The Indian Iron Ore Pellet Industry - A Report

Prepared by:
Joint Plant Committee
An ISO-9001:2008 Organization
(Constituted by the Government of India)
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CONTENTS

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Page No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>The JPC Survey</td>
<td>3</td>
</tr>
<tr>
<td>An Overview</td>
<td>24</td>
</tr>
<tr>
<td>Data Tables</td>
<td>59</td>
</tr>
<tr>
<td>Directory Listing</td>
<td></td>
</tr>
<tr>
<td>Annexure</td>
<td></td>
</tr>
</tbody>
</table>
The Indian Iron Ore Pellet Industry - EXECUTIVE SUMMARY
Background:

Iron ore pellet is a kind of agglomerated fines which has better tumbling index as compared to that of parent ore and can be used as a substitute used in blast furnaces in countries where lump ore is not available.

India’s iron ore export basket used to comprise predominantly of iron ore fines (almost to the tune of 80% of total iron ore exports) largely because of the lucrative market it catered to globally and secondly as the domestic market for iron ore fines as a ready-made feed for sintering/pelletisation was at a still-nascent stage. However, over time with significant changes in the domestic iron ore market and given the increasing uncertainties in global steel market courtesy the slowdown in Chinese demand, India’s iron ore export has taken a hit. At the same time, the perception that iron ore fines can be gainfully utilized by offering a ready-to-use feed material in the form of pellets whose use in turn, leads to substantial economic gains over time and given the shortage of quality iron ore lump (which setting up a pellet plant can well alleviate), have led to a paradigm change in the domestic market.

The net result is that pelletisation has emerged as an independent economic activity and is being increasingly held as a viable one as well, as a charge mix in sponge iron making and also in blast furnaces. Over time, what had started out as an exploration has now turned out to be nothing short of a trend.

Such increasing importance of pellet as a key feed material in production of iron and steel in the domestic market has made it essential to assess the market trends in this emerging but niche segment in terms of spread of
units, level of production and capacity, employment and capital investment, among others.

Accordingly, Joint Plant Committee (JPC), under the aegis of Ministry of Steel, has initiated action to conduct a comprehensive national survey on the Indian iron ore pellet industry so as to update the current JPC database and include this key segment as a regular feature in the JPC reporting system.

It is important to note here that the findings of the present survey should be treated only as an indicator of the state of affairs in the Indian iron ore pellet industry and is completely based on the data reported by the units, as collected during the survey.

**Objective:** The objective of the JPC survey of the Indian iron ore pellet industry is to:

a) update the existing database with regard to population, capacity, spread, production among others

b) understand the market trends in this emerging but niche segment in terms of spread of units, level of production and capacity, employment and capital investment, among others

c) provide a workable base for including this key segment as a regular reporting feature for JPC

**Scope:** The survey is an attempt to collect operational and relevant information with regard to the Indian iron ore pellet industry, covering all operational units in the country.
Methodology:

Planning of Work: As a first step, JPC had held extensive consultations with industry experts to assess the present industry situation and firm up the methodology for undertaking the nation-wide work for the survey.

Questionnaire formulation: The outcome of such interaction session was the formulation of a comprehensive questionnaire as the method for data collection. Besides the usual provisions on location and profile of the unit, the questionnaire focused on key operational aspects of the modern-day Indian pellet industry and was circulated to all the identified units in the country.

Data Collection: Data was collected for the year 2013-14 via questionnaires sent to units in the different states. The Kolkata headquarters of JPC was in charge of the different operations concerned with the survey, aided and supported by data collection by its Regional Offices in Kolkata, Mumbai, New Delhi and Chennai.

Data Processing: Survey data collected was processed in-house in the Kolkata headquarters of JPC where all questionnaires were compiled, numbered, entered in appropriate software for database building. The latter provided the basis for generating the table structures and analysis on the leading findings of the survey work, based entirely on data/information gathered from the collected questionnaires. Due validation of the collected and processed data was done in order to ensure absolute accuracy in the same, so that it reflects actual industry practice and operations.
Major Findings:

The findings of the survey are with regard to the reference year 2013-14. The following is the detailed reporting on the findings made during the field survey of this emerging but still-niche segment, placed under different heads, each indicating a significant parameter of the operation of the Indian iron ore pellet industry for the reference year. The following parameters were studied in this context:

1. Distribution of units
2. Year of Commissioning
3. Production/Production for Sale
4. Exports
5. Annual Capacity
6. Employment
7. Capacity Employment Ratio
8. Labour Productivity

- Total number of units surveyed is 33.
- The survey data indicates the predominance of the Eastern region accounting for 18 units i.e. 55% of the total number of iron ore pellet units in the country, the rest 45% being nearly equally divided between the Southern and Western part. The Northern region is devoid of any presence as far as the iron ore pellet industry is concerned –a key feature of this industry, which is in sync with the pattern of spread of the Indian sponge iron industry.
- Results of the survey indicate clearly that though the Indian iron ore pellet industry still remains at a nascent stage as on date, it had started to emerge in a significant way in the period 2005-2010.
The Indian Iron Ore Pellet Industry - A Report

- Eastern region leads the total production numbers with Odisha emerging as the largest producer-state in 2013 -14 having a 39% share of the total production during the year.
- The top 5 producers accounted for 48% of the total iron ore pellet production during the reference year.
- The survey data shows that total annual capacity in the Indian iron ore pellet industry during 2013-14 stood at 66.30 million tonnes.
- Total employment stood at 23149 in the Indian iron ore pellet industry during the reference year.
- The survey has indicated that capacity employment ratio in the Indian iron ore pellet industry stood at 32 during the reference year.
- The survey has indicated that labour productivity ratio in the Indian iron ore pellet industry stood at 10.6 during the reference year.

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Details on each are available in the statistical tables annexed (in complete report).