

Daily Iron Ore Index Report

November 01, 2018

IRON ORE PORT STOCK INDEX (IOPI)

November 01 2018		FOT Qingdao (inc. 16% VAT), RMB/wet tonne							CFR Qingdao Equivalent (exc. 16% VAT), USD/dry tonne ¹						
Index	Fe Content	Price	Change	Change %	MTD	YTD ²	Low ²	High ²	Price	Change	Change %	MTD	YTD ²	Low ²	High ²
IOPI62	62% Fe Fines	601	-2	-0.3%	601	496	443	603	77.07	-0.29	-0.4%	77.07	66.31	75.83	77.89
IOPI58	58% Fe Fines	419	5	1.2%	419	351	304	419	52.59	0.66	1.3%	52.59	45.67	40.67	52.59
IOPI65	65% Fe Fines	771	-13	-1.7%	771	646	541	784	99.93	-1.78	-1.8%	99.93	87.54	96.35	101.71

IRON ORE SEABORNE INDEX (IOSI)

PLATFORM TRADES AND TENDERS

November 01 2018		CFR Qingdao, USD/dry tonne						
Index	Fe Content	Price	Change	Change %	MTD	YTD ³	Low ³	High ³
IOSI62	62% Fe Fines	75.25	-0.70	-0.9%	75.25	68.12	63.25	86.20
IOSI65	65% Fe Fines	98.75	-1.25	-1.3%	98.75	94.21	86.20	101.50

MARKET COMMENTARY

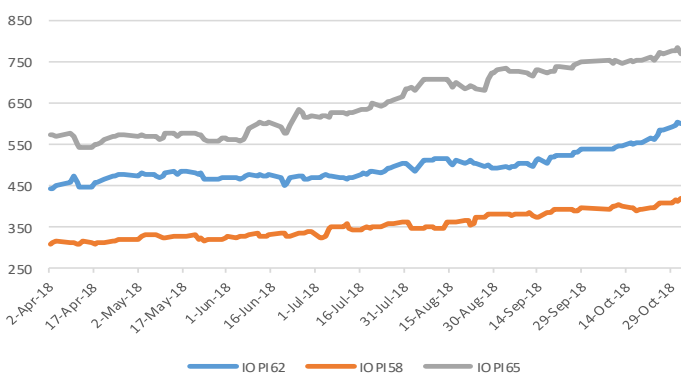
Though traders tried to hold firm on their offers, prices inched down today as mills sensed blood in the water. Production limits have been launched in Tangshan, in effect Oct.31-Nov.5, put in place due to the recent heavy pollution. Stage one production cuts for the heating season in Wuan, Hebei province will be carried out from Nov.1-Dec.31 and the second stage will start from Jan.1,2019-Mar.31, 2019. Mill demands for iron ore may decrease even though the production cuts are said to come under expectation. Some mills are currently looking to substitute PB fines given its higher price.

IRON ORE DOMESTIC CONCENTRATE SPOT PRICE ASSESSMENTS AND COMPOSITE INDEX

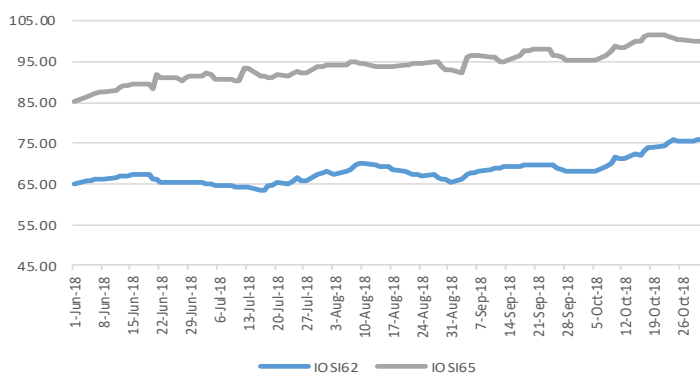
Week Ending October 26, 2018				RMB/tonne (excluding tax) ⁴				USD/tonne (excluding tax) ⁴			
Province	Region	Product	Basis	This week	Change %	Low ²	High ²	This week	Change %	Low ²	High ²
Hebei	Hanxing	66% Fe Concentrate	Dry	695	2.2%	579	695	100.19	4.8%	83.47	100.19
Hebei	Qian'an	65% Fe Concentrate	Dry	780	0.0%	630	780	112.44	-0.5%	90.82	112.44
Liaoning	Anshan	65% Fe Concentrate	Wet	545	0.0%	445	550	78.56	-0.5%	64.15	79.28
Shandong	Zibo	65% Fe Concentrate	Dry	775	0.0%	620	775	111.72	2.2%	89.38	111.72
Week Ending October 26, 2018				This week	Change %	Low ⁵	High ⁵				
China Mines Concentrate Composite Index RMB/WT				650.94	0.6%	534.50	650.94				

¹ Exchange rate applied: RMB/USD = 6.9670 ² Since March 1 ³ Since June 1 ⁴ Weekly exchange rate applied: RMB/USD 6.9208 ⁵ Last 12 months

IRON ORE PORT INDEX, FOT QINGDAO (RMB/WT)



IRON ORE SEABORNE INDEX, CFR QINGDAO (USD/DMT)



IRON ORE PORT STOCK INDEX MONTHLY, QUARTERLY AND YEAR-TO-DATE AVERAGES

November 01 2018		FOT Qingdao (inc. 16% VAT), RMB/wet tonne							CFR Qingdao Equivalent (exc. 16% VAT), USD/dry tonne ¹						
Index	Fe Content	July	August	September	October	MTD	QTD	YTD ²	July	August	September	October	MTD	QTD	YTD ²
IOPI62	62% Fe Fines	482	505	513	564	601	566	496	64.29	63.41	65.25	72.55	77.07	72.78	66.31
IOPI58	58% Fe Fines	349	363	385	401	419	402	351	44.14	44.86	45.84	50.47	52.59	50.59	45.67
IOPI65	65% Fe Fines	638	701	732	760	771	720	646	82.19	85.29	92.13	99.05	99.93	99.09	87.54

IRON ORE SEABORNE INDEX MONTHLY, QUARTERLY AND YEAR-TO-DATE AVERAGES

FREIGHT RATES

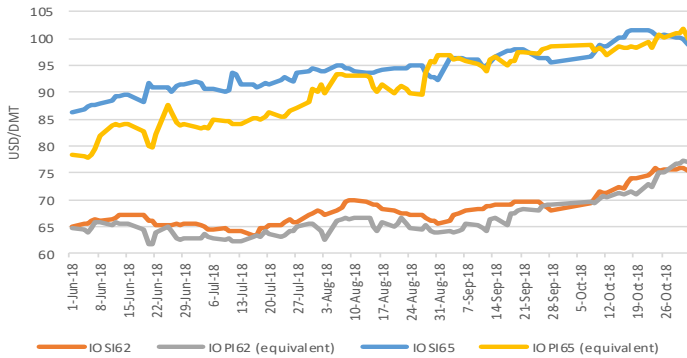
November 01 2018		CFR Qingdao, USD/dry tonne							October 31, 2018							
Index	Fe Content	July	August	September	October	MTD	QTD	YTD ³	Route		Designation	Change	Change %	Low ⁵	High ⁵	
IOSI62	62% Fe Fines	65.09	67.89	68.79	72.31	75.25	72.43	68.12	W. Australia - Qingdao		C5	8.61	-0.24	-2.67%	5.109	10.002
IOSI65	65% Fe Fines	91.90	94.04	96.48	98.97	98.75	98.96	94.21	Tubarao - Qingdao		C3	21.39	-0.22	-1.01%	12.705	24.76

Visit www.mmiprices.com for full index price histories and archive of daily reports

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IRON ORE INDEX COMPARISONS



CHINA DOMESTIC COMPOSITE MINES INDEX (RMB/Wet Tonne, including VAT)



IRON ORE BRAND SPOT PRICE ASSESSMENTS

November 01 2018	PORT STOCK INDEX (RMB/WT)			November 01 2018	SEABORNE INDEX (USD/DMT)		
	Price	Change	Diff to IOPI62		Price	Change	Diff to IOSI62
Roy Hill	578	-2	-23	Roy Hill	68.62	-0.70	-6.63
SIMEC Fines	526	-2	-75	SIMEC Fines	61.62	-0.70	-13.63
PB Fines	583	-3	-18	PB Fines	74.12	-0.70	-1.13
Newman Fines	602	-2	1	Newman Fines	76.61	-0.70	1.36
MAC Fines	569	-2	-32	MAC Fines	69.12	-0.70	-6.13
Jimblebar Blended Fines	535	-2	-66	Jimblebar Blended Fines	62.75	-0.70	-12.50
Carajas Fines	758	-12	157	Carajas Fines	96.59	-0.70	21.34
Brazilian SSF	604	-2	3	Brazilian SSF	78.06	-0.70	2.81
Brazilian Blend Fines	617	-2	16	Brazilian Blend Fines	80.06	-0.70	4.81
RTX Fines	508	-2	-93	RTX Fines	67.62	-0.70	-7.63

November 01 2018	PORT STOCK INDEX (RMB/WT)		
	Price	Change	Diff to IOPI58
SSF	375	9	-44
FMG Blended Fines	425	5	6
Robe River	404	4	-15
Western Fines	404	6	-15
Atlas Fines	384	10	-35
Yandi	480	8	61

IRON ORE INDEX NORMALISATION DIFFERENTIALS

Port Stock Index Product Differentials (RMB/wet tonne)				Seaborne Index Product Differentials (USD/dry tonne)			
	Applicable range	Value	Change		Applicable range	Value	Change
1% Fe	High Grade Fe 60 - 63%	12.00	0.00	1% Fe	High Grade Fe 60 - 63%	2.50	0.00
	High Grade Fe 63 - 64%	54.00	-3.00		High Grade Fe 63 - 64%	2.75	0.00
	High Grade Fe 64 - 65%	54.00	-3.00		High Grade Fe 64 - 65%	2.75	0.00
	High Grade Fe 65 - 65.5%	54.00	-3.00		High Grade Fe 65 - 65.5%	2.75	0.00
	Low Grade Fe	18.00	-2.00				
1% Alumina	High Fe Grade Al <2.25%	44.00	0.00	1% Alumina	High Fe Grade Al <2.25%	9.75	0.00
	High Fe Grade Al 2.25-4%	39.00	0.00		High Fe Grade Al 2.25-4%	0.00	0.00
	Low Fe Grade Al <2.25%	85.00	0.00				
	Low Fe Grade Al 2.25-4%	13.00	0.00				
1% Silica	High Fe Grade Si <4%	5.00	-2.00	1% Silica	High Fe Grade Si <4%	2.50	0.00
	High Fe Grade Si 4-6.5%	26.00	0.00		High Fe Grade Si 4 - 6.5%	3.75	0.00
	Low Fe Grade	5.00	-1.00				
0.01% Phosphorus	High Fe Grade 0.09%<P<0.115%	4.00	0.00	0.01% Phosphorus	High Fe Grade 0.09%<P<0.115%	0.50	0.00
	High Fe Grade 0.115%<P<0.15%	14.00	0.00		High Fe Grade 0.115%<P<0.15%	1.00	0.00
	Low Fe Grade 0.09%<P<0.1%	2.00	0.00				

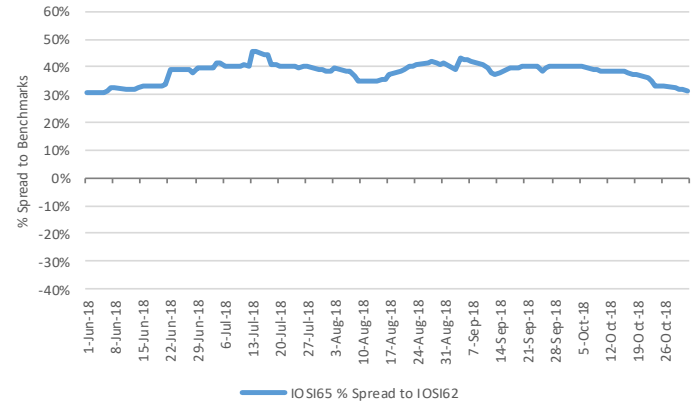
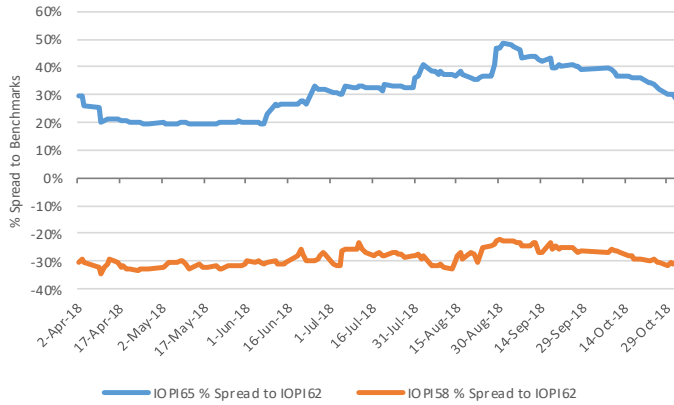
Port Stock Differentials to Qingdao Port (RMB/wet tonne)

Port	Value	Change	Port	Value	Change	Port	Value	Change	Port	Value	Change
Bayuquan	-25.00	15.00	Fangcheng	-5.00	0.00	Lanshan	0.00	0.00	Qingdao	0.00	0.00
Beilun	5.00	0.00	Jiangyin	-10.00	20.00	Lianyungang	0.00	0.00	Rizhao	0.00	0.00
Caofeidian	-15.00	0.00	Jingtang	-15.00	0.00	Majishan	0.00	0.00	Shekou	0.00	0.00
Dalian	-15.00	5.00	Lanqiao	0.00	0.00	Nantong	-10.00	20.00	Tianjin	-30.00	0.00

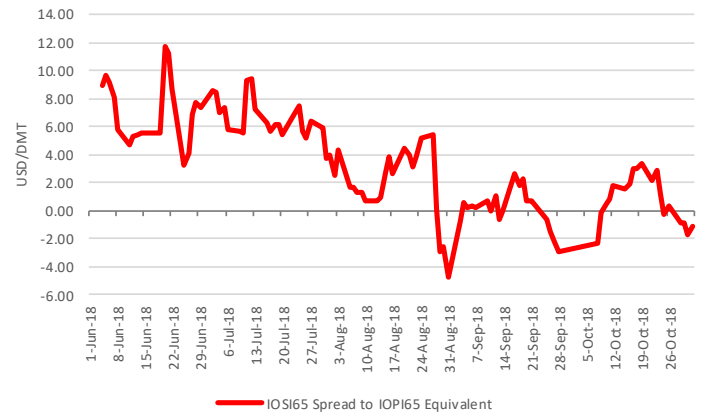
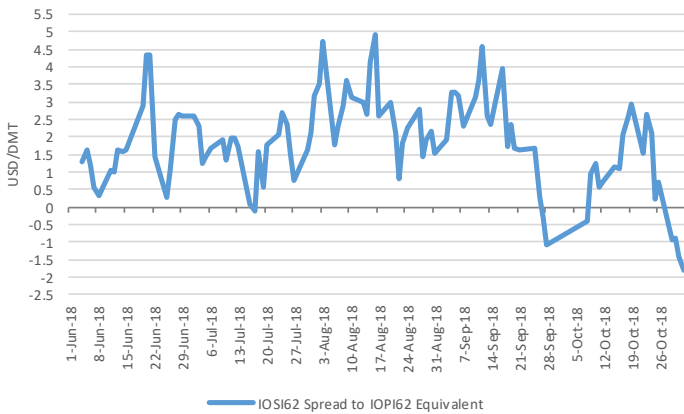
IRON ORE INDEX PREMIUMS/DISCOUNTS

November 01 2018	PORT STOCK INDEX (RMB/WT)	
Fe Content	Spread to IOPI62	% Spread to IOPI62
58% Fe Fines	-182	-30.28%
65% Fe Fines	170	28.29%

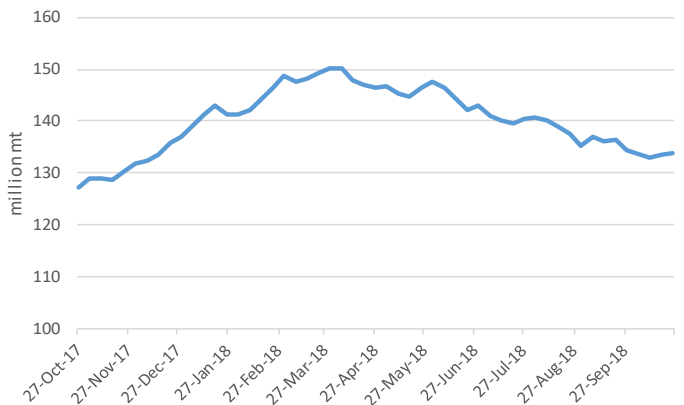
November 01 2018	SEABORNE INDEX (USD/DMT)	
Fe Content	Spread to IOSI62	% Spread to IOSI62
65% Fe Fines	23.50	31.23%



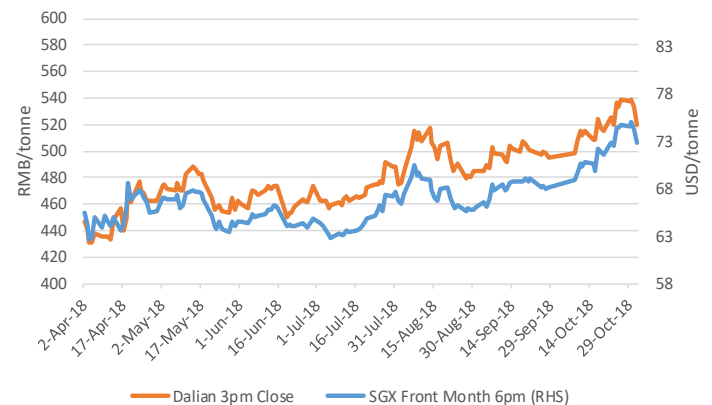
IRON ORE SEABORNE TO PORT STOCK SPREADS



TOTAL IRON ORE INVENTORIES AT CHINA PORTS



FUTURE TRADING—FRONT MONTH CLOSING PRICE



IRON ORE PORT INVENTORIES

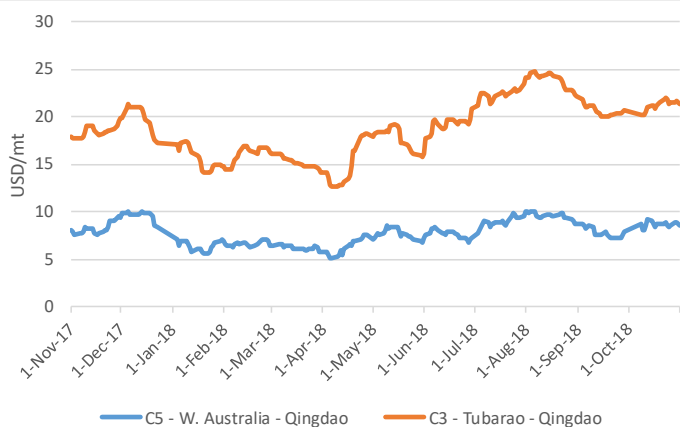
Week Ending October 26, 2018 (million tonnes)

Province	This week	Change %	Low ⁴	High ⁴
Jingtang	14.30	5.15%	13.47	19.00
Qingdao	18.00	0.00%	15.60	19.97
Caofeidian	18.60	-6.81%	16.70	25.30
Tianjin	9.30	3.79%	8.50	11.00
Rizhao	16.05	1.58%	13.16	19.00
Total (35 Ports)	133.81	0.21%	127.10	150.04

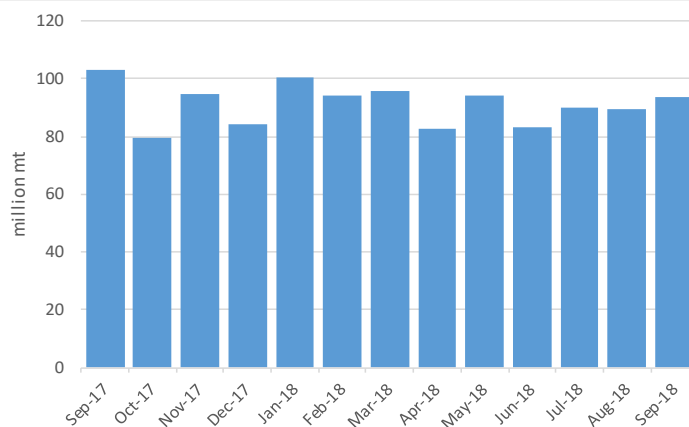
IRON ORE FUTURES CONTRACTS

Closing Date	DCE		SGX			
	01 Nov 3pm close	Change	Change %	01 Nov 6 pm	Change	Change %
Contract	11901			Nov'18		
Closing Price	519.5	-14.0	-2.62%	72.90	-1.35	-1.82%
Vol traded ('000 lots)	112.22	10.5	10.30%	12.31	7.91	179.81%
Open positions ('000 lots)	77.28	-2.1	-2.61%	106.71	3.28	3.17%
Day Low	519.5	-11.5	-2.17%	72.60	-1.14	-1.55%
Day High	533.5	-2.5	-0.47%	74.10	-0.19	-0.26%

DRY BULK FREIGHT RATES



TOTAL CHINA IRON ORE IMPORT VOLUMES

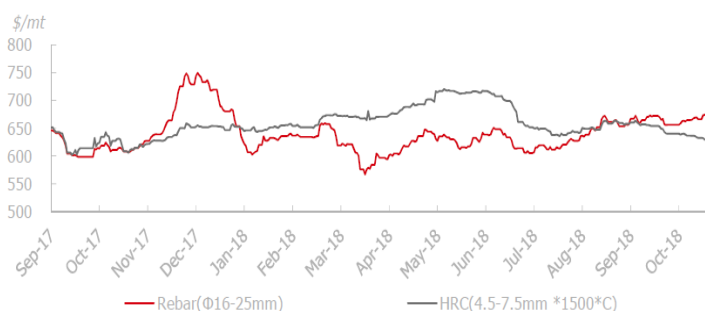


Steel Spot Market Prices - China

Steel Spot Market RMB/tonne

Product	26/10/2018	Change	Change %
ReBar HRB400 φ18mm	4,707.0	83	1.79%
Wirerod Q300 φ6.5mm	4,930.0	59	1.21%
HRC Q235/SS400 5.5mm*1500*C	4,205.0	2	0.05%
CRC SPCC/ST12 1.0mm*1250*2500	4,800.0	-26	-0.54%
Medium & Heavy Plate Q235B 20mm	4,356.0	-34	-0.77%
GI ST02Z 1.0mm*1000*C	5,150.0	-10	-0.19%
Billet Q235 150*150mm	4,000.0	80	2.04%

Rebar and HRC spot prices



CHINESE STEEL EXPORT PRICES

China Export Prices USD/tonne

Product	Specification	Export tax (+)/Vate rebate (-)	Change
26/10/2018			
Rebar	BS4449 460B 12-25mm, + chrome	-13%	560 -10
Wire Rod	SAE1008 6.5-10mm +chrome	-9%	580 0
Hot-rolled coil	SS400/Q235 4.0-10.mm	-9%	560 -5
Cold-rolled coil	SPCC 1.0mm	-13%	600 -5
Medium & Heavy plate	A-level Shippe plate 12-25mm	0%	610 0
Galvanised	ST02Z/SGCC 1.0mm	-13%	665 -5

Note: Calculation formula for converting export prices of rebar, cold-rolled steel and galvanizing into prices in China's spot market = FOB * exchange rate * 1.16 / (1.16 - 0.13); Calculation formula for converting export prices of wire rod and hot-rolled steel into prices in China's spot market = FOB * exchange rate * 1.16 / (1.16 - 0.09); Calculation formula for converting export prices of medium-thick plate into prices in China's spot market = FOB * exchange rate

CHINESE STEEL INVENTORIES

Steel Inventories³ (unit: 1000 tonnes)

Product	26/10/2018	19/10/2018	Change	Change %
Rebar	3,789	4,124	-335	-8.12%
Wirerod	1,216	1,355	-139	-10.26%
Hot-rolled Coil	2,454	2,445	9	0.37%
Medium & Thick Plate	1,152	1,161	-9	-0.78%
Cold-rolled Coil	1,220	1,230	-10	-0.81%
Total	9,831	10,315	-484	-4.69%

³ SMM statistics cover inventories of major steel products in China's major markets: hot-rolled steel inventories in 33 major cities; rebar and wire inventories in 35 major cities; cold-rolled steel and medium-thick plate inventories in 31 major cities.

CHINESE STEEL MILL PROFITABILITY

SMM Tracking of Steel Mill P&L - Rebar and Hot-rolled Coil (RMB/tonne)

Category	Price	Change (WoW)	Note
MMI (Fe 62%), USD/mt excluding tax	74.95	-0.25	Mmi CFR Equivalent index for 12th October
Coke	2,510	0	2nd grade met coke, Tangshan, incl. tax
Steel Scrap	2,430	20	steel scrap (6mm) in Zhangjiagang, excl. tax
Billet Cost	3,192	5	Q234, incl. tax
Rebar cost - Blast furnace	3,460	5	calculated based on theoretical weight, incl. tax
Rebar profit - Blast furnace	1,090	5	based on Shanghai prices, incl. tax
Hot-rolled coil cost - Blast furnace	3,517	5	based on actual weight, incl. tax
Hot-rolled coil profit - Blast furnace	663	-5	based on Shanghai prices, incl. tax

Note: 1. Costs in the table are calculated based on today's market prices and factored our management, sales, financial and depreciations fees.

2. The cost refers to average cost in the industry based on SMM's survey of small, medium and large mills in China

IRON ORE INDEX SPECIFICATIONS, COMPILATION RATIONALE AND DATA EXCLUSIONS

Iron Ore Index Specifications (Port and Seaborne)				Iron Ore Index Compilation Rationale and Data Exclusions			
	65% Fe Fines	62% Fe Fines	58% Fe Fines	MMi iron ore indices are compiled from data provided by companies that are part of the iron ore supply chain and involved in spot market transactions. The indices are calculated using detailed transaction-level data submitted to MMi by these companies. This data is normalised to the appropriate specifications and screened to remove outliers before volume-weighted average prices are calculated from the remaining core set of data. For more details on MMi's iron ore methodology please download the guide published on our website at: www.mmiprices.com			
Fe %	65.00	62.00	58.00				
Alumina %	1.40	2.25	2.25				
Silica%	1.50	4.00	5.50				
Phosphorus %	0.06	0.09	0.05				
Sulphur %	0.01	0.02	0.02				
Moisture %	8.00	8.00	9.00				
Sizing	Granular size below 10mm for at least 90% of cargo; maximum of 40% below 150 micron						
Pricing Point	Qingdao Port (FOT and CFR respectively)						
Timing (Seaborne)	Loading within 4 weeks, Delivery within 8 weeks						
Payment Terms	L/C at sight						

Data Exclusions*			
	62%	58%	65%
Port Index	1	0	0
Seaborne index	0	0	0
Lump Index	0	0	0

* Number of price submissions for iron ore indices that were excluded from index calculations today as they were anomalous and could not be verified

IRON ORE DOMESTIC CONCENTRATE INDEX CALCULATION METHODOLOGY

The compilation method for price index generally refers to the compilation method of CPI price index and other price indices, breakdown the price data and calculate the average value according to a certain method, taking the vertical axis as the regional composite index (average of different grade index) and the horizontal axis as the grade composite index (average of different regional index), a total composite index for domestic ore can be output ultimately. The process system is also adopted in the calculation i.e. each sub-index can be obtained as well.

AVERAGE IRON ORE SPECIFICATIONS APPLIED FOR BRAND PRICE ASSESSMENTS

PORT STOCK BRANDS						SEABORNE BRANDS					
November 01 2018	SPECIFICATIONS APPLIED FOR 62% BRAND ASSESSMENTS					November 01 2018	SPECIFICATIONS APPLIED FOR 62% BRAND ASSESSMENTS				
	Fe	Alumina	Silica	Phos	Moisture		Fe	Alumina	Silica	Phos	Moisture
Roy Hill	61.00%	2.20%	4.50%	0.055%	8.00%	Roy Hill	60.70%	2.30%	4.90%	0.055%	8.00%
SIMEC Fines	60.00%	2.30%	6.30%	0.060%	6.00%	SIMEC Fines	60.00%	2.30%	6.30%	0.060%	6.00%
PB Fines	61.66%	2.32%	3.55%	0.100%	9.34%	PB Fines 62%	62.00%	2.60%	4.30%	0.090%	10.00%
Newman Fines	62.48%	2.32%	4.16%	0.070%	7.67%	Newman Fines	62.80%	2.20%	4.30%	0.080%	6.40%
MAC Fines	60.85%	2.21%	4.77%	0.090%	7.93%	MAC Fines	61.00%	2.70%	4.70%	0.110%	9.30%
Jimblebar Blended Fines	61.37%	2.80%	4.36%	0.110%	6.80%	Jimblebar Blended Fines	61.79%	2.67%	4.08%	0.115%	7.16%
Carajas Fines	64.79%	1.32%	1.95%	0.070%	8.30%	Carajas Fines	65.10%	1.50%	1.70%	0.080%	8.50%
Brazilian SSF	62.00%	1.00%	6.50%	0.040%	6.00%	Brazilian SSF	62.00%	1.00%	6.50%	0.040%	6.00%
Brazilian Blend Fines	62.66%	1.55%	4.79%	0.060%	8.37%	Brazilian Blend Fines	62.50%	1.50%	5.00%	0.070%	7.00%
RTX Fines	61.00%	3.10%	4.50%	0.135%	7.50%	RTX Fines	61.00%	3.10%	4.50%	0.135%	7.50%
November 01 2018	SPECIFICATIONS APPLIED FOR 58% BRAND ASSESSMENTS										
	Fe	Alumina	Silica	Phos	Moisture						
SSF	56.42%	3.00%	6.34%	0.050%	9.46%						
FMG Blended Fines	58.36%	2.79%	5.90%	0.070%	7.13%						
Robe River	56.63%	2.88%	1.85%	0.040%	9.09%						
Western Fines	57.60%	2.93%	6.26%	0.070%	7.83%						
Atlas Fines	56.59%	2.55%	7.14%	0.080%	8.46%						
Yandi	57.15%	1.31%	6.36%	0.030%	8.88%						

BLOOMBERG TICKERS

PORT STOCK INDICES			
	FOT Qingdao (RMB/wet tonne)		CFR Qingdao Equivalent (USD/dry tonne)
IOP162	IRCNQ001		IRCNQ004
IOP158	IRCNQ002		IRCNQ005
IOP165	IRCNQ003		IRCNQ006

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