



Iron and Steel Industry in India

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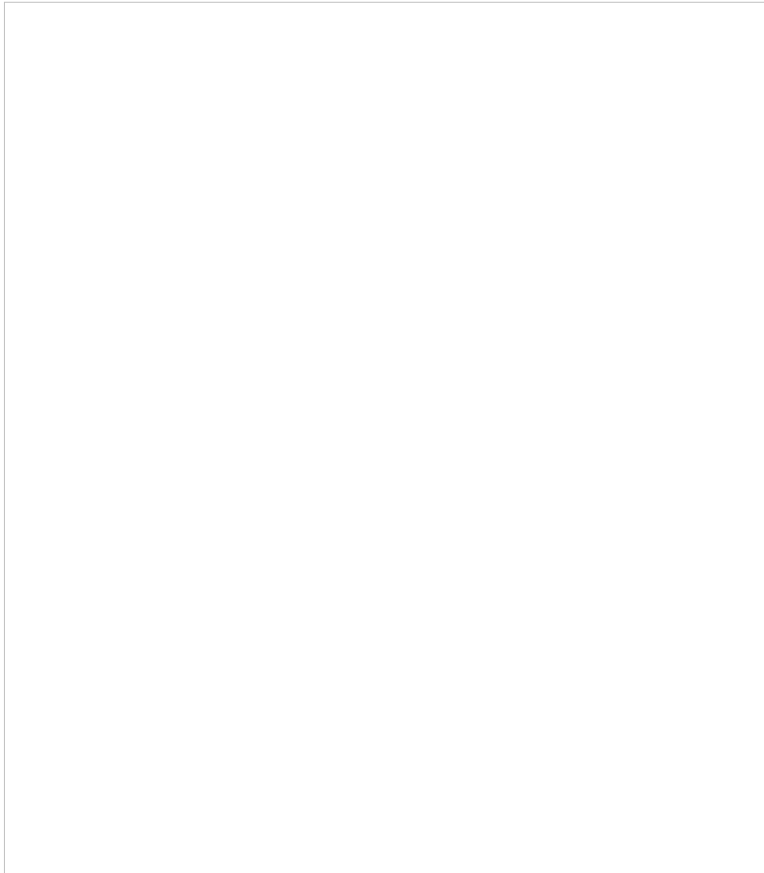
Overview

- At global level in 2018, the world crude steel production reached 1789 million tonnes (mt) and showed a growth of 4.94% over 2017.
- **China remained world's largest crude steel producer in 2018 (928 mt) followed by India** (106 mt), Japan (104 mt) and the USA (87 mt).
- Per capita **finished steel consumption** in 2017 is placed at 212 kg for world and 523 kg for China and for India it was 69 kg as published by World Steel Association.
- **India is the largest producer of sponge iron** in the world and the **3rd largest finished steel consumer** in the world after China & USA.
- The Government has taken various steps to boost the sector including the introduction of **National Steel Policy 2017** and allowing **100 per cent Foreign Direct Investment (FDI)** in the steel sector under the automatic route.
- The growth in the Indian steel sector has been driven by domestic **availability of raw materials** such as iron ore and cost-effective labour. Consequently, the steel sector has been a major contributor to India's manufacturing output.

Development of Steel Sector

- The economic reforms initiated by the Government since 1991 added new dimensions to industrial growth in general and the steel industry in particular.
- Licensing requirement for capacity creation was abolished, except for certain locational restrictions and the steel industry was removed from the list of industries reserved for the public sector.
- Automatic approval of foreign equity investment up to 100% was granted. Price and distribution controls were removed with a view to make the steel industry efficient and competitive.
- Restrictions on external trade, both in import and export, were removed with drastic reductions in import duty.
- General policy measures like reduction in import duty on capital goods, convertibility

of rupee on trade account, permission to mobilise resources from overseas financial markets among others, also benefited the Indian steel industry.



The Growth Profile

- The liberalization of industrial policy and other initiatives taken by the Government have given a definite impetus for entry, participation and growth of the private sector in the steel industry.
- While the existing units are being modernized/expanded, a large number of new steel plants have also come up in different parts of the country based on modern, cost effective, state-of-the-art technologies.
- In the last few years, the rapid and stable growth of the demand side has also prompted domestic entrepreneurs to set up fresh green field projects in different states of the country.
- Today, as the 2nd largest crude steel producer globally and with a capacity of over 100 million tonne, the Indian steel industry has come a long way.
- **Pig 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 94% of total production of pig iron in the country. Pig iron, crude iron obtained directly from the blast furnace and cast in molds.
- **Sponge Iron:** India, world's largest producer of sponge iron (2018), has 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 79% of total sponge iron production in the country.

- Sponge iron is a metallic product produced through direct reduction of iron ore in the solid state. The process of sponge iron making aims to remove the oxygen from iron ore. The quality of sponge iron is primarily ascertained by the percentage of metallization (removal of oxygen), which is the ratio of metallic iron to the total iron present in the product.

Import and Export of Iron & Steel

- Although India started exporting steel way back in 1964, exports were not regulated and depended largely on domestic surpluses. However, in the years following economic liberalisation, export of steel recorded a quantum jump.
- Subsequently, the rapid growth of domestic steel demand has led to a decline in the rate of growth of steel exports from India to ensure that domestic requirements are adequately met. India is currently a net importer of total finished steel.
- **Iron & steel are freely importable and freely exportable.**

Additional Capacity Creation in Private Sector

- Since 1991 with further opening up of the Indian economy, a focused reform process in place and a rapid but stable growth of the Indian economy, investments have flown significantly into the steel industry of the country with major investment plans announced in the states of Odisha, Jharkhand, Karnataka, Chhattisgarh and West Bengal.
- **Crude steel capacity** in the country stood at 138 million tonnes in 2017-18 as per data released by the JPC while the **National Steel Policy 2017** envisions domestic crude steel capacity reaching 300 million tonnes per annum by 2030-31.

Demand – Availability

- Demand and availability of iron and steel in the country are largely determined by market forces and gaps in demand-availability are met mostly through imports.
- Interface with consumers exists by way of meeting of the **Steel Consumers' Council**, which is conducted on regular basis.
- Interface helps in redressing availability problems, complaints related to quality.

Steel Prices

- **Price regulation of iron & steel was abolished on January 16, 1992.** Since then steel prices are determined by the interplay of market forces.

- Domestic steel prices are influenced by trends in raw material prices, demand – supply, conditions in the market, and international price trends among others.
- As a facilitator, the **Government monitors the steel market conditions** and adopts fiscal and other policy measures based on its assessment. Currently, **GST of 18% is applicable on steel** and there is **no export duty** on steel items.
- A **Steel Price Monitoring Committee** has been constituted by the Government with the aim to monitor price rationalization, analyze price fluctuations and advise all concerned regarding any irrational price behaviour of steel commodity.
- To avoid any distortion in prices in view of ad-hoc and rising imports, the Government had taken several steps including **raising import duty** and imposed a gamut of measures including **anti-dumping and safeguard duties** on a host of applicable iron and steel items.
- In a further move, to curb steel imports, the Indian government banned the production and sale of steel products that does not meet **BIS approval**.
- To check the sale of defective and sub-standard stainless steel products used for making utensils and various kitchen appliances, the **Stainless Steel (Quality Control) Order, 2016**, released for products used in making utensils and kitchen appliances that will help filter imports of the metal.

Government Initiatives

- An export duty of 30 per cent has been levied on iron ore to ensure supply to domestic steel industry.
- Government's focus on infrastructure and restarting road projects is aiding the boost in demand for steel. Also, further likely acceleration in rural economy and infrastructure is expected to lead to growth in demand for steel.
- The Union Cabinet has approved the National Steel Policy (NSP) 2017, as it seeks to create a globally competitive steel industry in India.

NSP 2017 – Vision, Mission & Objectives

Vision: To create a technologically advanced and globally competitive steel industry that promotes economic growth.

Mission: Provide environment for attaining –

- Self-sufficiency in steel production by providing policy support & guidance to private manufacturers, MSME steel producers, CPSEs & encourage adequate capacity additions.
- Development of globally competitive steel manufacturing capabilities.
- Cost-efficient production and domestic availability of iron ore, coking coal and natural gas.
- Facilitate investment in overseas asset acquisitions of raw materials.

- Enhance domestic steel demand.

Objectives: The National Steel Policy aims at achieving the following objectives –

- Build a globally competitive industry
- Increase per Capita Steel Consumption to 160 Kgs by 2030-31
- To domestically meet entire demand of high grade automotive steel, electrical steel, special steels and alloys for strategic applications by 2030-31
- Increase domestic availability of washed coking coal so as to reduce import dependence on coking coal from ~85% to ~65% by 2030-31
- To have a wider presence globally in value added/ high grade steel
- Encourage industry to be a world leader in energy efficient steel production in an environmentally sustainable manner.
- Establish domestic industry as a cost-effective and quality steel producer
- Attain global standards in Industrial Safety and Health
- To substantially reduce the carbon foot-print of the steel industry

The Ministry of Steel is facilitating setting up of an **industry driven Steel Research and Technology Mission of India (SRTMI)** in association with the **public and private sector steel** companies to spearhead research and development activities in the iron and steel industry at an initial corpus of Rs 200 crore (US\$ 30 million).

Export Promotion (Duty Exemption Schemes) of Iron & Steel Products

- The scheme enables exporters to import relevant raw material and other inputs in required quantities, duty free for production of the export product.
- Quantities of import are allowed as per standard input output norms (SION) prescribed by DGFT or as per self declared norms by the exporters subject to ratification of the DGFT.
- Ministry of Steel (Technical Wing) helps the Advance Authorization Committee/Norms Committee in DGFT/ in ratification of the self declaration norms or otherwise.
- Ministry of Steel also helps DGFT to fix new norms (Standard Input-Output Norms) and/or to review existing norms in consultation with industry/ experts/ consultants.

Energy and Environment Management in Iron & Steel sector

- Iron & steel industry in India are covered under the **Environment Protection Act (EPA)** as well as **Environment Protection Rules & Regulations** enacted & published by Ministry of Environment, Forest & Climate Change (MoEF&CC).
- At the beginning, the entrepreneurs are required to **obtain statutory clearances** from the Union/State Governments required under the EPA for setting up of any new iron & steel plants or its substantial expansion.
- Further, the steel companies are required to **install specified pollution control**

equipments and also operate well within the prescribed norms.

- These are **monitored by Central/State Pollution Control Boards**. Ministry Of Steel helps & facilitates formulation/amendment of Norms and standards.

Energy Management

- Energy consumption in most of the integrated steel plants in India is generally high at 6-6.5 Giga Calorie per tonne of crude steel as compared to 4.5-5.0 in steel plants abroad.
- The higher rate of energy consumption is mainly due to **obsolete technologies** including problems in retrofitting modern technologies in old plants, old shop floor & operating practices, poor quality of raw material viz. high ash coal/coke, high alumina iron ore etc.
- The energy consumption in steel plants is however, gradually reducing because of technological up gradation, utilisation of waste heats, use of better quality inputs, etc.

Some of the steps being taken by the Ministry of Steel through various forums and mechanisms are:

- Charter on Corporate Responsibility for Environment Protection (CREP).
- National Action Plan on Climate Change (NAPCC).
- Promotion of Energy Efficiency in SME Sector.
- UNDP-GEF-MoS Project: "Energy Efficiency in Steel Re-rolling Mills" (2004-2013).
- UNDP-MoS-AusAID Project: "Up scaling Energy Efficient Production in Small Scale Steel Industry in India" (June 2013-June2016).
- NEDO (New Energy & industrial technology Development Organisation), Model Projects for Energy Efficiency Improvement.
- Intended Nationally Determined Contributions (INDCs) for Indian Steel Industry.
- Ministry of Steel has constituted a Task Force for promotion and utilization of Iron and Steel Slag.

Problems of Iron and Steel Industry

- Poor demand, price slump, competition from cheaper imports and delays in project execution are major problems in Indian steel industry.
- Inadequate supply of power and coal, Inefficiency of public sector units and under-utilisation of capacity are other challenging issues.
- Indian banks are grappling with bad loans (NPA) and at the same time the industry which has a long gestation period, needed huge investment.
- Raw material and infrastructure bottlenecks issues are also there.
- Obsolete technology in PSUs led to inferior quality products.
- Under-utilization of labour due to frequent strikes, lockout, inefficient management

(slow land acquisition, environment clearances etc.) factors facilitate dumping in the market decreasing the global prices hitting the domestic producers and their exports.

- Global glut and a surge in cheap imports from China, Russia, Korea and Japan have dented the domestic industry's fortunes.

Suggestions

- The iron and steel industry needed a comprehensive planning for modernisation, up-gradation of technologies, replacement of obsolete equipment and removal of technological imbalances.
- Presently, the government is trying to support the industry through the RBI's strategic debt restructuring scheme. But it needs long-term finance, such as, pension funds, savings etc. which can withstand cyclical volatility of profits unlike funding from banks or capital markets.
- Anti dumping duties on cheap import to protect domestic producers.
- More focus on infrastructure and automobile industry to increase domestic demand and job creation to counter-balance global slowdown.
- Servicing of bad loans by government to provide capital and reviewing the credibility before dispatching the loans.
- Increased foreign investment.
- More emphasis on Green Climate Fund to procure environment friendly technology.
- Decrease iron ore exports to ensure raw material supply.

Way Forward

- The Indian steel industry has entered into a new development stage, post de-regulation, riding high on the resurgent economy and rising demand for steel.
- Huge scope for growth is offered by India's comparatively low per capita steel consumption and the expected rise in consumption due to increased infrastructure construction and the thriving automobile and railways sectors.
- The **New Industrial Policy Regime** provides opportunities for growth of Iron and Steel in private sector.
- The Government has also announced a policy for providing preference to domestically manufactured Iron & Steel products in Government procurement.
- Ministry of Steel is playing the role of a facilitator, providing broad directions and assistance to new and existing steel plants, in the liberalized scenario.