



## Utilization Rate of China's Electric Furnaces Slightly Grew

## Industry Research

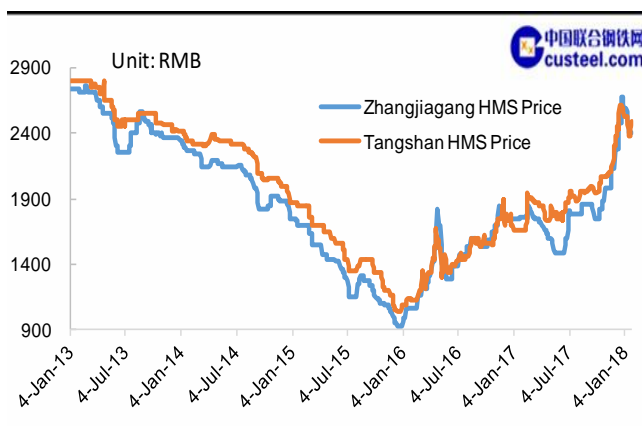
### Synopsis

China's steel market showed an upward momentum driven by winter storage booming this week. Traders were less willing to purchase since prices grew up high, leaving the market weakening again. Influenced by high steel prices, electric furnace steel's profit this week inched up compared with previous session. In addition, in order to increase the arrival volume, steel scrap prices were slightly lifted by short process steel mills located in Jiangxi, Southwestern area, Henan, etc. It reflected an active production status of local electric furnace mills. As Spring Festival is coming, electric furnaces planned to resume or start production in Q1 of 2018 will go into operation during end-Feb to end-Mar. However, as most short-process mills will start to take China's Spring Festival holiday in early Feb, the capacity utilization rate China's electric furnace is predicted to decline sharply in Feb.

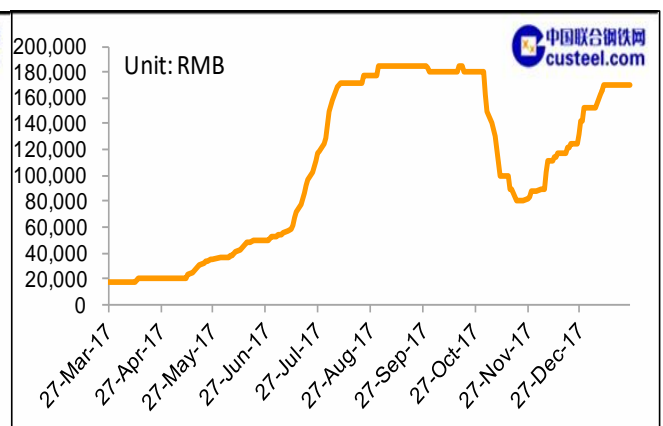
### 1. Steel Prices Edged Up, Electric Steel Profits Slightly Recovered

China's steel market was driven up by winter storage at the beginning this week. But then traders were less active in purchasing after the increase of steel prices at the weekend, leaving the market weakening again. As for the raw materials market, imported iron ore price edged down compared with the previous session, so did the average price; coke price decreased by RMB100/tonne again, totaled RMB350/tonne in this week. Partial steel mills lifted steel scrap prices, especially in North China and Shandong region, where the steel scrap price was up by RMB30-100/tonne accumulatively. It is worth noting that most of them are electric furnace mills at the beginning of this week. Ultra-high power graphite electrode price remain at a high level recently. Thanks to the increasing steel price in this week, steel profits improved slightly. By this weekend, the average profit of rebar produced by converter in Jiangsu increased by RMB76/tonne to RMB705/tonne, while that for rebar produced by electric furnaces was up by RMB85/tonne to RMB156/tonne.

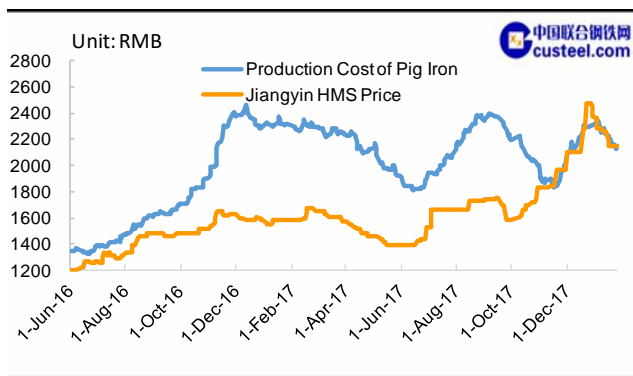
**Graph 1: Steel Scrap Market Remained Stable**



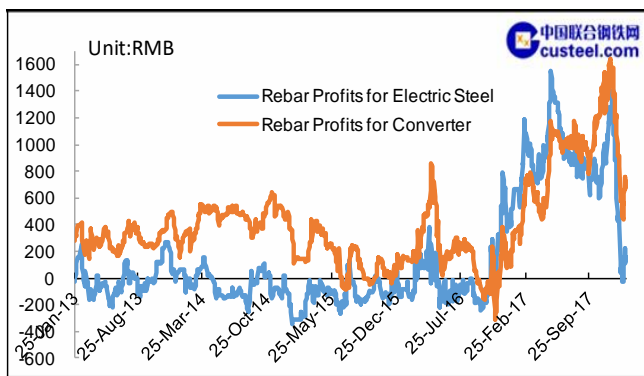
**Graph 2: Ultra-high Power Graphite Electrode Price Stays High**



**Graph 3: Pig Iron Cost Fluctuated**



**Graph 4: Electric Steel Profits Recovered Slightly**



## 2. Operating Rate of China's Electric Furnace Increased Slightly WoW

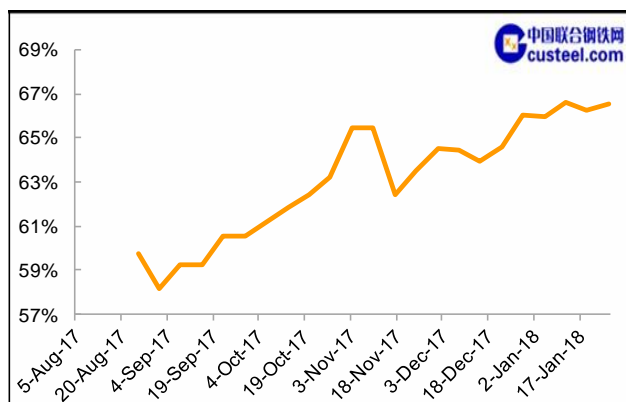
According to research of Custeel on 91 sample mills in China, including 35 long-process mills and 56 mini mills, covering electric furnace capacity of 107.05 Mln tonnes with the operating rate of electric furnaces increased slightly W-o-W. The operating rate of China's electric furnaces by number was 69.23% and capacity utilization rate of electric furnace rose by 0.29% to 66.52%. In details, that of North China remains at 33.7% and that of East China is 78.16%, increasing by 1.28%. That of South Central China has increased by 0.8% and reached 65.03%. Besides, the rate in Southwest China has decreased by 3.46% to 65.4% and that of Northwest China has increased by 0.64% to 33.12%.

**Chart 1: China's Operating Rate of Electric Furnaces Edged Up**

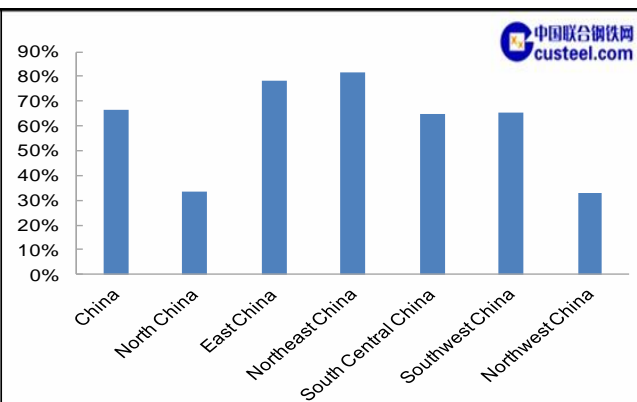
**China's Operating Rate of Electric Furnaces (on Jan 26)**

Region	Sample Number of Steel Mills	Overhaul Electric Furnaces	Operating Rate by Number	Change WoW (%)	Capacity Utilization Rate	Change WoW (%)
China	91	48	69.23%	0.00	66.52%	0.29
North China	6	8	20.00%	0.00	33.70%	0.00
East China	36	9	84.21%	1.75	78.16%	1.28
Northeast China	6	2	83.33%	0.00	81.94%	0.00
Central South China	20	11	72.50%	0.00	65.03%	0.80
Southwest China	14	9	64.00%	-4.00	65.40%	-3.46
Northwest China	9	9	25.00%	0.00	33.12%	0.64
Jiangsu	16	3	89.29%	3.57	83.42%	1.40
Fujian	6	3	70.00%	0.00	64.18%	3.73
Guangdong	5	1	88.89%	0.00	70.31%	4.12

**Graph 5: China's Electric Furnace Operating Rate Went Up**



**Graph 6: Electric Furnace Operating Rate Edged Up in East China**



Capacity utilization of electric furnaces has increased slightly this week. Capacity utilization of 50-tonne electric furnaces and below increased by 0.89% to 72.81%. A 45-tonne electric furnace in Jiangsu has resumed production after overhaul at the end of 2017. A 50-tonne electric furnace in Shaanxi which was carried out operation newly has increased output. A 50-tonne electric furnace in Guizhou has been overhauled for environmental alteration. The capacity utilization rate of 50-100 tonnes electric furnaces has increased by 0.09% to 70.45%. Besides, a 70-tonne electric furnace at No.2 line in a steel mill of Guangdong has been carried out production and output has increased. In addition, production limitation for a day in Xuzhou of Jiangsu province has affected electric furnace output slightly.

**Chart 2: Operating Rate of Electric Furnaces by Volume**

Operating Rate of Electric Furnaces by Volume					
Furnace Volume	Overhaul	Operating Rate by Number	Change WoW (%)	Capacity Utilization Rate	Change WoW (%)
Volumes≤50	16	74.19%	0.00	72.81%	0.89
50<Volumes≤100	24	71.08%	0.00	70.45%	0.09
Volume > 100	8	27.27%	0.00	36.04%	0.00

### 3. Capacity Utilization of 56 Short-process Mills Is 66.14%

According to the research of Custeel on 91 steel mills which produce steel by electric furnace, including 56 mini mills and 35 long-process mills. The operating rate of electric furnaces by number in mini mills has fallen to 72.83%, decreasing 1.09% compared with that of last week and capacity utilization rate has decreased by 0.58% to 66.14%. Besides, the operating rate of electric furnaces by number in long-process mills has increased by 1.56% to 64.06% and capacity utilization has risen by 1.37% to 66.99%. The electric furnaces of long-process mills have finished overhaul and output has increased, the same as capacity utilization. An electric furnace of mini mills in Guizhou has been shutdown to overhaul. The environment protection alteration of equipment has affected the capacity utilization and output of other equipment under alteration may be released later.

**Chart 3: Operating Rate of Electric Furnaces by Steel Type**

Operating Rate of Electric Furnaces by Steel Type (Jan 26)					
Steel Type	Number	Operating Rate by Number	Change WoW (%)	Capacity Utilization Rate	Change WoW (%)
Short-process Mill	56	72.83%	-1.09	66.14%	-0.58
Long-process Mill	35	64.06%	1.56	66.99%	1.37

### 4. The Latest Production Resumption and Overhauls

4 more electric furnaces raised production this week, while 2 more reduced or suspended production for overhaul. Specifically, a 50-tonne electric furnace in Fujian saw slightly increased output and rising capacity utilization rate after equipment modification. A 45-tonne electric furnace resumed production after a short-term overhaul last week. Besides, there was a 70-tonne furnace of a mill's No. 2 production line located in Guangdong went into production formally. A 50-tonne electric furnace in Shaanxi which was in debugging also saw gradually increasing output. Currently, the workshop and ancillary equipment are still in inspection, thus it is hard for the steel mill to produce in full capacity. In addition, the electricity furnaces to resume or start production in Q1 will go into operation intensively during Feb to late Mar after the Spring Festival.

**Chart 4: Overhauls, Production Resumption and Operation of Electric Furnaces**

Electric Furnaces' Resumption During Jan 22-26					
Region	Steel Mill Number	Volume	Theoretical Daily Output (Tonnes)	Remark	
Fujian	***	1	50	684	Equipment upgrading and output increased
Jiangsu	***	1	45	1232	Plan to resume production after overhaul in the end-year
Guangdong	***	1	70	383	No. 2 EAF puts into normal production
Shaanxi	***	1	50	136	New equipment has put into production, while others in this mill are in installation and overhaul
<b>Total</b>		<b>4</b>	<b>215</b>	<b>2435</b>	

## Latest Overhaul for Electric Furnaces in Jan 22-26

Region	Steel Mill	Number	Volume	Theoretical Daily Output (Tonnes)	Remark
Jiangsu	***	1	100	391	Plan to resume production after the temporarily output control and have slight influences on output
Guizhou	***	1	50	1300	Stopped production due to dust removal equipment modification
<b>Total</b>		<b>2</b>	<b>150</b>	<b>1691</b>	

Chart 5: Electric Furnaces to Start or Resume Production in Q1 of 2018

## Electric Furnaces to Start or Resume Production in Q1

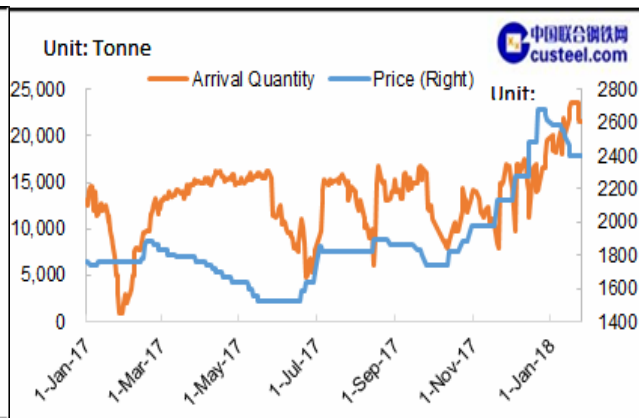
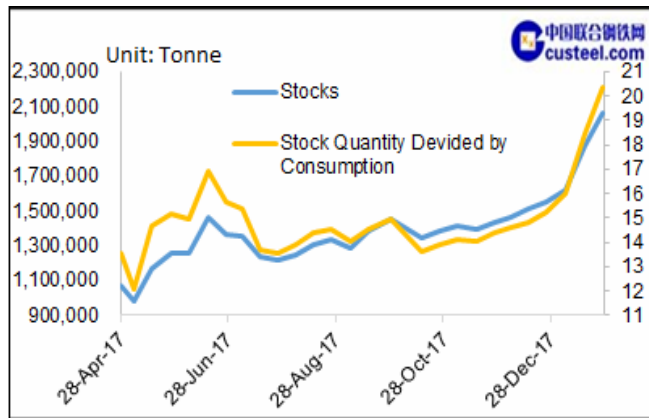
Region	Steel Mill	Number	Volume	Theoretical Daily Output (Tonnes)	Remark
Hebei	***	1	70	1918	Plan to put into production in Q1
Hebei	***	1	70	1918	Plan to put into production in Q1
Fujian	***	1	50	1370	Install supporting equipment and plan to put into production in Q1
Jiangsu	***	1	80	2192	The rolling production line is in overhaul and to resume production in Q1
Guangxi	***	1	60	1644	Plan to put into production in Q1
Guangxi	***	1	60	1644	Plan to put into production in Q1
Guangdong	***	1	45	1233	Equipment is upgrading and plan to put into production in Q1
Hubei	***	1	75	2055	Equipment is upgrading and plan to put into production in Feb or so
Ningxia	***	1	50	1370	Production plan delays to 2018 due to the construction process affected by the weather
Xinjiang	***	1	65	1781	Plan to put into production in Mar due to the weather
Sichuan	***	1	100	2740	Plan to put into production in Q1
Hubei	***	1	100	2740	Replaced capacity is planned to put into production in Mar and the original capacity is suspended
Hubei	***	1	100	2740	Replaced capacity is planned to put into production in Mar and the original capacity is suspended
<b>Total</b>		<b>13</b>	<b>925</b>	<b>25342</b>	

## 5. Stocks in North China and Shandong Increased Slightly

According to the statistics of 31 large and medium steel enterprises by the end of Jan 2018, steel scrap stock of the enterprises has reached 2.06 Mln tonnes, increasing by 186 thousand tonnes or 9.93% from the last session and rising 33.16% compared with that of end Dec 2017. The steel scrap market has kept stable this week apart from increases in partial steel mills. At the beginning of this week, snowy weather in North China and East China has affected the arrival of steel scrap. Besides, steel price has fallen rapidly a few days ago, leading to the sharp decrease of electric furnace profit. Therefore, the mini mills have suppressed steel scrap price apparently and the HMS price in Southwest China was about RMB1700-1800/tonne without tax. In addition, suppliers do not have much activity towards electric furnace mills' demand, while the demand for stock replenishment still exists, leading to the large price increase of mini mills. Meanwhile, it reflects the production enthusiasm of electric furnace mills currently. Partial steel mills in North China and Shandong still have demand for stock replenishment before the Spring Festival. Furthermore, affected by the decreased processing of steel scrap, constrained transportation and other factors in winter, steel mills are willing to increase price to purchase goods. In details, HMS price in North China has increased by RMB50-100/tonne and HMS price in Tangshan was RMB2280-2350/tonne with tax excluded. At present, steel mills have narrow adjustment according to their arrivals and stocks, as a result, China's steel scrap market may have slight adjustment amid stability as the Spring Festival approaches.

Graph 7: Steel Mills' Steel Scrap Stocks Increased

Graph 8: Arrival Quantity of a Steel Mill in East China Increased



## Remarks:

- There are 91 sample mills involved in Chinese Steel Mills' Electric Furnace Operating Rates Report done by Custeel, including electric steel capacity of 107.5 million tonnes;
- Operating rate by number is the ratio of the number of electric furnaces in normal production to the total number;
- Capacity utilization rate is the ratio of electric furnace capacity in normal production to the total capacity.

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