

SALE OF 0.5 MTPA MINI BLAST FURNACE COMPLEX (Southeast Asia)



Executive Summary

valuejunction, a business unit of mjunction (A SAIL – Tata Steel joint venture) is appointed by a leading steel manufacturer in Southeast Asia to sell their idle assets. mjunction services limited is a 50:50 venture promoted by Steel Authority Of India Limited and TATA Steel. Founded in February 2001, it is today not only India's largest eCommerce company (having eTransacted worth over Rs.2,00,000 crores till date) but also runs the world's largest eMarketplace for steel. For more information please check our website (<http://www.mjunction.in/>).

Asset Overview: A 0.5 MTPA blast furnace complex which was installed in 2009 - 10 period but was decommissioned in the year 2012. Working volume of *the mini blast furnace is 400 m³* and its maker is *Huatian Engineering & Cooperation*. In addition to this there is a sinter plant having annual production *capacity of 635,500 tonnes* along with a pig casting machine. A BF fired captive power plant having capacity in the range of 12-15 MW is also there. *The machinery are as good as new* and the output at the time of decommissioning the BF was *approximately 1300 t/day*.

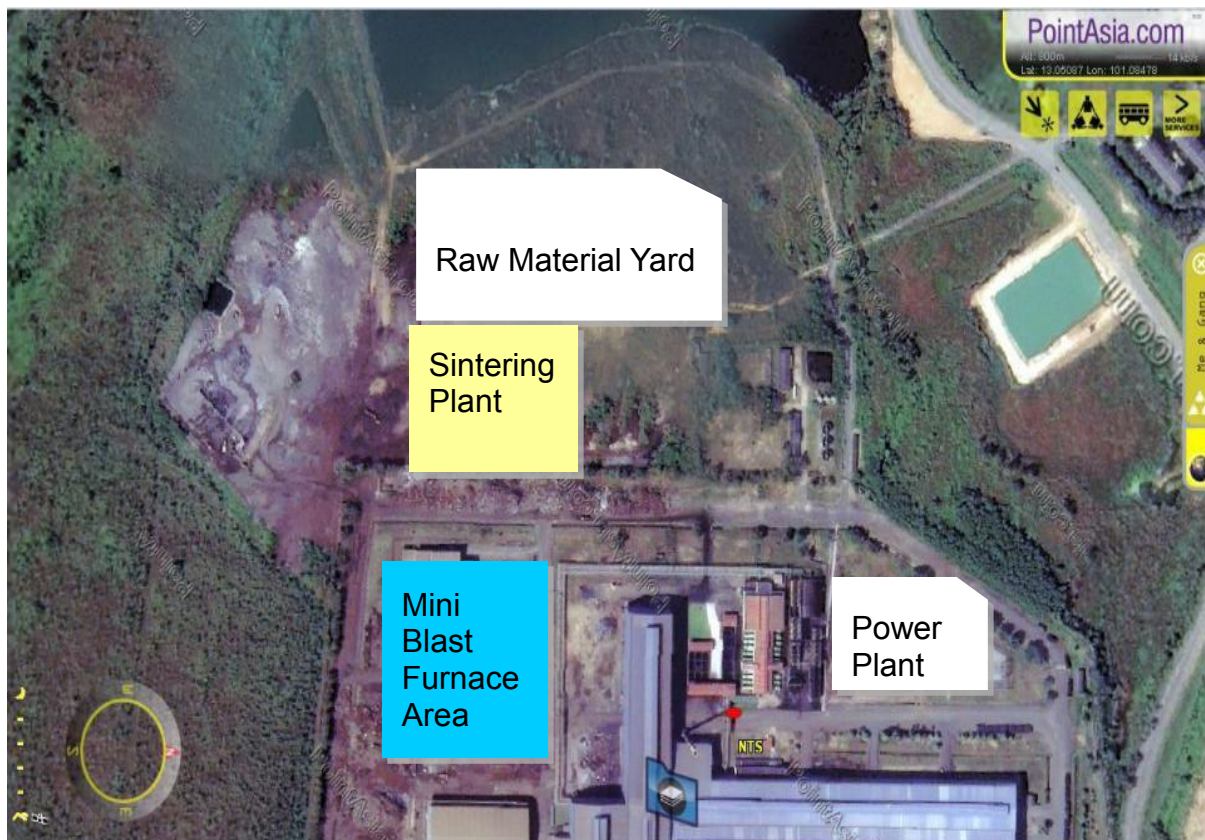
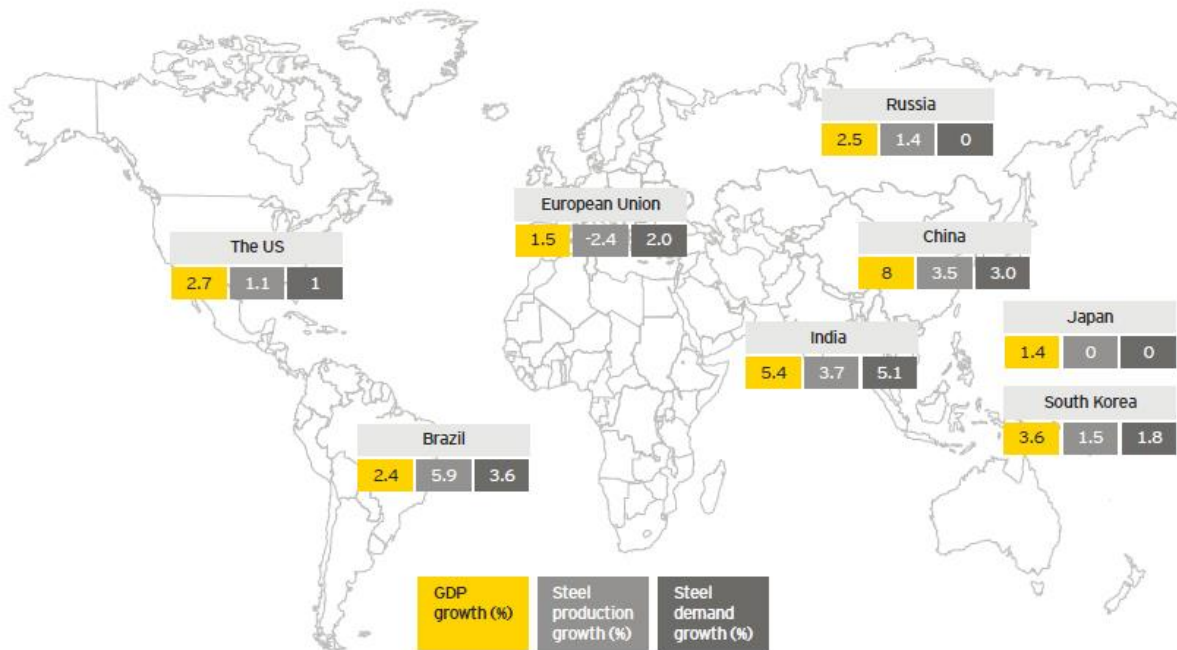


Figure 1: Plant Map

Global Outlook for steel

Global demand is forecasted to grow at about 3.3%. However, more demand growth is expected to come from outside of China as the Chinese Government pushes through economic restructuring with a focus on private consumption.



Outlook for steel & economic growth in 2014 mapped against the location of major steel markets

Source: HIS Global-insight

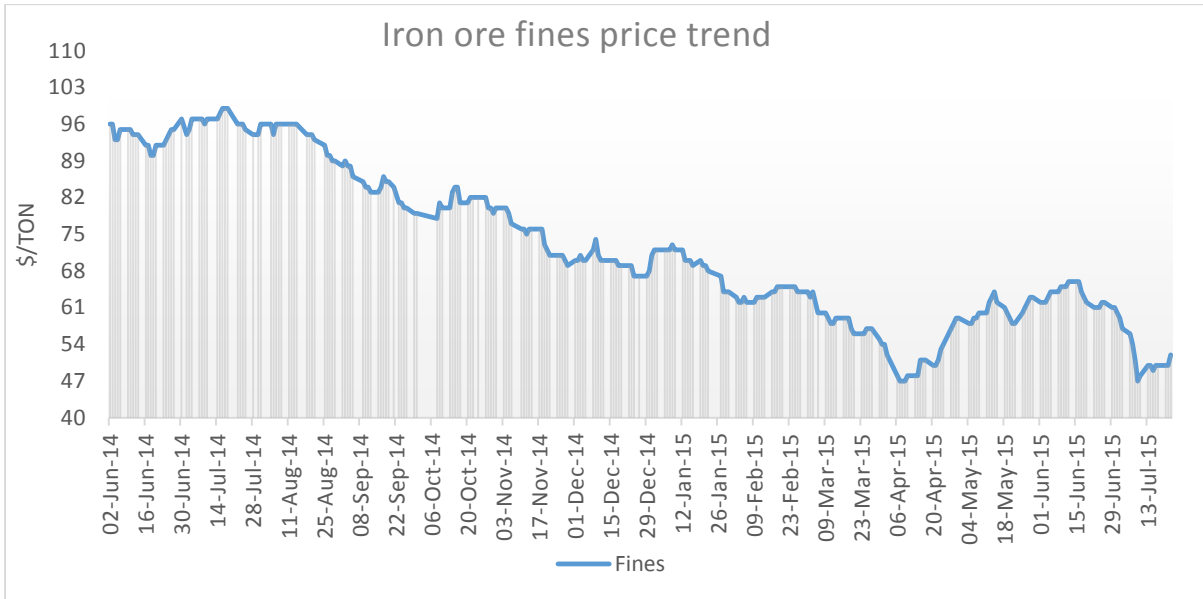
Future Demand Projection

1. As demand continues to shift to developing nations, the steel sector is directed towards China, with some focus on Brazil, Russia and India
2. With Africa moving towards urbanization, it may happen that future demand from Africa will completely shift the landscape
3. Growing middle class is driving steel demand in construction and real estate. Increasing investment in construction and infrastructure led to an 8% y-o-y increase in global demand for long products in 2013. Asian market captures around 40% of total construction spending
4. There will be an increasing demand from the automotive sector of both developing and the developed countries. The US, Brazil, Japan and China are the hotspots in the automotive sector with calculated annual growth of between 5% to 11% forecast to 2016
5. Looking upstream, increased capital investment in oil & gas sector will also drive steel demand

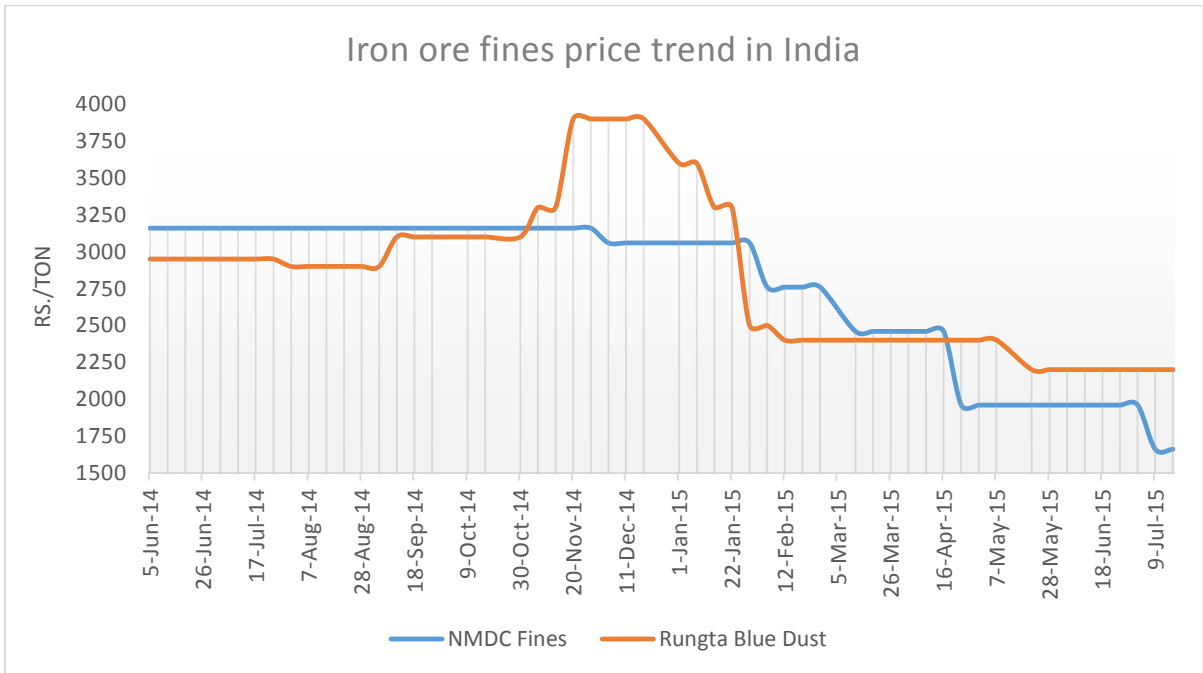
Raw Material – Finding Opportunity in Volatility

Iron Ore - Global iron ore prices were in the range of \$68-70 in December 2014. Since then it has been declining from \$66-67 per ton in January 2015 to \$62-64 (February), \$56-58 (March), \$51-53 (April). In May, the prices inched up to \$61-63 but, June rates again declined to the \$52 range. While

the global demand is going down, particularly in China, iron ore production is not slowing. Because of this phenomenon there is lot of inventory in the market and it is impacting the prices of iron ore.

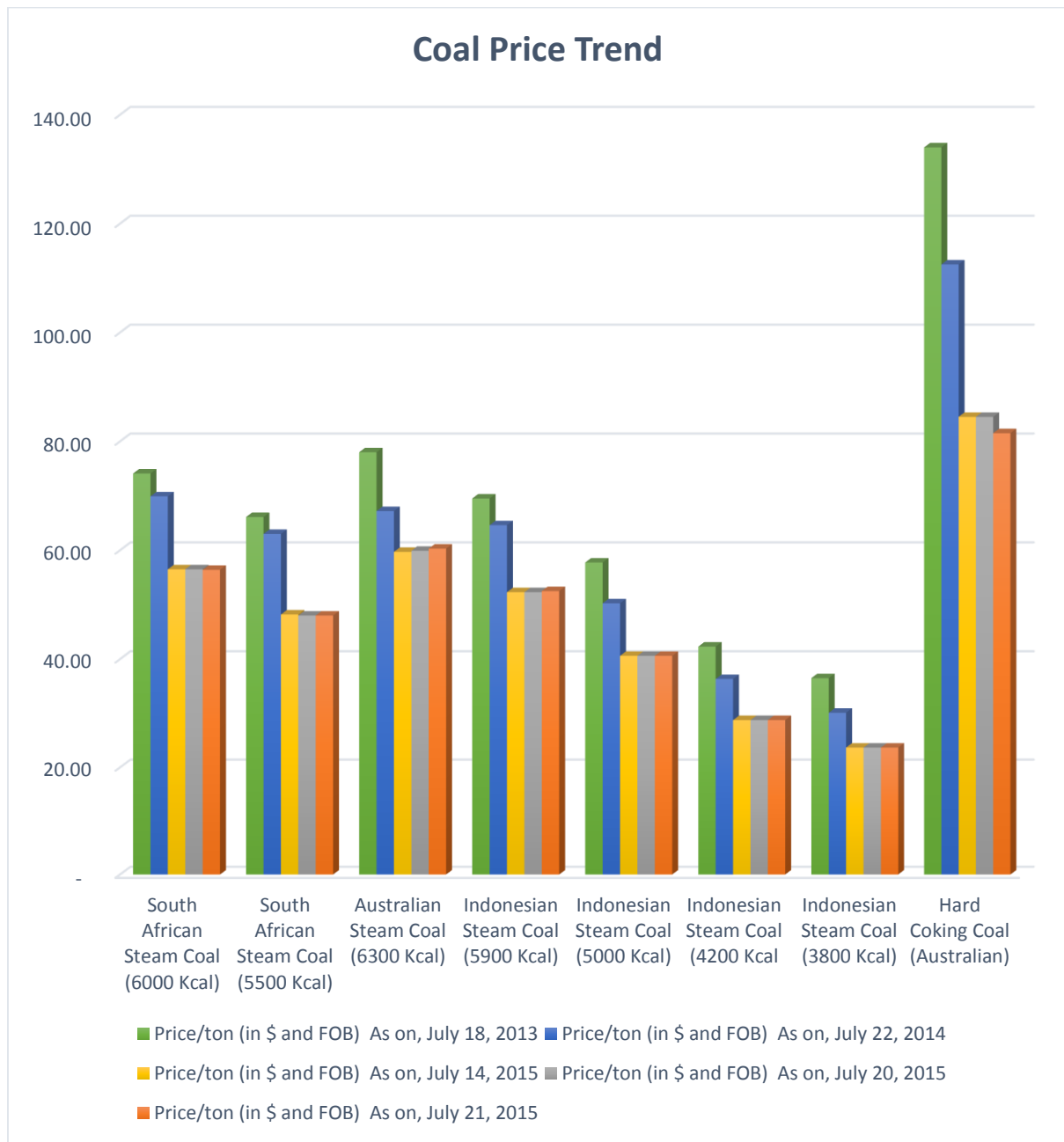


Indian Market- Iron ore miners have slashed prices of lumps or high grade iron ore owing to subdued demand in the domestic market. State-owned NMDC has slashed the prices of lumps by as much as 30% since January. The country's largest miner for the metal, used in the production of steel, has slashed iron ore fines prices steeper, by 46% during the period. Odisha miners like Rungta Mines also reduced lumps offers by 48% in the last one year because of higher inventory levels. Now that the government has allowed iron ore mining in Karnataka and Goa and increased cap for mining in Odisha, inventory levels would further rise putting pressure on price levels.



Source: India Steel Market Watch (ISMW)

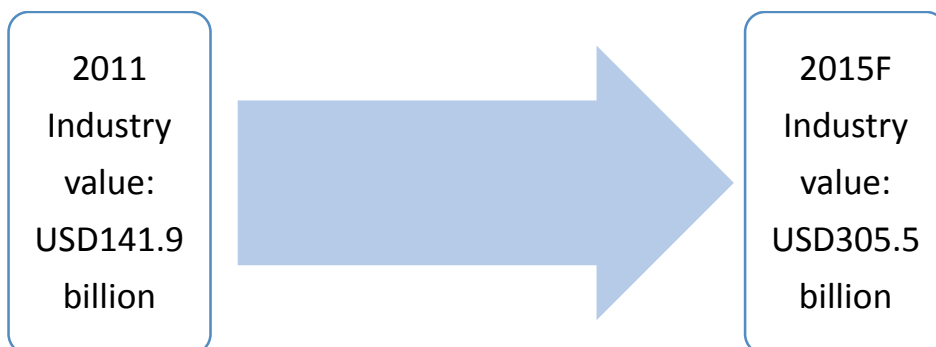
Coal - Coal prices across the category are down significantly during the past one/two year primarily on account of reduced demand from China, which led to a kind of oversupply position. Other factors such as less than expected growth in steel production throughout the world also impacted coal prices.



Source: India Coal Market Watch (ICMW)

So with the help of correct sourcing strategy and by using instruments such as derivatives an investor can take advantage of this downward trend in raw material prices.

Metals and Mining – Advantage India



Source: DataMonitor, Aranca Research

It has been evidenced that India is one of the major demand centre with an attractive investment opportunity.

Advantages of Buying This Plant

1. The equipment are well maintained and are as good as new
2. Setting up a new greenfield project of similar capacity will cost around 65 Mln USD so less capital investment is required in this case
3. Lead time reduction compared to setting up a new project
4. The products from mini blast furnaces are of the same quality as that of normal Blast Furnaces and are free of tramp elements - this is of particular advantage in steel making in mini steel plants
5. Reduced power consumption when compared to classical blast furnace
6. Higher plant availability compared to classical blast furnace
7. The technology used is environment friendly and hence there is a possibility to earn carbon credits and make money from it

Technical Details

1) Mini Blast Furnace

Configuration of Mini Blast Furnace	
Annual Production of hot metal	504,000 t/year
Working volume of blast furnace	400 m ³
Effective Volume	450 m ³
Hot blast temperature	1100 °C
Utilization ratio	3.572 t / m ³ / day
Raw material consumption	1,068,900 t / year
Furnace top pressure	0.03~0.15 Mpa
Furnace top temperature	120~300 °C
Tap hot metal	120 -130 t / tap
Fuel ratio	550 kg / t-HM
- Coke ratio	400 kg / t-HM
- Coal ratio	150 kg / t-HM
Sinter Ore : Iron Ore Lump	75 % : 25 %
Slag ratio	330 kg / t-HM
Output at the time of decommissioning the BF	1200-1300 ton/day
Availability (excluding planned shutdown)	350 day/year

2) Sinter Plant

Configuration of Sinter Plant	
Annual Production of sinter	635,500 t/year
Effective Sintering area	75 m ²
Mean Hourly	105 t/h
Maximum capacity	120 t/h
Fuel Consumption (BF Gas)	80 Nm ³ /t
Size Fraction	5-150 mm
Basicity (CaO/SiO ₂)	1.8
TFe	≥58%

3) Power Plant

Configuration of Power Plant	
Power Generator	12 MW (Max 15 MW)
Blast Furnace Gas Boiler	60 t-steam / h

The entire complex is very well maintained and in extremely good condition.

4) Plant Site Pictures

The pictures shown below are indicative in nature. Customers are advised to inspect the plant for better understanding.



Figure 2



Figure 3



Figure 4



Figure 5



Figure 6



Figure 7



Figure 8



Figure 9



Figure 10

Interested buyers are requested to contact the **following personnel**

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