

## Performance & Prospect of Indian Steel Industry Scenario

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**Abstract** – India stands at 2nd largest crude steel producer in 2017, as large public and private sector players strengthen steel production capacity showed a rise in demand. Moreover, tonnage has increased to 128.28 million (MT) in FY17, which is 5.17 per cent more than FY16, while in the coming ten years India is predicted to produce 300 MT of steel. India’s comparatively low per capita steel depletion and expected growth in consumption due to growing infrastructure construction, automobile and railways sectors has offered scope for growth. National Mineral Development Corporation is expected to amplify the iron ore production 75 million tonnes per annum (MTPA) until 2021 marking new opportunities in the sector. Domestic players investments in expanding and advancing manufacturing facilities are expected to reduce reliance on imports. In addition, the entry of international players would provide advantage in terms of capital resources, technical know-how and more competitive business dynamics.

**Keywords:** Steel, Growth in CAGR, Steel Industry, Steel Industry Players

### 1. INTRODUCTION

Steel is an alloy of iron and different other elements, along with carbon. When carbon is the chief alloying element, its content in the steel is between 0.002% and 2.1% by weight. The following elements are eternally present in steel: carbon, manganese, phosphorus, silicon, sulfur and traces of oxygen, nitrogen and aluminum. Alloying elements intentionally added to adapt the characteristics of steel include: manganese, nickel, boron, chromium, molybdenum, titanium, vanadium and niobium. Carbon and other elements act as a hardening operator, preventing dislocations in the iron atom crystal grating from sliding past one another. Varying the amount of alloying elements and the form of their existence in the steel checks properties such as the hardness, ductility, and tensile strength of the resulting steel. Steel with increased carbon content can be made harder and powerful than iron, but such steel is also less ductile than iron. Alloys with a higher than 2.1% carbons are recognized as cast iron. Because they are not malleable even when hot, they can be formed only by casting, and they have lower melting point. Steel is also distinguishable from wrought iron, which can include a small amount of carbon, but it is included in the form of slag inclusions.

## 2. EVOLUTION OF THE INDIAN STEEL SECTOR

**1907-18:** Production of steel commenced in India (TISCO was setup in 1907). To compete with TISCO, IISC was set up in 1918.

**1923-48:** Mysore Iron and Steel Company was established in 1923. According to the new Industrial Policy Statement (1948), new enterprises were only undertaken by the central government.

**1954-64:** Hindustan Steel Ltd and Bokaro Steel Ltd were set up in 1954 and 1964, respectively.

In the early 1990s, the public sector dominated steel output. Private players were in downstream production mainly producing finished steel applying crude steel products.

**1973-92:** SAIL was created in 1973 as a holding company to administer most of India's iron and steel production. In 1989, SAIL captured Vivesvata Iron and Steel Ltd. In 1993; the government set plans in motion to fractionally privatize SAIL.

**1993-2014:** Foreign players began to enter the Indian steel market. No license condition for capacity creation. Imposition of export duty on iron ore, is to aim more on catering growing domestic demand.

Launch of Scheme for boosting of Research and Development in Iron and Steel sector

**2015-17:** In 2017, India classified as the 2nd largest crude steel producer in the world, leaving behind United States. 8.24 MT of steel was exported from India in the year 2017.

## 3. INDIA : GROWING AT A FAST PACE

Crude steel production in India was 101.4 MT, during the year 2017, standing at world's 3<sup>rd</sup> largest producer of crude steel with the total crude steel production increasing at a CAGR of 5.49% over the last 6 years. The steel sector adds over 2 per cent to the GDP of the nation and provides 20 lakh jobs in the country. Crude steel and finished steel production in India stood at 66.70 MT and 76.356 MT respectively during April-November 2017. As of March 2017, the capacity usage of steel producers is set to increase with strong export demand and signs of revival in domestic sales.

Companies like JSW and Essar Steel have experienced a sharp increase in steel production in the last 2 months. Steel manufacturing output of India is predicted to increase to 128.6 MT by 2021, accelerating the country's apportion of global steel production from 5.4 per cent in 2017 to 7.7 per cent by 2021. India's steel output is expected to grow at a CAGR of 8.9 per cent during 2017-21 and India is expected to become top universal steel producer.

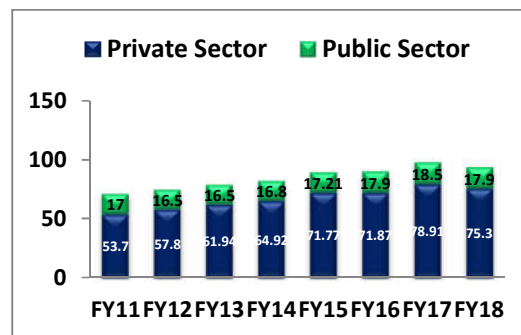


Fig.1 Total Crude Steel Production (Million Tonnes)

## 4. SHARES IN PRODUCTION

As of FY17, SAIL dominated India's steel sector, with the company accounting for 11.47% country's finished steel production and 14.88% of country's crude steel production. During FY17, Tata Steel after SAIL accounted for 10.84% of finished steel production and 12% of the country's crude steel production.

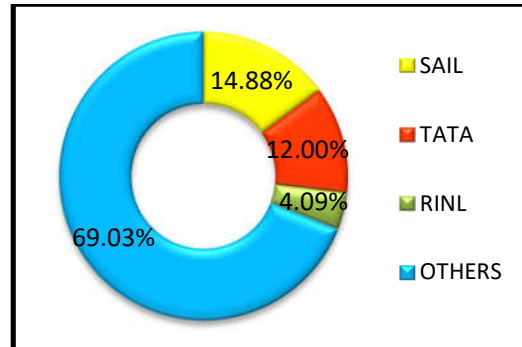


Fig.2 India's crude steel market share by production – FY17

Indian government inaugurated Universal Rail Mill (URM) worth US\$ 178.49 million at SAIL's Bhilai steel plant in January 2017. The production of the world's farseeing single rail of 130 meters from the new URM also commenced in the new mill.

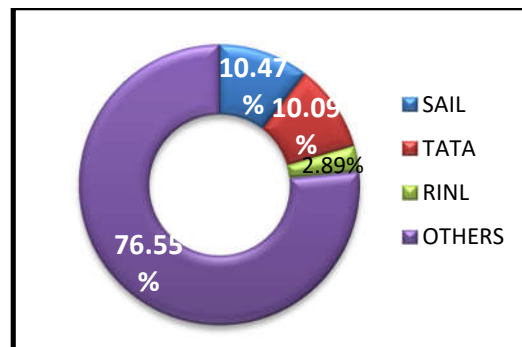


Fig.3 India's finished steel market share by production – FY17

## 4. STRATEGIES ADOPTED

**4.1 Capacity Expansion:** Companies in the steel industry are investing heavily in broadening their capacity. Major public and private companies, including Tata Steel, SAIL and JSW Steel, are expanding their production competency. The government is targeting a steel production capacity of 150 million tonnes by the year 2020. India is the 2nd-largest crude steel producer in the world with production striking 96 million tonnes in 2016. The government has stepped up infrastructure spending from the current 5% of GDP to 10% by 2017 and the government has planned to invest US\$ 61.8 billion in infrastructure in the Union Budget 2017-18. Considering 15% as steel constituent in the total investment, the initiative has a potential to generate an additional demand for steel of 18.75 mtpa. The Ministry of Steel is encouraging R&D activities by providing financial support from Steel Development Fund and Plan Scheme of the Central Government. Furthermore, the government has allowed 100% FDI through the automatic route in the Indian steel sector. A long term perspective is to achieve capacity of 300 mtpa till 2030, as per National Steel Policy 2017. SAIL is increasing its production capacity by 60-70 % in the last leg of its US\$10.79 billion programme.

**4.2 Greenfield projects: focus on downstream value-added products:** In the last few years, brisk and stable growth in demand has also prompted domestic entrepreneurs to set up fresh Greenfield projects in various states of the country. Mittal Steel enunciated two 12 mtpa Greenfield steel projects, one each in Jharkhand and Orissa. As India surges forward in building infrastructure, investments in steel pave the way ahead

**4.3 Mergers & Acquisitions:** Steel corporations are strengthening their position through over border mergers and acquisitions. The focus is on improving existing technology to upgrade production means and developing new value added-products. In the year 2014, Arcelor Mittal along with Nippon Steel and Sumitomo Metal Corporation acquired ThyssenKrupp Steel USA. Notable deals include Essar Globe's acquisition of Canada-based Algoma Steel. On 1st August 2016, Kirloskar Ferrous Industries Ltd has enunciated to acquire pig iron plant of VSL Steels Ltd. for US\$ 23.68 million. Moreover on 18 August 2016, JSW Steel Ltd. has acquired 74 % stake of Praxair Oxygen Pvt. Ltd. in their joint enterprise for US\$ 36 million. As on December 01, 2016, JSW Steel, entered into a consortium to acquire 35% stakes of Ilva steel plant, in Italy. Tata Steel has executed an agreement with Creative Port Development (CPDPL) for the acquisition of the priority stakes, i.e., 51% in CPDPL in January 2017. Italy's Marcegaglia ArcelorMittal has offered to buy Italy's troubled Ilva steel plant, for an amount of US\$ 2.4 billion and will expand production. In March 2017, Central Government permitted sale of SAIL's 3 units including Alloy Steels Plants, Salem Steel Plant, Visvesvaraya Iron and Steel Plant, with the transfer of management in these plants for the strategic disinvestment. ArcelorMittal SA is looking to set up a joint venture factory in India with state-owned Steel Authority of India Ltd, to produce high-end steel products which could be used in defense and satellite industries.

## 5. EMERGING OPPORTUNITIES

**5.1 Automotive-**The automotive industry is estimated to grow in size by US\$ 74 billion in 2015 to US\$ 260-300 billion by 2026. With increasing capacity addition in the automotive industry, demand for steel from the sector is expected to be vigorous.

**5.2 Capital Goods-**The capital goods sector accounts for 11% of steel consumption and expected to increase 14/15% by 2025-26 and has the potential to increase in tonnage and market share. Corporate India's capex is estimated to grow and generate greater demand for steel.

**5.3 Infrastructure -**The infrastructure sector accounts for 9% of steel consumption and expected to increase 11 per cent by 202526. Due to such a huge investment in infrastructure the demand for lengthy steel products would increase in the years ahead.

**5.4 Airports-**Large numbers of modern and private airports are expected to be set up. In the year 2017, passenger traffic at Indian airports stood at 264.99 million. Development of Tier-II city airports would uphold consumption growth. Consumption of steel in airport building is likely to grow more than 20% over next few years

**5.5 Railways-**The Dedicated Rail Freight Corridor (DRFC) network expansion would be improved in future. Gauge conversion, setting up of new lines and electrification would force steel demand. Indian Railways awarded projects worth around US\$ 1.73 billion during the 1st 7 months (April October) of FY16. In January 2017, Crisil estimated that the railways sector could generate business opportunities worth US\$ 99.65 billion.

**5.6 Oil & Gas-**Oil and gas amongst major end-user segment accounted for 34.4% of primary energy consumption in FY16. This would tend to an increase in demand of steel tubes and pipes, providing a lucrative opportunity to the steel industry.

**5.7 Power-**The government targets volume addition of 100 GW under the 13th Five-Year Plan (2017–22). Both generation and transmission capacities would be strengthened, thereby raising steel demand from the sector. Conventional power capacity addition of 23.98 GW has certified to be the highest in FY16.

**5.8 Rural India-**Rural India is expected to reach per capita consumption of 12.11 kg to 14 kg for finished steel by the year 2020. Policies like Indira Awaas Yojana Food for Work Programme (FWP)

and, Pradhan Mantri Gram Sadak Yojana are driving growing demand for construction steel in rural India.

## 6. CONCLUSION

Steel in India has a lot of scope in coming years and the way its requirement are fulfilling and serving all the areas of steel segments catching the eye of not only investors but the businessmen and entrepreneur of steel manufacturer products. It's expected to generate greater demand for steel during the year 2025-2026 especially for capital goods. However the crude steel production seems to be decreasing this year. SAIL dominating the finished steel production. The entrance of international players would provide benefits in terms of capital resources.

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