



Raw Material Scenario

India has been long recognised as a nation well endowed in natural mineral resources. India is ranked 4th amongst the mineral producer countries, behind China, United States and Russia, on the basis of volume of production it is an extremely important sector and contributes significantly to Gross Domestic Product. The Indian mining industry however is passing through a critical phase, especially in the last two years, witnessing negative growth. As mining is interlinked with industrial development, availability of raw material is of prime importance and as such, the pro-active role of union and state government is called to ensure an era of mineral development. This report is an initiative on the part of FICCI to bring out the issues and concerns plaguing the mining sector (each non-fuel mineral) for the consideration of the government. There are a number of unresolved policy issues, which deserve serious consideration by the union and state governments.

In the wake of bans and restrictions imposed on iron ore mining in Odisha, Jharkhand and Karnataka, India's steel industry is likely to face unprecedented crisis due to extreme shortage of iron ore and cheaper imports from China and Russia. In a note submitted to the government, apex industry body Assocham has suggested for an urgent intervention to correct artificially inflated rate of iron ore in the domestic market by the non-captive iron ore miners. The chamber secretary general, D S Rawat said that as against the international norm of efficient steel making, the Indian steel industries have no captive mines and fully dependent on the domestic

Raw Material Security Need of the Hour

- Steelworld Research Team

The steel capacity in India has increased from 66 million tonnes in 2009 to about 90 million tonnes in 2012 which is all set to increase further as both public and private sector producers have taken up expansion and modernization programmes very aggressively. As per projection, Indian steel production would grow to around 200 million tonnes by 2020. The government is making efforts to fuel this growth by providing a good investment climate to domestic and foreign steel makers in the country. In line with the increase in capacities, the per capita consumption of steel has also been increasing, but is still below the World's average. Steps are being taken to improve this through many schemes to give a boost to the use of steel, especially in the rural areas.

A National Steel Policy is being prepared which will provide the necessary vision and framework for increasing steel production and consumption in India. The industry welcomes partnerships with leading global steel makers to improve process and product technologies and is always open to new ideas. Today, the environment has become a key area of concern. India is part of this growing consensus for adoption of environment friendly steel making technologies. The carbon footprint of the steel industry must be brought down significantly by sharing advanced technologies through strategic partnerships for clean and green steel production. For achieving growth in the Indian steel industry it is important to have raw material security. This would include optimum resource utilization and securing raw material sources abroad, global strategic partnership will play an important role in achieving this. India has a sizeable quantity of iron ore fines, which at present are not being fully utilised for want of suitable beneficiation and pelletisation technologies. The industry plans to use modern techniques of beneficiation and pelletisation for adding value to its own iron ore and also for optimum utilisation of domestic mineral resources.

merchant miners. Both private and PSU in the states of Chhattisgarh, Odisha, Jharkhand, etc. have been paying very high cost for Iron Ore ranging from US\$ 96-105/ MT (landed cost) resulting in high production cost of Steel \$ 450 -500 / MT rendering them less competitive in the international market as well as in the domestic market because of cheaper imports from China/ Russia/ other countries. As a result of such high level of Iron ore prices maintained by domestic producers coupled with crash in international iron ore prices and dumping by Chinese and Russian Steel producers, domestic steel producers are left with no option but to resort import of iron ore in order to maintain sustainability in the current market scenario and stay afloat.

While in India, steel production has gone up from 65.84 MT in 2009-10 to 91 MT in 2014-15, the iron ore production has gone down from 218.55 MT in 2009-10 to 138 MT in 2014-15. The low Iron ore production is reducing year upon year and is leading to a situation where the Iron ore requirement is surpassing the restricted production currently being witnessed in India. While few de-bottlenecking steps have been taken recently by the government, the same has yet to produce results. During the current year Indian Steel industry has already imported 8.5 Mio T of Iron ore (Apr-Dec'14) and the total Iron ore imports likely to cross 12-13 Mio T during FY 2013-14. Due to various restrictions imposed on iron ore producers in various states and closure of mines happening for various reasons, there is mismatch in demand and supply. As a result, few other mines, which are allowed operation is operating with huge demand from the Steel/ Sponge Iron/ Pellet producers having no captive mines. In order to continue their operation, the plants are

forced to offtake iron ore at a price determined and dictated by these producers. This has resulted in anomalous situation whereby while the world over all commodity prices including Iron ore prices are falling, domestic Iron ore prices are sustaining at a very high level.

The International prices have dropped by almost 50% from its peak level of US\$ 135.88/ DMT CFR China in Nov'13 to the current level of US\$ 63-64/ DMT CFR. The JSM FOB price have reduced by 41% from US\$ 121.90/ DLT in Nov'13 to US\$ 72.29/ DLT in Jan'15. However, during the same period the domestic Fines price has increased by 17% from Rs. 2610/ WMT to Rs. 3060/ WMT in Jan'15 on ex-mines basis. Steel industry continues to be sluggish for the past 2-3 years with there being hardly any chance of recovery in the near term. The price of Hot Rolled Coil (HRC) has crashed in the International market during the past 1 year from a level of US\$ 570 to the current level of US\$ 440, a drop of 23%. With the Chinese economy slowing down and Infrastructure/Construction activities waning in China, it has doubled its export of Steel and is dumping Steel in the Indian market and elsewhere in a big way.

The production of domestic iron ore is pegged at 137-140 million tonnes for 2014-15 and for the current financial year, a growth of 15% is expected. The growth will come from NMDC, mines in Karnataka and Odisha. Recently, Rungta has received EC nod for 16.5 million tonnes in Odisha. NMDC has announced that it would increase production by 20% to 35 million tonnes as against 31 million

in the fiscal year to end-March as tumbling global prices and limited domestic supply pushed steelmakers to buy more of the raw material overseas, industry data showed. Formerly the world's No. 3 supplier of iron ore, India has been importing it over the past three years due to court-imposed restrictions aimed at curbing illegal mining in the major producing states of Karnataka and Goa.

The shortage deepened last year when some mines in the states of Odisha and Jharkhand were ordered to close after the expiry of license. In the year to March 2014, imports were just 320,000 tonnes. More than half of imports in fiscal 2014/15 were brought in by JSW Steel, India's third-largest steel producer, with 8.4 million tonnes. Tata Steel followed with 3.06 million.

Official Indian government data only covers April-December, with imports totalling 7.38 million tonnes, according to the trade ministry. Despite the jump in shipments to India, global iron ore prices fell below \$50 a tonne .IO62-CNI=SI last week to the lowest level since a key benchmark pricing index began in 2008. The steelmaking commodity has lost about two-thirds of its value since the start of last year amid a global glut and slow demand from top iron ore buyer China. The reopening of iron ore mines in states such as Odisha, Jharkhand and Goa may reduce India's imports in the current fiscal year.

Coking Coal

At present, the Indian steel industry is dependent largely on imported coking coal. For increasing the country's steel production, it is

| IRON ORE PRODUCTION AND CONSUMPTION (MILLION TONNES) | | |
|--|------------|-------------|
| Financial Year | Production | Consumption |
| 2011-12 | 168.58 | 100.57 |
| 2012-13 | 136.62 | 103.40 |
| 2013-14 | 152.43 | 110.50 |
| 2014-15* | 91 | == |

Source : Ministry of Steel, * April – December period

tonnes in FY15. In Karnataka, production is set to increase by over 20% to 22 million tonnes in 2015-16. Goa is also likely to commence production towards the second half of this year.

Rising Import

India's iron ore imports jumped to a record above 15 million tonnes

therefore important that we maximise the usage of indigenous coking coal by adopting latest coal washing technologies. Besides, it is also important to adopt alternate iron making technologies which can use directly non-coking coal and low grade iron ore fines. The recent JV agreement with KOBE Steel, Japan for the ITmk3 technology is a step in the right direction. For every ton of steel production about 4 ton of material is to be transported.



COUNTRY-WISE DETAILS OF EXPORTS OF IRON ORE (MILLION TONNES)

| Country | 2011-12 | 2012-13 | 2013-14 | 2014-15* |
|----------------------|---------|---------|---------|----------|
| China | 43.79 | 16.08 | 13.47 | 2.91 |
| Japan | 1.94 | 1.54 | 1.96 | 1.04 |
| Korea Republic | 0.84 | 0.13 | 0.41 | 0.29 |
| United Arab Emirates | 0.02 | 0.02 | 0.05 | == |
| Other countries | 0.55 | 0.34 | 0.41 | 0.14 |

Source : Ministry of Steel * Upto October,14

Therefore logistics is a major challenge. It is planned to tackle this by improving rail, road and port infrastructure and using alternate methods like slurry pipelines for movement of inputs.

Research and Development will play a critical role in improving processes and products. It is being planned to undertake state of the art Research & Development activities indigenously. In order to do this, a policy paper will focus on iron ore beneficiation, coal ash reduction and production of value added steel has been published by the Ministry of Steel and the recommendations are being implemented.

Other raw materials include pig iron and sponge iron. India is also an important producer of pig iron. Post-liberalization, with setting up several units in the private sector, not only imports have drastically reduced but also India has turned out to be a net exporter of pig iron.

The private sector accounted for 93% of total production for sale of pig iron in the country in 2013-14. The production for sale of pig iron has increased from 1.6 mt in 1991-92 to 7.95 mt in 2013-14.

India is the world's largest producer of sponge iron with a host of coal based units, located in the mineral-rich states of the country. Over the years, the coal based route has emerged as a key contributor and accounted for 89% of total sponge iron production in the country. Capacity in sponge iron making too has increased over the years and stood at 45 mt in 2013-14.

Bleak Future

India is likely to remain a net importer of iron ore in 2015-16 as the falling international prices might encourage steel majors to continue import of key steel-making raw material through the current year. However, the quantity of imports may not be as high as last

fiscal owing to an expected increase in the domestic production of iron ore. During this year, imports are likely to be around 10 million tonnes. This is despite reopening of mines in Odisha and the huge pile ups in several mines. But, the fact that international prices are continuing their downward journey and are ruling at below \$50 per tonne CFR. China would keep the interest of importers in the global seaborne trade.

Also, inconsistency in supply of iron ore and availability of high grade ore at cheap prices will be encouraging for the steel mills to keep their import intact. Indian steel mills, which do not have captive mines, require around 95 million tonnes of iron ore per annum.

JSW Steel, which was the largest importer last year at 10 million tonnes, will continue to be the major importer in FY16. Other importers include Tata Steel and Welspun among others. Tata Steel, which imported around 2 million tonnes last year, is expected to import this year too to feed its Kalinganagar steel plant, which will be operational, analysts tracking, said the sector. In 2013-14, the imports stood at a mere 3.2 lakh tonne.

The report said the imports last fiscal were largely from South Africa (5.9 MT) followed by Brazil (3.7 MT), Australia (1.9 MT) and Oman (1.4 MT) among others. Exports were recorded at 4.5 MT during the fiscal.