

# Mysteel Coal and Coke Index Methodology

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#### Introduction

This document explains the methodology for the calculation and management of the Mysteel Coal and Coke Indices ("the Indices" or "MCCDEX" for short). The indices aim to reflect price changes in the physical coal and coke markets every day, and to provide an important pricing indicator for coal and coke markets participants.

The procedures and norms followed when compiling the index have been published on the Mysteel website in both Chinese and English and can be consulted free of charge.

## **Background**

Energy is an indispensable boost to promote economic and social development, and an important strategic resource and a pillar industry of the national economy. The world's energy structure is dominated by oil, followed by coal in the second place and natural gas in the third place. China is a country with sufficient coal but short oil. The proven coal reserves of China account for 13.3% of the world's coal reserves, with the recoverable volume ranks second, and the output ranks first in the world. With the discovery and development of Daqing Oilfield and Bohai Oilfield, China's primary energy structure has changed to a certain extent, but coal still accounts for as high as over 70% of its energy mix and is still in the absolute dominant position in China's primary energy structure. By 2050, the proportion of coal in the energy mix is estimated won't be less than 50%. It is foreseeable that the basic position of the coal industry in the national economy will be long-term and stable, and irreplaceable.

In the short term, coal companies must limit outputs, stabilize prices, reduce costs, and improve efficiency to avoid vicious competition in the same industry. On the other hand, we should encourage coal companies to establish long-term and stable strategic partnerships with users inside and outside the province to achieve mutual benefit and win-win development. At the same time, industrial authorities must strengthen coal mine safety supervision, implement safety production responsibilities, and promote the sound and rapid development of the coal industry.

In the long run, coal companies should follow the idea of "coal-based and diversified development" to realize the industrial transformation of "coal supporting non-coal and non-coal feeding back coal". Only by shifting from a decentralized, low-efficiency, and low-relevance industrial development mode to an economic development mode characterized by close industrial linkages, high added value, cleaner production, and comprehensive utilization of resources, can we win the extraordinary development of enterprises.

## **Purpose and Significance**

It is of great significance to compile a fair and neutral coal price indices.

From a macro perspective, first of all, the indices can be used as a reference for the relevant government departments to carry out macro-control.



Through the vertical comparison of coal and coke prices and the horizontal comparison with other energy indices, energy security and the healthy and stable development of the national economy can be effectively guaranteed.

The coal price indices can also be used as an important indicator for the country to analyze the macroeconomic situation, study the level of inflation, formulate macroeconomic policies, and carry out price reforms.

Secondly, the indices can effectively resolve the economic and people's livelihood impact caused by the price fluctuation of coal and coke.

The establishment of the coal and coke price indices can reflect the price level and trend of changes in different periods and different regions. The indices play an important role in stabilizing the market, guiding consumption, and building a conservation-oriented society.

The establishment of a scientific and reasonable coal and coke price indices can effectively avoid malicious control of the market by domestic and international markets, avoid excessive chain reactions caused by irregular price fluctuations, and ensure the basic stability of prices and the people's livelihood economy.

From a meso perspective, first of all, the indices can effectively promote the marketization of coal and coke and the reform of the pricing mechanism to maintain the healthy operation of the market.

Through the establishment of coal and coke price indices, it is feasible to advance the reform of the circulation system, marketization and pricing mechanism, further promote the establishment of a market-oriented trading center system, and develop diversified trading forms such as spot transactions, forward contracts, and futures transactions.

By clarifying the reference indicators of the coal and coke markets and prices, the price index can be used to effectively allow both the supply and demand parties to grasp the laws of market changes, effectively respond to the changes in the coal and coke markets, ensure the stability of market supply, and ensure the rationality and harmony of all links in the industrial chain.

Secondly, the indices can maintain China's competitiveness and interests in the international market.

Taking China's coal and coke price indices as the basis can help our country to gain more advantages in import and export trade negotiations.

The establishment of China's coal and coke price indices can help boost China's right to speak in the coal and coke markets.

Comparing China's coal and coke price indices with other international energy price indices can better grasp the trend of other international energy sources, regulate domestic energy supply and consumption, and ensure domestic energy security.

From a micro perspective, first of all, the indices is an important reference for corporate transactions, negotiations and business strategies.

The coal and coke price indices can be used as an important reference for price negotiation in spot transactions between the supply and demand parties and when signing long-term contracts. Using the coal and coke price indices as a reference, it is easier to establish a price that can be accepted by both the supply and demand parties, which helps to improve negotiation efficiency and establish long-term stable supply relationship.



## **Governance of the Mysteel Coal and Coke Indices**

To ensure that the Mysteel Coal and Coke indices are constructed, maintained and operated to the highest standards, the administrator of the Mysteel Indices, Shanghai Ganglian E-Commerce Holdings Co, Ltd., ("Shanghai Ganglian" or "the administrator", herein known as "Mysteel") employs a robust governance framework to manage the indices, approve new indices and approve changes to the methodologies of existing indices.

#### Mysteel Index Management Committee

The Mysteel Index Management Committee is responsible for the oversight of all aspects relating to the provision of the indices administered by Shanghai Ganglian E-Commerce Holdings Co., Ltd. Its members are drawn from Shanghai Ganglian management and staff. The Committee looks to ensure that the Indices continually reflect market change, and keeps their methodology under constant review in order to meet changing needs of the metallurgical coke market.

The Index Management Committee uses sophisticated auditing and oversight mechanisms to ensure that the calculation of the indices is undertaken strictly according to the index methodology.

The membership of the Committee and its terms of reference are approved by Shanghai Ganglian's Information Management Committee. When considering the Committee's membership, the Information Management Committee is required to ensure the Committee has the expertise and skills required to fulfil its role.

#### Mysteel Index Management Committee

Mysteel Index Management Committee (MIMC) is responsible for supervising all aspects related to the provision of the indices. The indices are managed by Shanghai Ganglian E-Commerce Co., Ltd. The members of MIMC come from the management and ordinary employees of the Mysteel. The committee hopes to ensure that the indices continue to reflect market changes, and will constantly review its methods to meet the changing needs of the coal and coke markets.

MIMC uses sophisticated auditing and supervision mechanisms to ensure that index calculations are carried out in strict accordance with the index methods.

The membership of MIMC and its terms of reference are approved by Mysteel Information Management Committee. When selecting members of MIMC, Mysteel Information Management Committee needs to carefully consider to ensure that the members of MIMC have the professional knowledge and skills required to perform its duties.

#### Index Calculation Responsibility

The daily management of the Mysteel index is handled by the Mysteel information team and the Mysteel index team. The information team and the index team are responsible for data collection and index calculation respectively.



#### **Negotiation Process**

MIMC shall evaluate the potential impact of major changes or suspension of the indices on users and stakeholders, and if the situation permits and is consistent with the nature of the indices, it may arrange for surveys of users and stakeholders to collect feedback. Normally, the investigation of stakeholders will be decided after MIMC consults with the Mysteel Index Advisory Group (MIAG), and the scope and duration of the investigation will also be decided together. In addition, any user or stakeholder is welcome to provide suggestions for modification of the coal price index methodology. You can send an email to MIMC (imc@mysteel.com) or send an email to the secretary of Mysteel Index Management Committee (secretary\_imc@ mysteel.com).

#### Ongoing Review of Submitters

Submitters to the Mysteel Indices are required to accept a code of conduct and to sign an agreement with Mysteel specifying each party's responsibilities.

Mysteel routinely reviews the companies involved in submitting data for use in the Mysteel Indices, ensure the suitability and reliability of the data Mysteel uses to compile the index. These reviews ensure the suitability and reliability of the data Mysteel uses for index compilation. These reviews are conducted on a regular basis, and may take into consideration an array of issues including, but not limited to, whether they have any direct or indirect conflicts of interest with Mysteel or Mysteel's staff, their credit rating, and both operational and logistical issues.

Reviews consider both individual submissions and each submitter's submission history.

Mysteel does not disclose the nature, scope or results of its routine reviews of submitters, other than as required by regulators or relevant market supervisory bodies.

#### General

Mysteel attaches great importance to confidentiality, and all employees must strictly abide by confidentiality rules, and never disclose any index compilation-related information, whether regarding index values, data or customers, unless required to by law. Mysteel strictly prohibits team employees from participating in transactions, offers, or bids as individuals or on behalf of market participants. They are also not permitted to provide market participants with free subscriptions or any other benefits in exchange for price or market information. A specific conflict of interest declaration is required annually by the Index Team employees, declaring that they have not benefited from non-public information.

Mysteel attaches great importance to the training of index team members to ensure that they have the skills, knowledge and experience necessary to perform their specific responsibilities. Mysteel provides index team employees with various irregular and regular training, and strictly standardizes the training content for employees, from probation to confirmation, to ensure that they understand and adhere to internal procedures and methodologies.



## Introduction to Coal and Coke Price indices

#### Mysteel Metallurgical Coke Index

The Mysteel Metallurgical Coke Index (MCDEX) represents transaction prices between coking plants, traders and steel mills in the spot metallurgical coke market. Sources of information used in calculating these indices include transaction prices between coking plants, traders and steel mills. The MCDEX is mainly divided into the Mysteel Metallurgical Coke Portside Spot Index (MCPDEX), the Mysteel Metallurgical Coke Regional Spot Index (MCRDEX) and Mysteel Metallurgical Coke Import and Export Prices.

#### Mysteel Metallurgical Coke Port Spot Index

The Mysteel Metallurgical Coke Port Spot Index reflects the spot prices of domestic portside market in RMB and represents the tradable prices between domestic coking plants, traders and steel mills. Mysteel collects spot prices from the following 7 metallurgical coke ports: Rizhao port, Qingdao port, Lianyungang port and Tianjin port in North China, as well as Fuzhou port, Yangjiang port, and Fangchenggang port in South China. The sample of the indices include transaction prices among coking plants, traders and steel mills. In addition, on the basis of the spot price index of the aforementioned ports (FOT) and according to the portside inventory structure and current status, we increased Rizhao Port Metallurgical Coke Spot Index (Ex-Warehouse) and Qingdao Port Metallurgical Coke Spot Index (Ex-Warehouse). The indices' price unit is in Yuan/wmt. The smallest price fluctuation unit is Yuan 10/tonne, and the minimum transaction volume is 2,000 tonnes.

Mysteel Metallurgical Coke Port Spot Index includes:

Rizhao Port Metallurgical Coke Index (Ex-Warehouse)

Rizhao Port Metallurgical Coke Index (FOT)

Qingdao Port Metallurgical Coke Index (Ex-Warehouse)

Qingdao Port Metallurgical Coke Index (FOT)

Tianjin Port Metallurgical Coke Index (FOT)

Lianyuangang Port Metallurgical Coke Index (FOT)

South China Fuzhou Port Metallurgical Coke Index

South China Yangjiang Port Metallurgical Coke Index

South China Fangchenggang Port Metallurgical Coke Index

In addition to the Lianyungang Metallurgical Coke Index (FOT) includes the first-grade metallurgical coke sub-index, and the Rizhao Port Metallurgical Coke Index (FOT) and the South China Yangjiang Port Metallurgical Coke Index include the



second-grade, quasi-first grade, and first-grade metallurgical coke sub-index, and the South China Fuzhou Port Metallurgical Coke Index includes the quasi-first grade metallurgical coke sub-index, all other indices include the quasi-first grade and first-grade metallurgical coke sub-index.

#### Mysteel Metallurgical Coke Regional Spot Index

Mysteel Metallurgical Coke Regional Spot Index (MCRDEX) reflects the spot prices in RMB in various regions, and represents the tradable prices between domestic coking plants, traders and steel mills. Samples of the index include deals and quoted prices among coking plants, traders and steel mills. In addition to the index, prices of mainstream metallurgical coke varieties in the market are also published daily. The unit of the index price is Yuan/tonne, including the 13% VAT, upon arrival at the factory. The smallest price fluctuation unit is Yuan 10/tonne, and the minimum transaction volume is 2,000 tonnes.

The Mysteel Metallurgical Coke Spot Index includes:

Mysteel Shandong Metallurgical Coke Regional Spot Index which includes: quasi-first grade wet-quenching and dry-quenching two sub-index.

Mysteel Hebei Metallurgical Coke Regional Spot Index which includes three sub-indices: Tangshan quasi-first grade, first grade and Hanxing quasi-first grade.

#### Mysteel Metallurgical Coke Import and Export Prices

Mysteel Metallurgical Coke Import and Export Prices (MCIEDEX) reflect the export prices of domestic metallurgical coke and import prices of foreign metallurgical coke in RMB, and represent the tradable prices between domestic and overseas coking plants, traders and steel mills. Samples of the index include deals and quoted prices among coking plants, traders and steel mills. The unit of the index prices are \$/tonne, with on FOB basis for export prices and on CFR basis for import prices. The smallest price fluctuation unit is \$ 1 /tonne, and the minimum transaction volume is 10,000 tonnes.

The Mysteel Metallurgical Coke Import and Export Prices include:

Mysteel Metallurgical Coke Export Price which includes prices of first grade metallurgical coke (CSR 62%) and first grade metallurgical coke (CSR 65).

Mysteel Metallurgical Coke Import Price includes five prices for first grade metallurgical coke imported from Japan, South Korea and Australia, and for quasi-first grade metallurgical coke imported from Russia and Poland.

#### Mysteel Coal Spot Index

The Mysteel Coal Spot Index (MCSDEX) represents transaction prices among coal miners, traders, coking plants steel mills and power plants in the spot coal market. Sources of information used in calculating these indices include transaction prices between coal miners, traders, coking plants steel mills and power plants. The MCSDEX is mainly divided into Mysteel Domestic Coking Coal Spot Index (MyCCpic), Mysteel Domestic Thermal Coal Spot Index (MyTCpic), Mysteel Coking Coal Seaborne Spot Index (MCCSDEX) and Mysteel PCI Seaborne Spot Index (MSPDEX).



## Mysteel Domestic Coking Coal Spot Index and Market Prices

The Mysteel Domestic Coking Coal Spot Index (MyCCpic) represents transaction prices among coal miners, traders, coking plants and steel mills in the domestic coking coal spot market. Sources of information used in calculating these indices include transaction prices, offer prices and bid prices between coal miners, traders, coking plants and steel mills. Mysteel has already published Low Sulfur Coking Coal Spot Index, Medium Sulfur Coking Coal Spot Index, High Sulfur Coking Coal Spot Index, High Sulfur Coking Coal Spot Index, High Sulfur Fat Coal Spot Index, 1/3 Coking Coal Spot Index, Lean Coal Spot Index and Gas Coal Spot Index. Mysteel is also publishing Mining Region Coking Coal Index, such as Yan'an Market Gas Coal Index. In addition to the indices, prices of mainstream coking coal brands that are actively traded in the market are also announced daily. The scope for sample prices used in calculating the index is limited in a natural day. The unit is RMB/wmt and the smallest floating price unit is RMB 0.1/wmt. The minimum transaction volume is 3,000.0 tonnes. The transactions are concluded on cash in RMB.

Mysteel Domestic Coking Coal Spot Index (MyCCpic) includes:

Mysteel Composite Domestic Coking Coal Spot Index

Low Sulfur Coking Coal Spot Index

Medium Sulfur Coking Coal Spot Index

High Sulfur Coking Coal Spot Index

High Sulfur Fat Coal Spot Index

1/3 Coking Coal Spot Index

Lean Coal Spot Index

Gas Coal Spot Index

Yan'an Market Gas Coal Index

Mysteel Domestic Coking Coal Spot Prices include:

Linfen Coking Coal Prices

Lyliang Coking Coal Prices

Changzhi Coking Coal Prices

Jinzhong Coking Coal Prices

Taiyuan Coking Coal Prices

Xinzhou Coking Coal Prices

Yan'an Coking Coal Prices



### Mysteel Domestic Thermal Coal Spot Index and Market Prices

Mysteel Domestic Thermal Coal Spot Index (MyTCpic) represents the tradable price among domestic miners, traders, power plants and other end users in the thermal coal spot market. The information sources used in calculating these indices include transaction prices among end users such as domestic coal miners, traders, and power plants. The domestic spot market price of Mysteel thermal coal mainly includes the markets and brands prices of the places of origin. Specifically, there are Zhungeerqi Market Spot Thermal Coal Price, Zhungeerqi Market Thermal Coal Brand Price, and Shenmu Market Thermal Coal Brand Price. Mysteel will launch thermal coal prices and brand prices in other major markets. The sample collection price of this index is based on a daily basis, the index price unit is Yuan/tonne, the transaction method is RMB cash settlement, the smallest price fluctuation unit is Yuan 1.0/ton, and the minimum transaction volume is 1000.0 tonnes.

Mysteel Domestic Thermal Coal Spot Index (MyTCpic) includes:

Zhungeerqi Market Spot Thermal Coal Price

Zhungeerqi Market Thermal Coal Brand Price

Shenmu Market Thermal Coal Brand Price

#### Mysteel Coking Coal Seaborne Spot Index and Market Prices

The Mysteel Coking Coal Seaborne Spot Index (MCCSDEX) reflects the spot price in US dollars that has not yet arrived at Chinese ports, and represents the price of transactions among overseas mines, traders, coking plants and steel mills. The sample of the index includes mines' tenders, various bid negotiations, and transactions and quoted prices among overseas mines, traders, coking plants, and steel mills. In addition to the price index, prices of major miners' coking coal brands that are actively traded on the market are also published daily. The unit of the index is \$/wet tonne, the smallest price fluctuation unit is \$ 0.05/wet tonne, and the minimum trading volume is 10000.0 tonnes.

Mysteel Coking Coal Seaborne Spot Index:

- PLV Seaborne Spot Index
- PMV Seaborne Spot Index
- HCC 64 mid Seaborne Spot Index
- Semi-soft Seaborne Spot Index

Mysteel Coking Coal Seaborne Brand Spot Prices:

- Peakdowns Seaborne Spot Price
- Saraji Seaborne Spot Price
- Peadownsnorth Seaborne Spot Price



- Goonyella Seaborne Spot Price
- LV Seaborne Spot Price
- Ravensworth Seaborne Spot Price
- K4 Seaborne Spot Price
- Elkview Seaborne Spot Price

#### Mysteel PCI Seaborne Spot Index

The Mysteel PCI Seaborne Spot Index (MSPDEX) reflects spot prices seaborne PCI that have not yet arrived at Chinese ports and are priced in US dollars. It represents tradable prices among mines, traders, coking plants and steel mills. Samples of the index include tenders for mines, various types of bids, and transactional and inquired prices among mines, traders, coking plants and steel mills. In addition to the index, prices of mainstream PCI brands that are actively traded in the market are also published daily. The unit of the index is \$/wmt, the smallest price fluctuation unit is \$0.05/wet tonne, and the minimum trading volume is 10000.0 tonnes.

Mysteel PCI Seaborne Spot Index:

- Low Vol PCI Australia Spot Index
- Mid Tier PCI Australia Spot Index
- Low Vol PCI Russia Spot Index

Mysteel PCI Seaborne Brand Spot Prices:

- Coppabella Seaborne Spot Price
- South Walker Creek Seaborne Spot Price
- Jellinbah Seaborne Spot Price
- Mechel Seaborne Spot Price
- SIB Seaborne Spot Price

## **Data Submission and Collection**

#### Sample data source

The information collected by Mysteel comes from transaction and inquiry information submitted by domestic and foreign coal mines, traders and end users. In addition, as an internationally renowned price reporting agency (referred to as PRA), Mysteel also



receive detailed information on their transactions in the spot coal and coke markets and incorporated the information into the calculation sample.

At the same time, based on the Mysteel price collection level, Mysteel also collects transaction and inquiries information from mainstream coal and coke spot trading platforms, and collects transaction and inquiry information from other market participants. However, Mysteel will only use this price information when it is confirmed by at least one party that has participated in the transaction, inquiry and offer, and the purpose of the transaction is also needed be confirmed.

#### Methods of Sample Collection and Collection Periods

Mysteel accepts real-time information provided for publication across a wide variety of media platforms. Methods of sample collection include, but are not limited to:

- 1. Telephone (recorded phone lines)
- 2. Email
- 3. Other instant-communication tools, such as Wechat, Dingding

#### **Submission Types**

- 1. Transactions that are open to the market
- 2. Public transactions sourced from market participants
- 3. Firm bids that are open to the market
- 4. Firm offers that are open to the market
- 5. Tradable prices sourced from market participants
- 6. Other data that are relevant to the coal and coke prices, such as supply and demand fundamentals or other factors affecting the coal and coke prices

#### Submission Detail

Mysteel strictly controls the submission and collection process, and only considers transactions, offers and inquiries that follow standard contract terms. Mysteel not only collects the submitted transaction price, but also other important additional information, including payment, logistics and final product delivery. If necessary, Mysteel can require the submitter to provide relevant documents to judge the performance of the contract and verify the validity of the data.

Mysteel uses the transaction settlement price to compile the Mysteel coal coke price index. All repeated and tradeable sample prices are included in Mysteel's submission storage system.



#### Confirmation

Mysteel hopes to collect as much data as possible, including transactions, offers, inquiries and chemical specifications of samples. Mysteel confirms and analyzes the submitted data as much as possible, and encourages all market participants to become the submitters of the Mysteel price index, because more extensive data can improve the accuracy of the price index.

Mysteel's sample collector aims to collect comprehensive information related to coal prices, including transaction activities, final prices, parties to the transaction, origin of goods, port of delivery, quantity, contract terms and delivery time, etc. The sample collectors are trained to judge the authenticity of the submissions received.

Mysteel will verify the details of each transaction, inquiry and offer, including product type, chemical specifications, origin, quantity, price, delivery date and delivery port to ensure the authenticity of each price index sample. The submitted content comes from the market and is properly recorded in detail to ensure its high quality and reliability.

Submissions received that do not fully meet the requirements set by Mysteel cannot be included in the calculation of the price index.

#### Recordkeeping

Regardless of the collection channel used, telephone, email, or Internet-based instant messaging tool, Mysteel will archive and record all communications with the submitter, and the retention period should not be less than 3 years, so that all submitted information used in the price index can be used go back to the original record.

The submission is stored in Mysteel's secure storage system to ensure the confidentiality of the data and prevent improper use of the data by parties not participating in the price index calculation process.

#### **Index Calculation**

Mysteel's sample data collection time is 24 hours in a roll. The collection time of all samples used for price index calculation is from 17:01 on the day before the release day of the price index to 17:00 on the ongoing release day. The data collected after 17:00 will be included in the calculation of the next price index release day.

#### Sample Screening

The Mysteel portside group undertakes a preliminary screening of all collected submissions. In addition to checking the basic information of each submission, such as quantity, brand, portside and price, Mysteel also confirms the details with at least one party regarding the reported transaction, to ensure the sample's authenticity.

Submissions that pass the preliminary screening are divided into three groups according to their sources: transactions, bids and offers.



#### Sample Normalization

Mysteel standardizes samples based on chemical specifications. When chemical indicators such as ash (A), sulfur (S), and Coke Strength after Reaction (CSR) included in the sample are beyond the standard range of the Mysteel index, the sample will be excluded from the standardization process.

Mysteel has set the standard value of the chemical specifications of various types of coal, and based on the information or contract information published by coal mines, coking plants and steel mills, combined with market information, and in accordance with the needs of market changes, the standard values of these specifications will be adjusted at least every six months.

Comparing with the standardized price of a submission in a category with submissions in other standardized categories, if there is an obvious abnormality, Mysteel will reconfirm the details of the sample. If the submitted data is incomplete, opaque, or the two parties have disagreements, and the standardized price significantly deviates from the market level (that is, it is not within two standard deviations of the data), the sample will be removed. For details on the standardization process, see <a href="Appendix B Standardization Process Description">Appendix B Standardization Process Description</a>.

Once confirmed to be valid, the samples will be used for index calculation.

#### Calculation

Mysteel aims to provide the market with a fair price that accurately tracks daily price changes. Therefore, if the data submitted are sufficient, the final value of each index will be a volume-weighted average of all the standardized trading samples. The Mysteel team will prioritize higher tier data based on the Mysteel data tier standard.

If the number of deals submitted for a particular index is insufficient, Mysteel will use data on available prices, enquiries and offers. For specific situations and calculation formulas, please refer to <a href="Appendix D: Mysteel Extreme Events Situation Table">Appendix D: Mysteel Extreme Events Situation Table</a>.

In the event of insufficient data submissions, Mysteel reserve the right to use expert judgment, including reference to other market information, such as supply and demand fundamentals or other factors affecting coal coke prices, etc.

#### **Index Publication**

Mysteel will release the Mysteel Index on the Mysteel Chinese and English website, Mysteel Chinese and English Index Daily, SMS and mobile application at 17:30 after the collection of samples on each working day.

The release time may be affected by public holidays. As long as it is a national working day, the index will be released on time.

The release time may be affected by public holidays. The price index will be released normally except for Chinese statutory holidays.

The release time may also be affected by various emergencies and force majeure, such as power outages, natural disasters and terrorist activities. If this happens, Mysteel will try its best to make an announcement as soon as possible.



#### **Corrections**

If an error is identified, whether caused by an incorrect submission or a calculation error, Mysteel will promptly issue a public notice to modify the erroneous index value.

#### **Review**

In order to ensure that the overall internal operation of the Mysteel Coal Coke Index is accurate and orderly, and the index products and services published externally are accurate, the Mysteel Coal Coke Index team has developed the following internal audit processes: mainly divided into calculation, index release, daily report release, etc. The review process must be completed by senior staff.

## **Requests for Data Clarifications**

Mysteel aims at all times to provide the highest quality service to its customers. Customers may ask questions about Mysteel's sample collection methods, calculation methods, normalization processes, and more.

If market participants require additional information, such as a detailed description of data or of calculation methods, please email miodex@mysteel.com.

## **Complaints**

Customers or stakeholders wishing to complain about an aspect of Mysteel's provision of the Mysteel Indices may do so. Full detail on how Mysteel handles complaints can be found in Mysteel's Complaints Policy. Both this and a Disclosure to Complainants are available by emailing <a href="mailto:complaints@mysteel.com">complaints@mysteel.com</a>



# Appendix A: Key Index Chemical Specifications Used in Normalization

Sheet 1: Mysteel Metallurgical Coke Index

| Туре   | Name  | Typical Value                             | Quantity (T) | Granularity  | Base port/place                                 | Payment    | Unit   |
|--------|---|---|--------------|--|---|------------|--------|
| Port   | Rizhao Port Metallurgical Coke Index (Ex-Warehouse)     |   | ≥2000.0      | 40-80mm≥90%  | Rizhao port                                     | Cash       | Yuan/t |
| Port   | Rizhao Port Metallurgical Coke Index (FOT)              |   | ≥2000.0      | The highest 90% of the cargo size is not less than 40-80mm | Rizhao port                                     | Acceptance | Yuan/t |
| Port   | Qingdao Port Metallurgical Coke Index (Ex-Warehouse)    |   | ≥2000.0      | The highest 90% of the cargo size is not less than 40-80mm | Qingdao port                                    | Transfer   | Yuan/t |
| Port   | Qingdao Port Metallurgical Coke Index (FOT)             | Tier 2: A13.5%, S0.8%,                    | ≥2000.0      | The highest 90% of the cargo size is not less than 40-80mm | Qingdao port                                    | Acceptance | Yuan/t |
| Port   | Tianjin Port Metallurgical Coke Index (FOT)             | CSR55%, MT7%;  Quasi tier 1: A13%, S0.7%, | ≥2000.0      | The highest 90% of the cargo size is not less than 40-80mm | Tianjin port                                    | Acceptance | Yuan/t |
| Port   | Lianyungang Metallurgical Coke (ship price) Price Index | CSR60%, MT7%; Tier 1: A12.5%,             | ≥2000.0      | The highest 90% of the cargo size is not less than 40-80mm | Lianyun port                                    | Acceptance | Yuan/t |
| Region | South China Port Metallurgical Coke Price Index         | S0.65%,CSR65%, MT7%                       | ≥2000.0      | The highest 90% of the cargo size is not less than 40-80mm | Fuzhoupport, Yangjiang port, Fangchenggang port | Acceptance | Yuan/t |
| Region | Shandong Metallurgical Coke Price Index                 |   | ≥2000.0      | The highest 90% of the cargo size is not less than 40-80mm | Shandong  | Acceptance | Yuan/t |
| Region | Hebei Metallurgical Coke Price Index                    |   | ≥2000.0      | The highest 90% of the cargo size is not less than 40-80mm | Hebei   | Acceptance | Yuan/t |

Note: Port Metallurgical Coke with Ex-Warehouse is moisture 7%, ash 8%; Port Metallurgical Coke with FOT is moisture 7%, ash 7%.



#### Sheet 2: Mysteel Imported Metallurgical Coke Spot Indices

| Nation    | Enterprise          | Name                                 | Specification                                    | Quantity (t) | Base port/place | Time           | Payment          | Unit |
|-----------|---------------------|--------------------------------------|--|--------------|-----------------|----------------|------------------|------|
| Japan     | Mitsubishi Chemical | Tier 1 Metallurgical Coke            | A<11.5, S<0.7, CSR>65, MT5, Ash5%, SIZE25-90MM   | ≥1,0000.0    | East China port | Nest 3-45 days | Letter of Credit | \$/t |
| Korea     | POSCO               | Tier 1 Metallurgical Coke            | A<12.5, S<0.65, CSR>65, MT5, Ash5%, SIZE25-100MM | ≥1,0000.0    | East China port | Nest 3-45 days | Letter of Credit | \$/t |
| Russia    | Mechel              | Tier 1 Equivalent Metallurgical Coke | A<11.0, S<0.6, CSR>60, MT5, Ash5%, SIZE25-80MM   | ≥1,0000.0    | East China port | Nest 3-45 days | Letter of Credit | \$/t |
| Poland    | JSW                 | Tier 1 Equivalent Metallurgical Coke | A<10.5, S<0.6, CSR>62, MT3, Ash5%, SIZE25-80MM   | ≥1,0000.0    | East China port | Nest 3-45 days | Letter of Credit | \$/t |
| Australia | Bluescope           | Tier 1 Metallurgical Coke            | A<12.5, S<0.75, CSR>65, MT5, Ash5%, SIZE25-90MM  | ≥1,0000.0    | East China port | Nest 3-45 days | Letter of Credit | \$/t |

# Sheet 3: Mysteel Coking Coal Region Spot Index and Market Prices

| Specification     | Low Sulfur          | Medium Sulfur      | High Sulfur        | High Sulfur         | 1/3 Coking Coal      | Lean Coal           | Gas Coal            |
|-------------------|---------------------|--------------------|--------------------|---------------------|----------------------|---------------------|---------------------|
| A                 | Typical value: 10%  | Typical value: 10% | Typical value: 10% | Typical value:10%   | Typical value: 10.5% | Typical value: 10%  | Typical value: 8.5% |
| V                 | Typical value: 25%  | Typical value: 25% | Typical value: 25% | Typical value: 32%  | Typical value: 32%   | Typical value: 16%  | Typical value: 37%  |
| s                 | Typical value: 0.6% | Typical value:1.3% | Typical value: 2%  | Typical value: 1.8% | Typical value: 1.2%  | Typical value: 0.4% | Typical value: 0.8% |
| Coking Properties | Typical value: 80%  | Typical value: 80% | Typical value: 80% | Typical value: 90%  | Typical value: 85%   | Typical value: 50%  | Typical value: 75%  |
| МТ                | 8.0%                | 8.0%               | 8.0%               | 8.0%                | 8.0%                 | 8.0%                | 8.0%                |
| Qty               | ≥10,000.0           | ≥10,000.0          | ≥10,000.0          | ≥10,000.0           | ≥10,000.0            | ≥10,000.0           | ≥10,000.0           |
| Base port/place   | Shanxi              | Shanxi             | Shanxi             | Shanxi              | Shanxi               | Shanxi              | Shandong            |
| Unit              | Yuan/t              | Yuan/t             | Yuan/t             | Yuan/t              | Yuan/t               | Yuan/t              | Yuan/t              |



## Sheet 4: Mysteel Domestic Thermal Coal Spot Index and Market Prices

| Туре            | Specification                     | Payment | Tax          | Unit   | Qty     | Base Place |
|-----------------|-----------------------------------|---------|--------------|--------|---------|------------|
| Slack Coal      | Q5,000, S0.3%, MT19%, Size0-15mm  | Cash    | Tax Included | Yuan/t | ≥1000.0 | Zhungeerqi |
| Slack Coal      | Q5,000, S0.8%, MT13%, Size0-15mm  | Cash    | Tax Included | Yuan/t | ≥1000.0 | Zhungeerqi |
| Slack Coal      | Q5200, S0.3%, MT10%, Size0-13mm   | Cash    | Tax Included | Yuan/t | ≥1000.0 | Zhungeerqi |
| Lump Coal       | Q5,700, S0.4%, MT10%, Size30-80mm | Cash    | Tax Included | Yuan/t | ≥1000.0 | Zhungeerqi |
| Mixed Lump Coal | Q6,000,S0.6%,MT12%,Size3-80mm     | Cash    | Tax Included | Yuan/t | ≥1000.0 | Zhungeerqi |
| Slack Coal      | Q5,800, S0.3%, MT12%, Size0-15mm  | Cash    | Tax Included | Yuan/t | ≥1000.0 | Shenmu     |
| Slack Coal      | Q6,100, S0.3%, MT11%, Size0-15mm  | Cash    | Tax Included | Yuan/t | ≥1000.0 | Shenmu     |
| Slack Coal      | Q6,600, S0.3%, MT8%, Size30-80mm  | Cash    | Tax Included | Yuan/t | ≥1000.0 | Shenmu     |

## Sheet 5: Mysteel Coking Coal Seaborne Spot Indices

| Index      | Typical Specification                              | Quantity (t) | Size   | Base portside/Place | Time            | Payment          | Unit |
|------------|--|--------------|--------|---------------------|-----------------|------------------|------|
| PLV        | A10.5%, V21%, S0.6%, MT10%, P0.03%, CSN9%, CSR74%  | ≥10,000      | ≤0.5mm | Jingtang port       | Next 30-75 days | Letter of Credit | \$/t |
| PMV        | A10%, V22%, S0.6%, MT10.5%, P0.02%, CSN8%, CSR71%  | ≥10,000      | ≤0.5mm | Jingtang port       | Next 30-75 days | Letter of Credit | \$/t |
| HCC 64 Mid | A9%, V27%, S0.6%, MT9.5%, P0.05%, CSN7%, CSR64%    | ≥10,000      | ≤0.5mm | Jingtang port       | Next 30-75 days | Letter of Credit | \$/t |
| Semi-Soft  | A9%, V35%, S0.6%, MT9.5%, P0.025%, CSN5.5%, CSR35% | ≥10,000      | ≤0.5mm | Jingtang port       | Next 30-75 days | Letter of Credit | \$/t |



# Sheet 5: Mysteel PCI Seaborne Spot Indices

| Index              | Typical Specification                            | Quantity (t) | Size   | Base Port/Place | Time            | Payment          | Unit |
|--------------------|--|--------------|--------|-----------------|-----------------|------------------|------|
| Australia LV       | A7.0-12.0%,V9.0-17.0%,S0.3-0.6%,HGI70.0-84.0%    | ≥10,000      | ≤0.5mm | Jingtang port   | Next 30-75 days | Letter of Credit | \$/t |
| Australia Mid-Tier | A9.0-10.5%,V15.0-19.0%,S0.35-0.75%,HGI80.0-88.0% | ≥10,000      | ⊴0.5mm | Jingtang port   | Next 30-75 days | Letter of Credit | \$/t |
| Russian LV         | A9.0-11.0%,V10.0-12.0%,S0.3-0.4%,HGI60.0-80.0%   | ≥10,000      | ≤0.5mm | Jingtang port   | Next 30-75 days | Letter of Credit | \$/t |



# Appendix B: Detailed Description of the Standardization Process

#### Metallurgical Coke Standardization

#### Chemical Indicator Standardization

Mysteel reflects the effects of ash, sulfur, and post-reaction strength on the Mysteel index. It will standardize all samples according to the Mysteel chemical index reward and punishment standards. Metallurgical coke with ash content lower than 12.5 and higher than 13.5, sulfur content lower than 0.65 and higher than 0.75, and thermal reaction intensity lower than 50 and higher than 70 will not be directly used for the valuation of various varieties of indexes, because the index rise and fall outside this range is lacking linear relationship. However, it can be used as a reference indicator for overall price trends. Volatiles and other impurities, such as phosphorus, are also considered in the standardization process if they have a significant impact on value.

Reward and punishment value adjustment standards for every 0.1% A, 0.01% S, and 1% CSR in different ranges

A is in the range of 12.5-13.5% per 0.1% of A's value

S in the range of 0.65-0.75% per 0.01% of S value

CSR in the range of 50-70% value of 1% CSR

Standardization of ash content under the same conditions of sulfur content and thermal reaction intensity as the index specification:

Standardization result = price of goods + (actual ash content of goods-index ash content) \* 0.1% ash value

Example: 0.1% ash content of MCDEX-quasi-tier 1 metallurgical coke index is the value of 13% ash content announced by Mysteel

Sulfur standardization in the case where the ash and thermal reaction intensity are the same as the index specifications:

Standardization result = cargo price + (actual sulfur content of the cargo-index sulfur content) \* 0.01% sulfur value

Example: 0.01% sulfur content of MCDEX-quasi-tier 1 metallurgical coke index is 0.65% sulfur content announced by Mysteel

In the case of ash, sulfur content and index specifications are the same:

Standardization result = price of goods + (index strength content-actual l strength content of the goods) \* 1% strength value Example: 1% intensity of MCDEX-quasi-tier l metallurgical coke index is the value of 60% intensity announced by Mysteel.

## **Domestic Coking Coal Standardization**

Chemical Indicator Standardization



Mysteel reflects the effects of ash, sulfur, and post-reaction strength on the Mysteel index. It will standardize all samples according to the Mysteel chemical index reward and punishment standards. Metallurgical coke with ash content lower than 8 and higher than 12, sulfur content lower than 0.3 and higher than 2.8, thermal reaction intensity lower than 15 and higher than 37, and caking property lower than 40 and higher than 95 will not be directly used for the valuation of various varieties of indexes, because the index rise and fall outside this range is lacking linear relationship. However, it can be used as a reference indicator for overall price trends. Volatiles and other impurities, such as phosphorus, are also considered in the standardization process if they have a significant impact on value.

Reward and punishment value adjustment standards for every 0.1% A, 0.01% S, 0.1% V and 1% Gin different ranges

A is in the range of 8-12% per 0.1% of A's value

S in the range of 0.3-2.8% per 0.01% of S value

V in the range of 15-37% per 0.1% of V value

G in the range of 40-95% value of 1% G value

Standardization of ash content under the same conditions of sulfur content, volatiles and caking property as the index specification:

Standardization result = price of goods + (actual ash content of goods-index ash content) \* 0.1% ash value

Example: 0.1% ash content of MCDEX-quasi-tier 1 metallurgical coke index is the value of 10% ash content announced by Mysteel

Sulfur standardization in the case where the ash, volatiles and caking property are the same as the index specifications:

Standardization result = cargo price + (actual sulfur content of the cargo-index sulfur content) \* 0.01% sulfur value

Example: 0.01% sulfur content of MCDEX-quasi-tier 1 metallurgical coke index is 2% sulfur content announced by Mysteel

Volatiles standardization in the case where the ash, sulfur content and caking property are the same as the index specifications:

Standardization result = cargo price + (index volatiles-actual volatiles of the cargo) \* 0.1% volatile value

Example: 0.1% volatile content of MCDEX-quasi-tier 1 metallurgical coke index is 20% volatiles announced by Mysteel

In the case of caking property, sulfur content and index specifications are the same:

Standardization result = price of goods + (index caking property-actual l caking property of the goods) \* 1% caking property

Example: 1% caking property of MCDEX-quasi-tier 1 metallurgical coke index is the value of 60% caking property announced by Mysteel.

#### **Domestic Thermal Coal Standardization**

#### Chemical Indicator Standardization

Mysteel reflects the effects of ash, sulfur, and total moisture on the Mysteel index. It will standardize all samples according to the Mysteel chemical index reward and punishment standards. Thermal coal with calorific value lower than 5,000 and higher than 6,000, sulfur content lower than 0.3 and higher than 0.6, total moisture lower than 8 and higher than 15 will not be directly used for the valuation of various varieties of indexes, because the index rise and fall outside this range is lacking linear



relationship. However, it can be used as a reference indicator for overall price trends. Volatiles, as and other impurities, are also considered in the standardization process if they have a significant impact on value.

Reward and punishment value adjustment standards for every 1% Q, 0.01% S, 0.1% MT, 0.1% V and 0.1% A in different ranges

Q is in the range of 5,000-6,000 per 1% of Q value

S in the range of 0.3-0.6% per 0.01% of S value

MT in the range of 8-15% per 0.1% of MT value

V in the range of 20-35% value of 0.1% V value

A in the range of 5-15% value of 0.1% A value

Standardization of calorific value under the same conditions of sulfur content, total moisture, volatiles, and ash

Standardization result = price of goods + (actual calorific value of goods-index calorific value ) \* 1% calorific value

Example: 1% calorific value of MyTCpic thermal coal index is the CV 5,500 announced by Mysteel

Sulfur standardization in the case where the calorific value, total moisture, volatiles, and ash are the same as the index specifications:

Standardization result = cargo price + (actual sulfur content of the cargo-index sulfur content) \* 0.01% sulfur value

Example: 0.01% sulfur content of MyTCpic thermal coal index is 0.5% sulfur content announced by Mysteel

Ash standardization in the case where the calorific value, sulfur content, total moisture, and volatiles are the same as the index specifications:

Standardization result = cargo price + (index ash content-actual ash content of the cargo) \* 0.1% ash value

Example: 0.1% ash of MyTCpic thermal coal index is 10% ash announced by Mysteel

Volatiles standardization in the case where the calorific value, sulfur content, total moisture, and ash are the same as the index specifications:

Standardization result = cargo price + (index volatiles -actual volatiles of the cargo) \* 0.1% volatile value

Example: 0.1% ash of MyTCpic thermal coal index is 22% volatile value announced by Mysteel

In the case of total moisture, the calorific value, sulfur content, volatiles and ash are the same:

Standardization result = price of goods + (index total moisture-actual total moisture of the goods) \* 0.1% total moisture value

Example: 0.1% total moisture of MyTCpic thermal coal index is the value of 10% total moisture announced by Mysteel.

## Imported Coking Coal Standardization

#### Chemical Indicator Standardization

In order to reflect the effects of ash, volatiles, sulfur and intensity on the Mysteel index, Mysteel will chemically standardize all samples in accordance to the Mysteel chemical index reward and punishment standards. Imported coking coal with ash lower than



8 and higher than 10.5, sulfur lower than 0.4 and higher than 0.7, volatiles lower than 18.8 and higher than 35 and strength lower than 30 and higher than 70 will not be directly used for the valuation of various product indexes, because the indicators outside this range lack linear relationship. However, it can be used as a reference indicator for overall price trends. Volatiles and other impurities, such as phosphorus, are also considered in the standardization process if they have a significant impact on value.

Reward and punishment value adjustment standards for every 0.1% A, 0.01% S, and 1% CSR in different ranges

A is in the range of 8-10.5% per 0.1% of A's value

S in the range of 0.4-0.7% per 0.01% of S value

V in the range of 18.8-35% per 0.1% of V value

CSR in the range of 30-70% CSR value per 1%

Standardization of ash content under the same conditions of sulfur content, volatiles and thermal reaction intensity as the index specification:

Standardization result = price of goods + (actual ash content of goods-index ash content) \* 0.1% ash value

Example: 0.1% ash content of MCCDEX-hard coking coal PLV index is 8.0% ash value published by Mysteel

Sulfur standardization in the case where the ash, volatiles and thermal reaction intensity are the same as the index specifications:

Standardization result = cargo price + (actual sulfur content of the cargo-index sulfur content) \* 0.01% sulfur value

Example: 0.01% sulfur content of MCCDEX-hard coking coal PLV index is the value of 0.4% sulfur content announced by Mysteel

Volatiles standardization in the case where the ash, sulfur and thermal reaction intensity are the same as the index specifications:

Standardization result = cargo price + (actual volatiles of the cargo-index volatiles ) \* 0.1% volatiles

Example: 0.1% volatiles of MCCDEX-hard coking coal PLV index is the value of 18.8% volatiles announced by Mysteel

In the case of ash, sulfur content and index specifications are the same:

Standardization result = price of goods + (index strength content-actual strength content of the goods) \* 1% strength value Example: 1% strength of the MCCDEX-hard coking coal PLV index is the value of 60% strength announced by Mysteel

#### Imported PCI Standardization

#### Chemical Indicator Standardization

In order to reflect the effects of ash, volatiles, sulfur and grindability on the Mysteel index, Mysteel will chemically standardize all samples in accordance to the Mysteel chemical index reward and punishment standards. Imported PCI with ash lower than 7 and higher than 12, sulfur lower than 0.3 and higher than 0.75, volatiles lower than 9 and higher than 19 and grindability lower than 60 and higher than 88 will not be directly used for the valuation of various product indexes, because the indicators outside this range lack linear relationship. However, it can be used as a reference indicator for overall price trends. Volatiles and other impurities, such as phosphorus, are also considered in the standardization process if they have a significant impact on value.



Reward and punishment value adjustment standards for every 0.1% A, 0.01% S, and 1% HGI in different ranges

A is in the range of 7-12% per 0.1% of A's value

S in the range of 0.3-0.75% per 0.01% of S value

V in the range of 9-19% per 0.1% of V value

HGI in the range of 60-88% CSR value per 1%

Standardization of ash content under the same conditions of sulfur content, volatiles and HGI as the index specification:

Standardization result = price of goods + (actual ash content of goods-index ash content) \* 0.1% ash value

Example: 0.1% ash content of MSPDEX-PCI index is 10.5% ash value published by Mysteel

Sulfur standardization in the case where the ash, volatiles and HGI are the same as the index specifications:

Standardization result = cargo price + (actual sulfur content of the cargo-index sulfur content) \* 0.01% sulfur value

Example: 0.01% sulfur content of MSPDEX-PCI index is the value of 0.6% sulfur content announced by Mysteel

Volatiles standardization in the case where the ash, sulfur and HGI are the same as the index specifications:

Standardization result = cargo price + (actual volatiles of the cargo-index volatiles) \* 0.1% volatiles

Example: 0.1% volatiles of MSPDEX-PCI index is the value of 15% volatiles announced by Mysteel

In the case of ash, sulfur content and index specifications are the same:

Standardization result = price of goods + (index HGI-actual HGI of the goods) \* 1% strength value

Example: 1% strength of the MSPDEX-PCI index is the value of 60% strength announced by Mysteel



## **Appendix C: Glossary**

**MCDEX Index:** The full name is Mysteel Metallurgical Coke Index, which reflects the price level that can be traded between coking plants, steel mills and traders on the market that day. The MCDEX includes: Mysteel Metallurgical Coke Portside Spot Index and the Mysteel Metallurgical Coke Regional Spot Index, and the Mysteel Metallurgical Coke Import and Export Prices.

MCSDEX Index: The full name is Mysteel Coal Spot Price Index, which reflects the price level that can be traded between coking plants, steel mills and traders on the market that day. The index is divide into domestic coal spot index and brand prices and Mysteel coking coal seaborne spot index and brand prices, and includes Mysteel Domestic Coking Coal Spot Index, Mysteel Coking Coal Seaborne Spot Index and Mysteel PCI Seaborne Spot Index.

**MyTCpic Index:** The full name is Mysteel Thermal Coal Spot Price Index, which reflects the price level that can be traded between coking plants, steel mills and traders on the market that day.

Portside Spot: Freely traded goods at a portside.

Seaborne Spot: Goods that have not arrived at portside and can be freely traded in the market.

**DMT:** Abbreviation for dry metric ton. Dry ton, which is the weight after deducting moisture. Dry ton weight = wet ton weight / (1- moisture)

**WMT:** Abbreviation for wet metric ton. Wet ton (also called natural ton), relative to dry ton, is the weight without deducting moisture. Wet ton weight = dry ton weight \* (1- moisture)

**Sample:** The original meaning refers to a part of individuals who are actually observed or surveyed in a study is called a sample, and the entire research object is called a sample capacity. In this article, Mysteel collects data from major market participants such as coking plants, steel mills and traders in order to reflect the mainstream price trend of metallurgical coke in Rizhao portside.

**Inquiry:** It refers to the buyer or seller asks about the terms of the transaction in order to buy or sell a commodity. In the actual business of international trade, generally the buyer takes the initiative to send an inquiry to the seller.



**Offer:** It is the seller's initiative to provide the buyer with commodity information, or a reply to the inquiry. According to the buyer's letter, the seller makes an offer to the buyer, the contents of which may include the name of the goods, specifications, quantity, packaging conditions, price, payment method and delivery period.

**Settlement price:** The average of the repeatable and tradable market price samples collected during the collection time. Mysteel aims to reflect representative market prices, track market price changes throughout the day, and prioritize highly transparent data. High transparency means that after comprehensive consideration of the data, the sample information is complete and the sample provider's credit rating is high.

**FOT:** Refers to the price at which the goods arrive at the portside and are loaded onto the ship, including all costs before boarding, that is to say the seller loads the goods on the ship, but does not pay the transaction price of sea freight.

Tax-inclusive price: including 13% VAT, cash

**Ex-pit Price:** It refers to the price at the pit for the transaction, which generally does not include the costs other than the coal price. The published pit price is the price at the pit for the transaction between the buyer and the seller, which is the bare price, and also includes the coal sustainable development fund, mine conversion development fund withdrawal and mine environment restoration and management fund.

**Ex-warehouse price**: Also known as the port pick-up price, refers to the price of goods in the port terminal warehouse transaction.

**DDP**: The price at which the seller delivers the goods to the buyer, generally so that shipping costs and losses in transit are borne by the seller.

CIF: Cost and Freight, the price from the port of loading to the port of destination, excluding insurance.

FOB: Free On Board, the price at the designated port of shipment.

**Delayed Payment**: When buying goods with a bank acceptance bill or trade acceptance bill, the bank will discount or transfer the bill in exchange for cash, because the bill cannot be immediately converted into cash. The other part will add this fee to the normal price. Namely: acceptance price = normal price + discounted interest.

**Cash**: The price at which goods are bought and delivered. Generally refers to the price at which specific goods are bought in cash on the spot market, including the price of the goods themselves and the transaction and transportation costs.

**Letter of Credit**: A letter from a bank guaranteeing that a buyer's payment to a seller will be received on time and for the correct amount.

**Transaction Price Sub-Index:** The sub-index calculated according to the transaction sample that meets the requirements of the Mysteel sample and calculated according to the standardization process of Mysteel.

**Bid Sub-Index:** According to the bid samples that meet the requirements of the Mysteel sample, and the number of samples is not less than two, the sub-index calculated according to the standardization processes of Mysteel.

**Offer Sub-Index:** According to the offer samples that meet the requirements of the Mysteel sample, and the number of samples is not less than two, the sub-index calculated according to the standardization processes of Mysteel.



# **Appendix D: Extreme Events Situation Table**

| Number | Situation  | Price |   |          | Related<br>Market Index | Calculation<br>Formulas  |
|--------|--|-------|---|----------|-------------------------|--|
| 1      | Collection two or more transaction information that met the sample requirements of Mysteel.  | ,     |   |          |                         | Transaction Price<br>Sub-Index× 1  |
| 2      | Less than two transaction samples were collected to meet Mysteel's requirements, with inquiry samples and offer samples available    |       | V | <b>√</b> |                         | Transaction Price Sub-Index× Weight + Bid Sub-Index× Weight + Offer Sub-Index×Weight |
| 3      | None collection transaction information that met the sample requirements of Mysteel, with inquiry samples and offer samples avialble |       | √ | <b>V</b> |                         | Bid Sub-Index×<br>Weight + Offer<br>Sub-Index×Weight                                 |



| 4 | None collection transaction information that met the sample requirements of Mysteel or inquiry samples and offer samples   |  | $\sqrt{}$ | Related Market<br>Index              |
|---|--|--|-----------|--------------------------------------|
| 5 | In the events of a disaster, terrorist attack or irresistible events:  None collection transaction information that met the sample requirements of Mysteel or inquiry samples and offer.  There are no related market information. |  |           | Refer to the<br>previous day's price |

# **Appendix E: List of Submitters**

# Mysteel Metallurgical Coke Port Spot Index

| Rank | Company   | Business Type |
|------|---|---------------|
| 1    | Jidong Development Group Co., Ltd.              | Trader        |
| 2    | Zhi (Tianjin) International Trading Co., Ltd.   | Trader        |
| 3    | Zhejiang Products Metal Group Co., Ltd.         | Trader        |
| 4    | SINOCHEM INTERNATIONAL CORPORATION              | Trader        |
| 5    | Huaibei Mining Group Daxie Energy Chemical Ltd. | Trader        |
| 6    | CCS Supply Chain Management Co., Ltd.           | Trader        |
| 7    | Hangzhou relian group co., ltd                  | Trader        |
| 8    | Tianjin gengrong trading co., ltd               | Trader        |
| 9    | Sinoma Import and Export Co., Ltd.              | Trader        |



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|--|--|--------------|--|--|
| 10   | Xuyang South China Port Trading Department       | Trader       |  |  |
| 11   | Tianjin Huate Energy Import & Export Trading Co. | Trader       |  |  |
| 12   | Shandong Rong Hui International Trade Co.        | Trader       |  |  |
| 13   | Cokind Holding Co., Ltd.                         | Trader       |  |  |
| 14   | Shandong Tai Ying Kang International Trade Co.   | Trader       |  |  |
| 15   | Juye (Tianjin) International Trade Co.           | Trader       |  |  |
| 16   | China Airlines International Steel Trading Co.   | Trader       |  |  |
| 17   | China Minerals Co., Limited                      | Trader       |  |  |
| 18   | Tianjin Jinghai Tai Import & Export Trading Co.  | Trader       |  |  |
| 19   | Zhejiang Metals and Materials Company            | Trader       |  |  |
| 20   | Tianjin Yujiasheng International Trade Co.       | Trader       |  |  |
| 21   | Guangdong Guoxin Industry Holdings Co.           | Steel Mill   |  |  |
| 22   | Guangdong Taidu Steel Industry Co.               | Steel Mill   |  |  |
| 23   | Guangdong Xinxing Casting Pipe Co.               | Steel Mill   |  |  |
| 24   | Guangxi Shenglong Metallurgy Co.                 | Steel Mill   |  |  |
| 25   | Zhuhai Yueyufeng Steel Co.                       | Steel Mill   |  |  |
| 26   | Guangdong Guangqing Metal Technology Co.         | Steel Mill   |  |  |
| 27   | XIAMEN XINDECO LTD.                              | Trader       |  |  |
| 28   | Shanxi Pengfei Group Co.                         | Coking Plant |  |  |
| 29   | Shanxi Dongyi Fuli Chemical Co.                  | Coking Plant |  |  |
|  |  |              |  |  |



| 30 | Shanxi Dongyi Coal Electricity Aluminum Group Coal Chemical Co, | Coking Plant |
|----|---|--------------|
| 31 | Hoyu Group Co.  | Coking Plant |
| 32 | Shanxi Xiaxin Coal Coking Co.                                   | Coking Plant |
| 33 | Sunlight Coking Holdings.,Ltd.                                  | Coking Plant |
| 34 | Shandong Tiexiong Metallurgical Technology Co.                  | Coking Plant |
| 35 | Fujian Sanbao Steel Co.   | Steel Mill   |
| 36 | Fujian Luoyuan Minguang Iron and Steel Co.                      | Steel Mill   |
| 37 | Fujian Yixin Iron and Steel Co.                                 | Steel Mill   |
| 38 | Ningbo Iron & Steel Co.   | Steel Mill   |
| 39 | Quwo Minguang Coking Co.  | Coking Plant |



# Mysteel Domestic Coking Coal Spot Index

| Rank | Company  | Business Type |  |  |
|------|--|---------------|--|--|
| 1    | Shanxi Deguangyu Energy Group Co.                      | Wash Plant    |  |  |
| 2    | Shanxi China Coal Huajin Energy Co.                    | Coal Mine     |  |  |
| 3    | Shanxi Qinxin Energy Group Co.                         | Coal Mine     |  |  |
| 4    | Shanxi Puxian Hongyuan Coal Group Co.                  | Coal Mine     |  |  |
| 5    | Shanxi Huaining Coking Coal Co.                        | Coal Mine     |  |  |
| 6    | Shanxi Kaijia Energy Group Co.                         | Coal Mine     |  |  |
| 7    | Shougang Fushan Resources Group Co.                    | Coal Mine     |  |  |
| 8    | Shanxi Datuhe International Trade Co.                  | Coal Mine     |  |  |
| 9    | Shanxi Liliu Coking Coal Group Co.                     | Coal Mine     |  |  |
| 10   | Shanxi Liliu Group Liulin Company                      | Coal Mine     |  |  |
| 11   | Shanxi Tongzhou Coal and Coke Group                    | Coal Mine     |  |  |
| 12   | Taiyuan Terayang Industrial Group Co.                  | Coal Mine     |  |  |
| 13   | Shanxi China Resources Liansheng Energy Investment Co. | Coal Mine     |  |  |
| 14   | Pingyao Coal Chemistry Group Co., Ltd.  Wash Pla       |               |  |  |
| 15   | Shanxi Lu'an Group Luning Coal Industry Co.            | Coal Mine     |  |  |
| 16   | Shanxi Sanyuan Coal Industry Co.                       | Coal Mine     |  |  |
| 17   | Shanxi Changqin Coal & Coke Co. Coal Mi                |               |  |  |
| 18   | Shanxi Kangwei Group Co.                               | Coal Mine     |  |  |



#### Mysteel Coal and Coke Index Methodology| November 2020

| 19 | Li Yazhuang Coal Mine of Huozhou Coal and Electric Group Co. | Coal Mine |  |
|----|--|-----------|--|
| 20 | Shanxi Huashengrong Coal Mine Co.                            | Coal Mine |  |



# Mysteel Domestic Thermal Coal Spot Index

| Rank | Company             | Business Type |
|------|---------------------|---------------|
| 1    | Builiangou Mine     | Coal Mine     |
| 2    | Pingdingshan Mine   | Coal Mine     |
| 3    | Qingchunta Mine     | Coal Mine     |
| 4    | Huangling No.2 Mine | Coal Mine     |
| 5    | Nanliang Mine       | Coal Mine     |
| 6    | Yuanzigou Mine      | Coal Mine     |
| 7    | Canzigou Mine       | Coal Mine     |
| 8    | Lunde Mine          | Coal Mine     |
| 9    | Yangjiacun Mine     | Coal Mine     |
| 10   | Baopingwan Mine     | Coal Mine     |
| 11   | Yidong Mine         | Coal Mine     |
| 12   | Chaojialiang Mine   | Coal Mine     |
| 13   | Anshan Mine         | Coal Mine     |
| 14   | Manlailiang Mine    | Coal Mine     |
| 15   | Qianjin Mine        | Coal Mine     |
| 16   | Ulansetai Mine      | Coal Mine     |
| 17   | Fuyao Mine          | Coal Mine     |
| 18   | Hongmei Mine        | Coal Mine     |



#### Mysteel Coal and Coke Index Methodology| November 2020

| 19 | Hongxin Mine  | Coal Mine |
|----|---------------|-----------|
| 20 | Changtan Mine | Coal Mine |



# Mysteel Coking Coal Seaborne Spot Index

| Rank | Company   | Business Type |
|------|---|---------------|
| 1    | ВНР   | Mine          |
| 2    | Anglo   | Mine          |
| 3    | Glencore  | Mine          |
| 4    | Jellinbah   | Mine          |
| 5    | Guangxi Shenglong Metallurgical Co., Ltd                        | Steel Mill    |
| 6    | Ansteel Co., Ltd.   | Steel Mill    |
| 7    | Guangxi Liuzhou Iron and Steel Group Co.                        | Steel Mill    |
| 8    | SGIS Songshan Co.,Ltd.  | Steel Mill    |
| 9    | Tangshan Dafeng Coking Plant Co., Ltd                           | Coking Plant  |
| 10   | E-Commodities Holdings Limited                                  | Trader        |
| 11   | Sojitz Plastics (China) Limited                                 | Trader        |
| 12   | Xuyang International Trade Co.,Ltd.                             | Trader        |
| 13   | Shougang Group  | Steel Mill    |
| 14   | Jiangsu Shagang Group Co Ltd                                    | Steel Mill    |
| 15   | Qian'an Sinochem Coal Chemical Co.                              | Coking Plant  |
| 16   | Shandong Laigang Yongfeng Steel Corp.                           | Steel Mill    |
| 17   | Shandong Iron and Steel Group Rizhao<br>International Trade Co. | Steel Mill    |



| 18 | Ningbo Donghao Metallurgical Fuel Co. | Trader     |
|----|---------------------------------------|------------|
| 19 | Baoshan Iron & Steel Co.,Ltd.         | Steel Mill |
| 20 | Ningbo Iron & Steel Co., Ltd.         | Steel Mill |



# Mysteel PCI Seaborne Spot Index

| Rank | Company                                  | Business Type |
|------|--|---------------|
| 1    | Bright Ruby resources                    | Steel Mill    |
| 2    | Guangxi Shenglong Metallurgical Co., Ltd | Steel Mill    |
| 3    | Ansteel Co., Ltd.                        | Steel Mill    |
| 4    | Sibanthracite Group                      | Mine          |
| 5    | Guangxi Liuzhou Iron and Steel Group Co. | Steel Mill    |
| 6    | E-Commodities Holdings Limited           | Trader        |
| 7    | Xuyang International Trade Co.,Ltd.      | Trader        |
| 8    | Jellinbah                                | Mine          |
| 9    | ВНР                                      | Mine          |
| 10   | Anglo                                    | Mine          |
| 11   | Mechel                                   | Mine          |
| 12   | Shougang Group                           | Steel Mill    |
| 13   | Baosteel Group Corporation               | Trader        |
| 14   | Ningbo Iron & Steel Co., Ltd.            | Steel Mill    |
| 15   | Minmetals Yingkou Medium Plate Co.       | Steel Mill    |
| 16   | Xiamen International Trade Holdings Ltd. | Trader        |
| 17   | Ningbo Donghao Metallurgical Fuel Co.    | Trader        |
| 18   | Hebei Jinxi Iron & Steel Group Co., Ltd. | Steel Mill    |



#### Mysteel Coal and Coke Index Methodology| November 2020

| 19 | Zhuhai Yueyufeng Steel Co., Ltd | Steel Mill |  |
|----|---------------------------------|------------|--|
| 20 | Xiamen Xiangyu Co., Ltd         | Trader     |  |



# **Appendix F: Revisions and Updates**

| Version | Revision<br>Record | Revision<br>Date | Reviser     | Revision Content  |
|---------|--------------------|------------------|-------------|---|
| V 1.0   | Version 1          | 11/2019          | Lei Wanqing | Add the Mysteel Metallurgical Coke Index for Shandong, Hebei and South China. |
| V 1.1   | Version 2          | 12/2019          | Lei Wanqing | Add the Mysteel Seaborne Coking Coal Spot Index.                              |
| V1.2    | Version 3          | 4/2020           | Yang Zirui  | Add the Mysteel Seaborne PCI Spot Index.                                      |
| V1.3    | Version 4          | 4/22/ 2020       | Yang Zirui  | Add the Mysteel Domestic Coking Coal Spot Index.                              |
| V1.4    | Version 5          | 6/17/2020        | Yang Zirui  | Add the Mysteel Coal Spot Index.  |
| V1.5    | Version 6          | 7/20/2020        | Yang Zirui  | Add the Mysteel Linfen Coking Coal Spot Index.                                |
| V1.6    | Version 7          | 8/4/2020         | Yang Zirui  | Add the Mysteel Imported Metallurgical Coke Spot Index.                       |
| V1.7    | Version 8          | 9/8/2020         | Yang Zirui  | Add the Mysteel Lvliang, Changzhi Coking Coal Spot Index.                     |
| V1.8    | Version 9          | 11/17/2020       | Yang Zirui  | Add ash content about Port Metallurgical Coke Index In Appendix D             |
| V1.9    | Version 10         | 1/16/2021        | Yang Zirui  | Delete Mysteel Index Advisory Group   |
| V2.0    | Version 11         | 2/26/2021        | Yang Zirui  | Add the brand price of coking coal in Jinzhong, Taiyuan and Xinzhou areas.    |



| V2.1 | Version 12 | 4/212021  | Yang Zirui | Add Thermal Coal Spot Price Index and Coal Price in Zhungeer market.   |
|------|------------|-----------|------------|--|
| V2.2 | Version 13 | 5/26/2021 | Yang Zirui | Add coking coal price in Yan'an market.  |
| V2.3 | Version 14 | 6/10/2021 | Yang Zirui | The brand name of coking coal prices in Linfen, Changzhi, Lvliang, Jinzhong,  Xinzhou and Taiyuan areas will be officially renamed as market prices. |
| V2.4 | Version 15 | 7/29/2021 | Luo Lifang | Add the brand price of thermal coal in the market of Zhungeer and Shenmu.  |
| V2.5 | Version 16 | 9/13/2021 | Yang Zirui | Add the Yan'an Market Gas Coal Price Index.  |