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In

DIAN

**SPONGE
INDUSTRY
Performance**

FY 16

Indian SPONGE INDUSTRY Performance 2016

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STUDY

SteelMint has tried to capture India's sponge iron production for FY 16 (Apr'15 - Mar '16) and has compared it with FY15. The report also covers India's sponge iron scenario in FY14. Further we have tried to find out the reasons for production trend in India, factors that impact sponge iron prices and key observations.

METHODOLOGY

We have tried to capture iron ore dispatches from different states through railways, trucks, slurry pipeline and coastal movements. We have considered total sponge iron production (captive/merchant) from different routes (gas/coal).

ASSUMPTIONS

- 1) 1.85 MT iron ore is consumed to make one tonne of sponge iron (C-DRI) in case of domestic iron ore
- 2) 1.6 MT iron ore is consumed to make one tonne of sponge iron in case of imported iron lump
- 3) 1.1 MT iron ore is required to make 1 MT of pellet

EXCLUSION

JSW Steel -Dolvi has been excluded from the study because unavailability of data

ABBREVIATIONS

C-DRI	Calibrated direct reduced iron
DRI	Direct reduced iron/sponge iron
E	Estimated Figure
FY	Financial Year (April-March)
MnT	Million Tonne
MT	Metric tonne
P-DRI	Pellet direct reduced iron

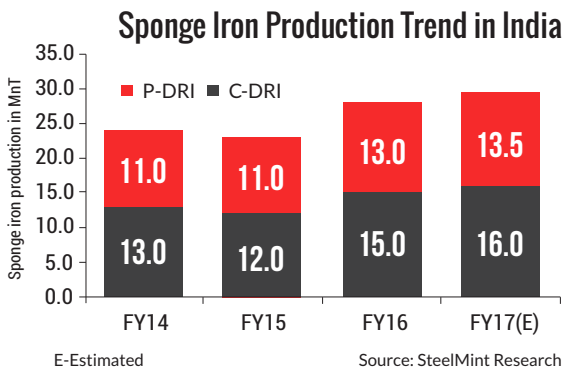
PRESENT SCENARIO OF SPONGE IRON INDUSTRY IN INDIA

India is world's largest sponge iron producer with an annual production of about 26-28 MnT against installed capacity of 46-47 MnT. There are over 400 sponge iron units in India.

Indian sponge iron industry is highly fragmented. Top 20 producers contribute about 60-65% of total production where as rest contribute 35-40% of the production.

Sponge iron contributes 25% of India's total crude steel production of 90 MnT.

SPONGE IRON PRODUCTION RISES SHARPLY IN FY16



According to SteelMint's analysis sponge iron production which was recorded at 23 MnT in FY15 surged by 22% Y-o-Y to 28 MnT in FY16. We expect Indian sponge iron production to remain around 29.5 MnT in FY17.

Sponge iron (C-DRI) accounted for nearly 54% of India's sponge iron production and pellet sponge (P-DRI) accounted for about 46% of India's sponge iron production in FY16.

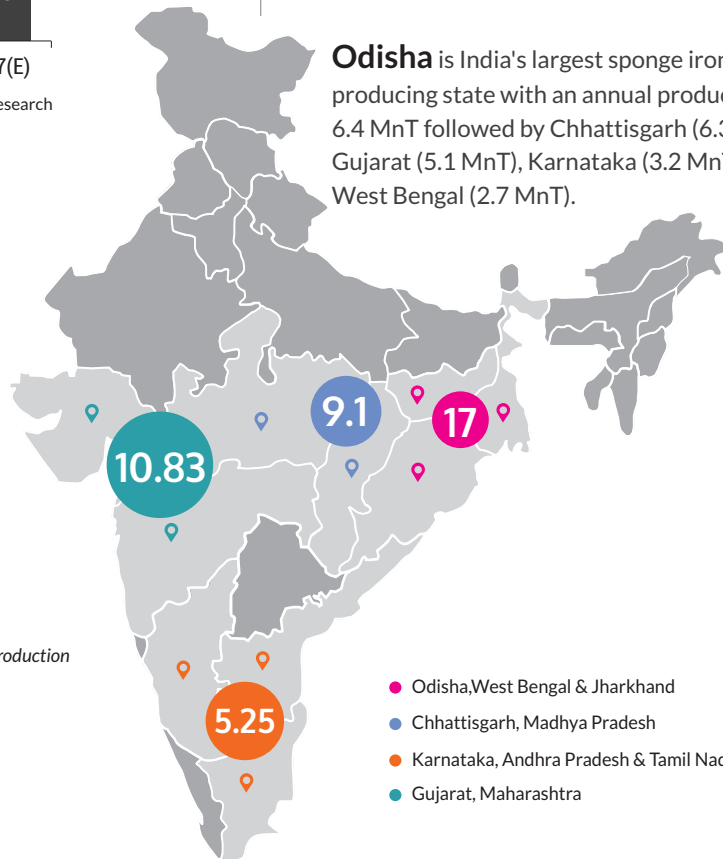
State	Sponge iron production (in MnT)	
	FY15	FY16
Andhra Pradesh	0.37	0.57
Chhattisgarh	6.16	6.31
Goa	-	0.27
Gujarat	4.2	5.1
Jharkhand	1.29	1.97
Karnataka	2.73	3.18
Madhya Pradesh	0.07	0.05
Maharashtra	0.31	0.2
Odisha	5.46	6.36
Tamil Nadu	0.14	1.09
Uttar Pradesh	0.06	0.1
West Bengal	2.23	2.74
Grand Total	23.02	27.94

Provisional data Source: SteelMint Research

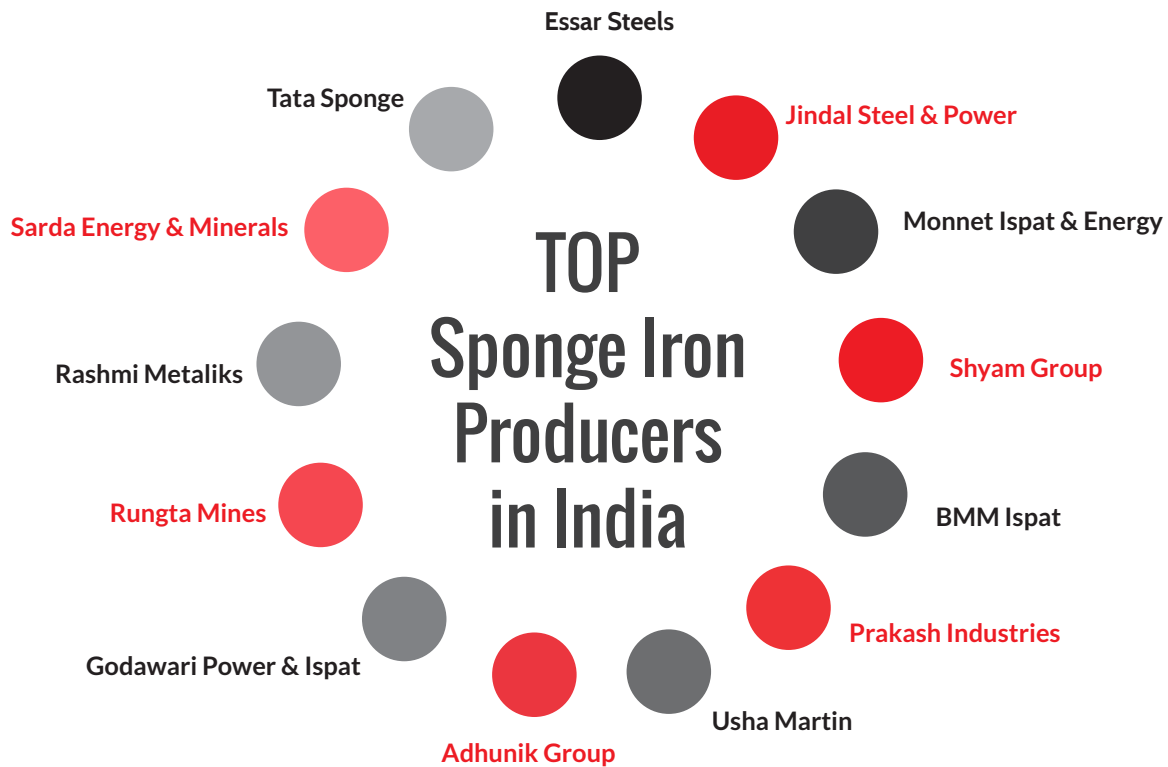
India's region-wise sponge iron capacity in FY16

Capacity in Million tonne

Other states contribute nearly 5.1 MnT in India's sponge iron production
Source: SteelMint Research



Odisha is India's largest sponge iron producing state with an annual production of 6.4 MnT followed by Chhattisgarh (6.3 MnT), Gujarat (5.1 MnT), Karnataka (3.2 MnT) and West Bengal (2.7 MnT).



Reasons behind increase in India's Sponge Iron Production

1. Improved domestic Iron Ore supply: Rise in domestic iron ore production was absorbed by sponge iron units and their iron ore sourcing also witnessed improvement. India's iron ore production ramped up by 20% Y-o-Y from 129 MnT in FY15 to 155 MnT in FY16.

2. Increase in Pellet Production by JSPL and Essar: JSPL's pellet production moved up by 44% Y-o-Y from 3.2 MnT in FY15 to 4.6 MnT in FY16.

Essar Steel sourced 7.3 MnT iron ore in FY16 compared to 5.9 MnT in FY15. As per the increased iron ore sourcing observed in last fiscal we expect its pellet production must have touched nearly 6.5 MnT in FY16 against 5.4 MnT in FY15.

3. Falling Iron Ore Prices: India's rising iron ore production and declining sponge iron prices forced miners to cut iron ore offers. Iron ore prices in Odisha and Chhattisgarh fell by upto 43% Y-o-Y in FY16.

Particulars	FY4	FY15	FY16
Iron Ore Production (in MnT)	152.4	129	155
Iron Ore Lump Imports (in MnT)	-	2.7	3
JSPL Pellet production (in MnT)	4.1	3.2	4.6
Essar Pellet production (in MnT)	5.4	5.4	6.5
Lump Premium (Domestic) (in INR/MT)	4,300	3,700	1,950
Lump Premium (Global)	0.25	0.2	0.1
Iron Ore Lump Prices (in INR/MT)	6,750	6,650	3,750
Pellet Prices (in INR/MT)	7,000	7,100	4,000

Iron ore lump (5-18 mm, Fe 63%) prices are monthly avg those of Odisha, prices loaded to wagons & inclusive of royalty Pellet (Fe 63%) prices are monthly avg, loaded to wagons basis from Barbil (Odisha)

Provisional data

Source: SteelMint Research

4. Falling Lump Premium which made imports cheaper for Sponge manufactures: Gujarat and southern India based sponge units have maintained their iron ore imports at similar levels in last two fiscals. West India and southern India based units imported nearly 3 MnT iron ore in FY15

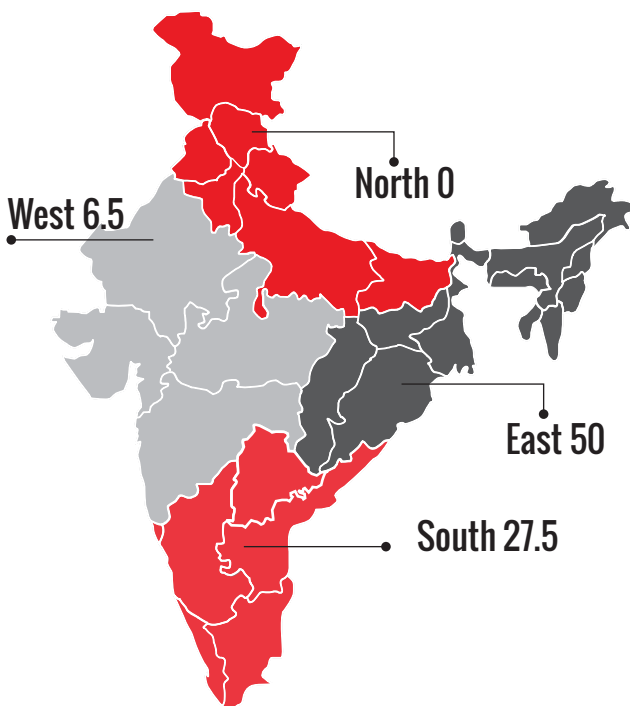
and in FY16 they imported 3.1 MnT iron ore. Major iron ore importers in west India were Gallant Metal, Monosteel, SAL Steel, Varsana Ispat and Welspun India. While major sponge iron makers in southern India were Kamachi Group, Pushpit Steels, Pulkit Steels, Akshara Industries and Jeevaka Industries.

Prime reason behind it was plunge in spot iron lump premium in last fiscal. In FY14 lump premium was mostly seen hovering in the range of USD 0.15-0.3/MT CFR China. While in FY15 it fell and was seen wavering in the range of USD 0.05-0.3/MT, CFR China and in FY16 it descended further to levels of USD 0.04-0.18/MT, CFR China.

KEY OBSERVATIONS

1. Standalone Pellet makers reduce Iron Ore sourcing sharply by 23%: Standalone pellet manufacturers have reduced their iron ore sourcing by 23% Y-o-Y in FY16. They sourced 4.3 MnT iron ore in FY15 which declined to 3.3 MnT in FY16. Capacity utilization of these pellet plants also reduced drastically last fiscal amid dull demand for pellets. Prime reasons behind subdued demand for pellets were preference of sponge units towards lump over its cost effectiveness.

Indian Pellet Capacity in FY16 (in MnT)



Source: SteelMint Research

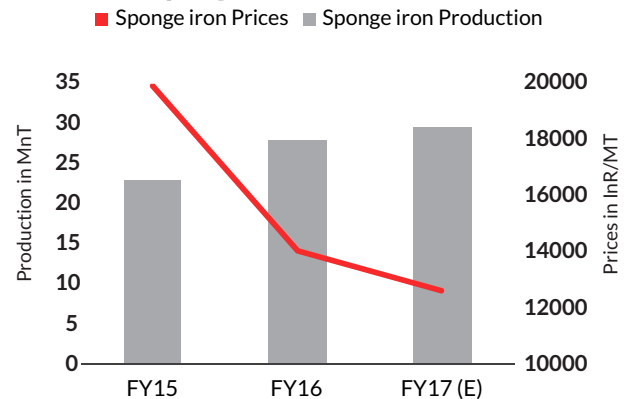
2. JSPL raises Iron Ore sourcing by 31%: Jindal Steel & Power witnessed 31% growth in its yearly iron ore sourcing pattern in FY16. It sourced 7.6 MnT in FY16 compared to 5.8 MnT in FY15. Reason behind increased sourcing was increase in pellet production from 3.2 MnT in FY15 to 4.6 MnT in FY16 following which its Angul (Odisha) plant doubled its crude steel production to 0.9 MnT in FY16. Essar Steel raised its iron ore sourcing from 5.9 MnT in FY15 to 7.3 MnT in FY16.

Southern India based sponge iron maker - BMM Ispat doubled its iron ore sourcing in FY16. It procured 2.3 MnT in FY16 against 1.1 MnT in FY15.

3. Bhushan Power & Steel nearly doubled its Iron Ore sourcing in FY16: Bhushan Power & Steel sourced 4.9 MnT iron ore in FY16 compared to 2.9 MnT in FY15, up by 69% Y-o-Y. Bhushan Steel also increased its iron ore procurement from 3.4 MnT in FY15 to 4.6 MnT in FY16.

DOMESTIC SPONGE IRON PRICES TO REMAIN SUBDUED IN FY17

Indian Sponge Iron Production Vs Prices

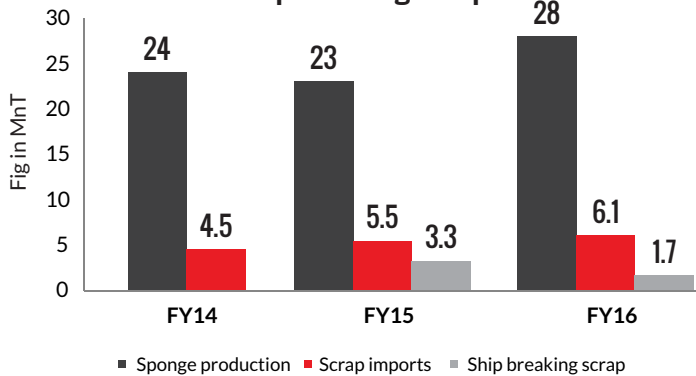


Sponge iron prices are weighted average of Durgapur, Rourkela, Raipur & Bellary

Source: SteelMint Research

Growing sponge iron production is pressurizing domestic sponge iron prices in India. SteelMint analyzed that weighted average prices of major sponge iron markets in India fell by about 30% Y-o-Y in FY16 amid subdued demand and increased production.

Indian Sponge Production Vs Scrap Imports & Ship Breaking Scrap



It can be inferred from the above graph that scrap imports to India have improved considerably by 11% Y-o-Y in FY16. Also sponge iron production in India increased by 22% in FY16. All these factors kept domestic sponge prices under pressure.

CONCLUSIONS

1. India's Iron Ore Production to increase further: With significant augmentation of iron ore production from states of Odisha, Karnataka, Chhattisgarh and Goa we anticipate India's iron ore production to increase by 18% Y-o-Y and touch 183 MnT in FY17

2. Sponge Iron Production in India may grow at 10%: Increasing domestic iron ore production will boost up sponge iron production in India. We expect India's sponge iron production to stand at 29.5 MnT in the running fiscal (up by 5% Y-o-Y)

3. Domestic Sponge Prices to remain under pressure : On one hand India's sponge production is to get a boost over strengthening iron ore production. On the other side weak demand for steel in the country has pulled down finished steel prices. If prices of finished steel products continue to decline and market remains unsupportive, it will adversely impact semi-finished steel market which may lead to thin margins.

Hence rising sponge iron production and declining market prices of sponge iron will keep prices under pressure.

DISCLAIMER

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