu	•		et of typical
Mideast Gulf to Durban	, ,, , ,	Africa 35,000t daily Worldscale spot rate assessment, minus a differential to reflet to all ports in the Arab Gulf/Persian Gulf up to Quoin Island (Straits of Hormuz).		-	of typical
Mideast Gulf to Durban (including anti- piracy fee)	, , , , ,	Africa (including anti-piracy fee) 35,000t daily Worldscale spot rate assessment, deast Gulf refers to all ports in the Arab Gulf/Persian Gulf up to Quoin Island (Str			



Jones Act rate specifications (\$/t)							
Assessment	Origin	Destination	Vessel	Cargo	Cargo size (bl)	Timing	Assessment time
Corpus Christi-St. James 140,000-260,000 bl	Corpus Christi	St. James	ATB	Dirty	140,000-260,000 bl	loading in 3-15 days	New York, 2.30pm Friday
Corpus Christi-Delaware Bay 260,000-330,000 bl	Corpus Christi	Delaware Bay	MR	Dirty	260,000-330,000 bl	loading in 3-15 days	New York, 2.30pm Friday
Corpus Christi-St. James 260,000-330,000 bl	Corpus Christi	St. James	MR	Dirty	260,000-330,000 bl	loading in 3-15 days	New York, 2.30pm Friday
Houston-Tampa 140,000-260,000 bl	Houston	Tampa	ATB	Clean	140,000-260,000 bl	loading in 3-15 days	New York, 2.30pm Friday
Houston-Port Everglades 140,000-260,000 bl	Houston	Port Everglades	ATB	Clean	140,000-260,000 bl	loading in 3-15 days	New York, 2.30pm Friday
Houston-New York Harbor 140,000-260,000 bl	Houston	New York Harbor	ATB	Clean	140,000-260,000 bl	loading in 3-15 days	New York, 2.30pm Friday
Houston-Tampa 310,000-330,000 bl	Houston	Tampa	MR	Clean	310,000-330,000 bl	loading in 3-15 days	New York, 2.30pm Friday
Houston-Port Everglades 310,000-330,000 bl	Houston	Port Everglades	MR	Clean	310,000-330,000 bl	loading in 3-15 days	New York, 2.30pm Friday
Houston-New York Harbor 310,000-330,000 bl	Houston	New York Harbor	MR	Clean	310,000-330,000 bl	loading in 3-15 days	New York, 2.30pm Friday
Houston-Jacksonville 310,000-330,000 bl	Houston	Jacksonville	MR	Clean	310,000-330,000 bl	loading in 3-15 days	New York, 2.30pm Friday

Panama Canal wait times (days)		
Assessment	Description	Assessment time
Panama Canal Neopanamax locks - southbound waiting days	Daily assessment of number of days a vessel with a beam exceeding 107 ft has to wait before it can transit the Panama Canal's Neopanamax locks if the vessel arrives without a booked slot	New York, 5pm
Panama Canal Neopanamax locks - northbound waiting days	Daily assessment of number of days a vessel with a beam exceeding 107 ft has to wait before it can transit the Panama Canal's Neopanamax locks if the vessel arrives without a booked slot	New York, 5pm
Puerto Bolivar-Rotterdam 75,000t Panamax		New York, 5pm
EC Australia-Japan 75,000t Panamax		New York, 5pm

Petroleum coke freight rate specifications (\$/t)							
Assessment	Origin	Destination	Cargo size	Timing	Assessment time		
US Gulf-ARA 50,000t	USGC	ARA	50,000t Supramax	loading in 10-30 days	New York, 5pm		
Venezuela-ARA 50,000t	Venezuela	ARA	50,000t Supramax	loading in 10-30 days	New York, 5pm		
US Gulf-Turkey 50,000t	USGC	Turkey	50,000t Supramax	loading in 10-30 days	New York, 5pm		
US Gulf-Brazil 50,000t	USGC	Brazil	50,000t Supramax	loading in 10-30 days	New York, 5pm		
US west coast-Japan 70,000t	US west coast	Japan	70,000t Panamax	loading in 10-30 days	New York, 5pm		
US Gulf-China 50,000t	USGC	China	50,000t Supramax	loading in 10-30 days	New York, 5pm		
US west coast-China 50,000t	US west coast	China	50,000t Supramax	loading in 10-30 days	New York, 5pm		
US Gulf-east coast India 50,000t	US Gulf	east coast India	50,000t Supramax	loading in 10-30 days	New York, 5pm		
East coast Saudi Arabia-west coast India 50,000t	Jubail, Saudi Arabia	Kandla, India	50,000t Supramax	loading in 10-30 days	New York, 5pm		



# METHODOLOGY AND SPECIFICATIONS GUIDE

Dry bulk freight rate specifications (\$/t)				
Assessment	Origin	Destination	Cargo size	Assessment time
Murmansk-Rotterdam 75,000t Panamax	Murmansk, Russia	Rotterdam, Netherlands	75,000t Panamax	London, 5pm
Richards Bay-Rotterdam 75,000t Panamax	Richards Bay, South Africa	Rotterdam, Netherlands	75,000t Panamax	London, 5pm
Puerto Bolivar-Rotterdam 75,000t Panamax	Puerto Bolivar, Colombia	Rotterdam, Netherlands	75,000t Panamax	London, 5pm
EC Australia-Japan 75,000t Panamax	Abbot Point, Dalrymple Bay, Gladstone, Hay Point, Newcastle and Port Kembla	Chiba, Fukuyama, Kashima, Kure, Mizushima, Oita and Soma	75,000t Panamax	Singapore, 6pm
EC Australia-S Korea 75,000t Panamax	Abbot Point, Dalrymple Bay, Gladstone, Hay Point, Newcastle and Port Kembla	Gwangyang (Kwangyang), Pohang, Ulsan and Yosu	75,000t Panamax	Singapore, 6pm
EC Australia-S China 75,000t Panamax	Abbot Point, Dalrymple Bay, Gladstone, Hay Point, Newcastle and Port Kembla	Fangcheng and Guangzhou	75,000t Panamax	Singapore, 6pm
EC Australia-east coast India 75,000t Panamax	Abbot Point, Dalrymple Bay, Gladstone, Hay Point, Newcastle and Port Kembla	Dhamra, Ennore, Gangavaram, Krishnapatnam, Paradip and Vizag	75,000t Panamax	Singapore, 6pm
Indonesia-S China 75,000t Panamax	South Kalimantan Island ports, including Balikpapan, Bontang Coal Terminal, Lubuk Coal Terminal, north and south Pulau Laut Coal Terminals, Samarinda port, Taboneo port and Tanjung Bara Coal Terminal	Fangcheng and Guangzhou	75,000t Panamax	Singapore, 6pm
Indonesia-east coast India 75,000t Panamax	South Kalimantan Island ports, including Balikpapan, Bontang Coal Terminal, Lubuk Coal Terminal, north and south Pulau Laut Coal Terminals, Samarinda port, Taboneo port and Tanjung Bara Coal Terminal	Krishnapatnam, Dhamra, Ennore, Gangavaram, Vizag and Paradip	75,000t Panamax	Singapore, 6pm
Indonesia-Japan 75,000t Panamax	South Kalimantan Island ports, including Balikpapan, Bontang Coal Terminal, Lubuk Coal Terminal, north and south Pulau Laut Coal Terminals, Samarinda port, Taboneo port and Tanjung Bara Coal Terminal	Chiba, Fukuyama, Kashima, Kure, Mizushima, Oita and Soma	75,000t Panamax	Singapore, 6pm
Indonesia-S Korea 75,000t Panamax	South Kalimantan Island ports, including Balikpapan, Bontang Coal Terminal, Lubuk Coal Terminal, north and south Pulau Laut Coal Terminals, Samarinda port, Taboneo port and Tanjung Bara Coal Terminal	Gwangyang (Kwangyang), Pohang, Ulsan and Yosu	75,000t Panamax	Singapore, 6pm
Richards Bay-Rotterdam 150,000t Capesize	Richards Bay, South Africa	Rotterdam, Netherlands	150,000t Capesize	London, 5pm
Puerto Bolivar-Rotterdam 160,000t Capesize	Puerto Bolivar, Colombia	Rotterdam, Netherlands	160,000t Capesize	London, 5pm
Newcastle-Zhoushan 130,000t Capesize	Newcastle, Australia	Zhoushan, China	130,000t Capesize	Singapore, 6pm
Newcastle-Fangcheng 130,000t Capesize	Newcastle, Australia	Fangcheng, China	130,000t Capesize	Singapore, 6pm
Gladstone-Zhoushan 160,000t Capesize	Gladstone, Australia	Zhoushan, China	160,000t Capesize	Singapore, 6pm
Gladstone-Fangcheng 160,000t Capesize	Gladstone, Australia	Fangcheng, China	160,000t Capesize	Singapore, 6pm
Hay Point-Zhoushan 160,000t Capesize	Hay Point, Australia	Zhoushan, China	160,000t Capesize	Singapore, 6pm
Hay Point-Fangcheng 160,000t Capesize	Hay Point, Australia	Fangcheng, China	160,000t Capesize	Singapore, 6pm
Richards Bay-S China 150,000t Capesize	Richards Bay, South Africa	Fangcheg and Guangzhou, China	150,000t Capesize	London, 5pm
Richards Bay-Krishnapatnam 150,000t Capesize	Richards Bay, South Africa	Krishnapatnam, India	150,000t Capesize	London, 5pm
Richards Bay-Kandla 150,000t Capesize	Richards Bay, South Africa	Kandla, India (discharge at anchorage)	150,000t Capesize	London, 5pm
Saldanha Bay-Qingdao 170,000t Capesize	Saldanha Bay, South Africa	Qingdao, China	170,000t Capesize	London, 5pm
WC Australia-N China 170,000t Capesize	Dampier and Port Hedland	Dalian, Qingdao, Qinhuangdao and Rizhao, China	170,000t Capesize	Singapore, 6pm
Tubarao-Antwerp 170,000t Capesize	Tubarao, Brazil	Antwerp, Belgium	170,000t Capesize	London, 5pm
Tubarao-Qingdao 170,000t Capesize	Tubarao, Brazil	Qingdao, China	170,000t Capesize	London, 5pm
Hay Point-Rotterdam 160,000t Capesize	Hay Point, Australia	Rotterdam, Netherlands	160,000t Capesize	Singapore, 6pm



Americas coal export freight rate specifications (\$/t)							
Assessment	Origin	Destination	Cargo size	Assessment time			
US east coast-ARA 75,000t Panamax	US east coast (north of Cape Hatteras)	ARA	75,000t Panamax	New York, 5pm			
US east coast-Japan 75,000t Panamax	US east coast (north of Cape Hatteras)	Japan	75,000t Panamax	New York, 5pm			
US east coast-east coast India 75,000t Panamax	US east coast (north of Cape Hatteras)	east coast India	75,000t Panamax	New York, 5pm			
US east coast-ARA 120,000t Capesize	US east coast (north of Cape Hatteras)	ARA	120,000t Capesize	New York, 5pm			
US east coast-east coast India 120,000t Capesize	US east coast (north of Cape Hatteras)	east coast India	120,000t Capesize	New York, 5pm			
West coast North America-ARA 75,000t Panamax	West coast North America	ARA	75,000t Panamax	New York, 5pm			
West coast North America-Japan 75,000t Panamax	West coast North America	Japan	75,000t Panamax	New York, 5pm			
US Gulf-ARA 75,000t Panamax	US Gulf	ARA	75,000t Panamax	New York, 5pm			

Agriculture freight rate specification	Agriculture freight rate specifications (\$/t)						
Assessment	Origin	Destination	Cargo size	Timing	Assessment time		
Dry grains Santos-Qingdao 60,000t	Santos, Brazil	Qingdao, China	60,000t, loading 8,000t/d and discharge 8,000t/d excluding Saturday and Sunday based on 77,000dwt Panamax vessel	loading 20-45 days forward	London, 5pm		
Dry grains Kalama-Qingdao 65,000t	Kalama, US	Qingdao, China	65,000t, loading 10,000t/d and discharge 8,000t/d excluding Sunday based on 82,000dwt Kamsarmax vessel	loading 10-30 days forward	New York, 5pm		
Dry grains Vancouver-Qingdao 65,000t	Vancouver, Canada	Qingdao, China	65,000t, loading 15,000t/d and discharge 8,000t/d excluding Sunday based on 82,000dwt Kamsarmax vessel	loading 10-30 days forward	New York, 5pm		
Dry grains Houston-Qingdao 65,000t	Houston, US	Qingdao, China	65,000t, loading 25,000t/d and discharge 8,000t/d excluding Sunday based on 82,000dwt Kamsarmax vessel	loading 10-30 days forward	New York, 5pm		
Dry grains Odessa-Alexandria 65,000t	Odessa, Ukraine	Alexandria, Egypt (El Dekheila port)	65,000t, loading 10,000t/d and discharge 6000t/d excluding Saturday and Sunday, based on 82,000dwt Kamsarmax vessel	loading 10-30 days forward	London, 5pm		
Dry grains Novorossiysk-Alexandria 65,000t	Novorossiysk, Russia	Alexandria, Egypt (El Dekheila port)	65,000t, loading 10,000t/d and discharge 6000t/d excluding Saturday and Sunday, based on 82,000dwt Kamsarmax vessel	loading 10-30 days forward	London, 5pm		
Dry grains Odessa-Qingdao 65,000t	Odessa, Ukraine	Qingdao, China	65,000t, loading 10,000t/d and discharge 8000t/d excluding Saturday and Sunday, based on 82,000dwt Kamsarmax vessel	loading 10-30 days forward	London, 5pm		
Dry grains Novorossiysk-Qingdao 65,000t	Novorossiysk, Russia	Qingdao, China	65,000t, loading 10,000t/d and discharge 8000t/d excluding Saturday and Sunday, based on 82,000dwt Kamsarmax vessel	loading 10-30 days forward	London, 5pm		
Dry grains Houston-Rotterdam 65,000t	Houston, US	Rotterdam, Netherlands	65,000t, loading 25,000t/d and discharge 25,000t/d excluding Sunday based on 82,000dwt Kamsarmax vessel	loading 10-30 days forward	New York, 5pm		