### Definition

India's iron and steel industries are some of the more important industries in India. During 2014 through 2015, India was the third largest producer of raw steel[[1]](https://en.wikipedia.org/wiki/Iron_and_Steel_Industry_in_India" \l "cite_note-1) and the largest producer of sponge iron in the world. The industry produced 91.46 metric tons of total finished steel and 9.7 metric tons of [pig iron](https://en.wikipedia.org/wiki/Pig_iron). Most iron and steel in India is produced from iron ore.[[2]](https://en.wikipedia.org/wiki/Iron_and_Steel_Industry_in_India#cite_note-2) The [Ministry of Steel](https://en.wikipedia.org/wiki/Ministry_of_Steel)iin Indias concerned with the Cocooination and planning of the growth and development of Iron and Steel Industry in the country, both in the Public and Private Sectors ;Formulation of policies in respect of production, pricing, distribution, import and export of iron & steel, ferro alloys and refractories; and the development of input industries relating to iron ore, manganese ore, chrome ore and Refractories etc., required mainly by the steel industry.

Most of the public sector undertakings market their steel through the [Steel Authority of India](https://en.wikipedia.org/wiki/Steel_Authority_of_India_Limited) (SAIL).

Steel plants

Steel plants[[edit](https://en.wikipedia.org/w/index.php?title=Iron_and_Steel_Industry_in_India&action=edit&section=1" \o "Edit section: Steel plants)]

Steel plants are of two types:

* Mini Steel plants;and
* Integrated Steel Plants

Mini steel plants are smaller, have electric furnaces, use steel scrap and sponge iron. They have re-rollers that use steel ingots as well. They produce mild and alloy steel of certain specifications. There are around 650 mini steel plants in India.

Integrated steel plants are large, handle everything in one complex-from putting together raw material to steel making, rolling and shaping. Iron ore, coke, and flux are fed into the blast furnace and heated. The coke reduces the iron oxide in the ore to metallic iron, and the molten mass separates into slag and iron. Some of the iron from the blast furnace is cooled, and marketed as pig iron; the rest flows into basic oxygen furnaces, where it is converted into steel. Iron and steel scrap may be added to both the blast furnace and the basic iron furnace. There are about 5 integrated SAIL plants in India.

Current steel plants in India[[edit](https://en.wikipedia.org/w/index.php?title=Iron_and_Steel_Industry_in_India&action=edit&section=2" \o "Edit section: Current steel plants in India)]

there are more than 50 iron and steel industries in India their locations are given below in the table that follow

|  |  |  |
| --- | --- | --- |
| **Name** | **Location** | **Owner** |
| [Tata Iron and Steel Corporation](https://en.wikipedia.org/w/index.php?title=Tata_Iron_and_Steel_Corporation&action=edit&redlink=1) (TISCO) | [Jamshedpur](https://en.wikipedia.org/wiki/Jamshedpur),[Jharkhand](https://en.wikipedia.org/wiki/Jharkhand) | [Tata Steel](https://en.wikipedia.org/wiki/Tata_Steel) |
| [Visvesvaraya Iron and Steel Plant](https://en.wikipedia.org/wiki/Visvesvaraya_Iron_and_Steel_Plant) | [Bhadravati, Karnataka](https://en.wikipedia.org/wiki/Bhadravati,_Karnataka) | [SAIL](https://en.wikipedia.org/wiki/Steel_Authority_of_India_Limited) |
| [Bhilai Steel Plant](https://en.wikipedia.org/wiki/Bhilai_Steel_Plant) | [Chattisgarh](https://en.wikipedia.org/wiki/Chattisgarh) | [SAIL](https://en.wikipedia.org/wiki/Steel_Authority_of_India_Limited) |
| [Durgapur Steel Plant](https://en.wikipedia.org/wiki/Durgapur_Steel_Plant) | [Durgapur](https://en.wikipedia.org/wiki/Durgapur),[West Bengal](https://en.wikipedia.org/wiki/West_Bengal) | [SAIL](https://en.wikipedia.org/wiki/Steel_Authority_of_India_Limited) |
| [Bokaro Steel Plant](https://en.wikipedia.org/wiki/Bokaro_Steel_Plant) | [Jharkhand](https://en.wikipedia.org/wiki/Jharkhand) | [SAIL](https://en.wikipedia.org/wiki/Steel_Authority_of_India_Limited) |
| [Chandrapur Ferro Alloy Plant](https://en.wikipedia.org/w/index.php?title=Chandrapur_Ferro_Alloy_Plant&action=edit&redlink=1) | [Chandrapur](https://en.wikipedia.org/wiki/Chandrapur),[Maharashtra](https://en.wikipedia.org/wiki/Maharashtra) | [SAIL](https://en.wikipedia.org/wiki/Steel_Authority_of_India_Limited) |
| [IISCO Steel Plant](https://en.wikipedia.org/wiki/IISCO_Steel_Plant) | [Asansol](https://en.wikipedia.org/wiki/Asansol), [West Bengal](https://en.wikipedia.org/wiki/West_Bengal) | [SAIL](https://en.wikipedia.org/wiki/Steel_Authority_of_India_Limited) |
| Salem Steel Plant | [Tamil Nadu](https://en.wikipedia.org/wiki/Tamil_Nadu) | [SAIL](https://en.wikipedia.org/wiki/Steel_Authority_of_India_Limited) |
| [Rourkela Steel Plant](https://en.wikipedia.org/wiki/Rourkela_Steel_Plant) | [Odisha](https://en.wikipedia.org/wiki/Odisha) | [SAIL](https://en.wikipedia.org/wiki/Steel_Authority_of_India_Limited) |
| [Vijaynagar Steel Plant](https://en.wikipedia.org/w/index.php?title=Vijaynagar_Steel_Plant&action=edit&redlink=1) | [Hospet](https://en.wikipedia.org/wiki/Hospet), [Bellary](https://en.wikipedia.org/wiki/Bellary), [Karnataka](https://en.wikipedia.org/wiki/Karnataka) | [Jindal Steel and Power](https://en.wikipedia.org/wiki/Jindal_Steel_and_Power) |
| Vishakhpatnam Steel Plant | [Vishakhpatnam](https://en.wikipedia.org/w/index.php?title=Vishakhpatnam&action=edit&redlink=1), [Andhra Pradesh](https://en.wikipedia.org/wiki/Andhra_Pradesh) | [Rashtriya Ispat Nigam](https://en.wikipedia.org/wiki/Rashtriya_Ispat_Nigam) |

### **Classification**

**First digit** 1 indicates carbon steel (2-9 are used for [alloy steels](http://www.substech.com/dokuwiki/doku.php?id=alloy_steels));

**Second digit** indicates modification of the steel.

0 - Plain carbon, non-modified

1 - Resulfurized

2 - Resulfurized and rephosphorized

5 - Non-resulfurized, Mn over 1.0%

**Last two digits** indicate [carbon](http://www.substech.com/dokuwiki/doku.php?id=classification_of_carbon_materials) concentration in 0.01%.

Example: SAE 1030 means non modified carbon steel, containing 0.30% of carbon.

A letter prefix before the four-digit number indicates the [steel making](http://www.substech.com/dokuwiki/doku.php?id=steel_making) technology:

A - Alloy, basic open hearth

B - Carbon, acid Bessemer

C - Carbon, basic open hearth

D - Carbon, acid open hearth

E - Electric furnace

Example: AISI B1020 means non modified carbon steel, produced in acid Bessemer and containing 0.20% of carbon.

[**Alloy steels**](http://www.substech.com/dokuwiki/doku.php?id=alloy_steels)

* Low alloy steels (alloying elements ⇐ 8%);
* High alloy steels (alloying elements > 8%).

According to the four-digit classification SAE-AISI system:

**First digit**indicates the class of the alloy steel:

2- Nickel steels;

3- Nickel-chromium steels;

4- Molybdenum steels;

5- Chromium steels;

6- Chromium-vanadium steels;

7- Tungsten-chromium steels;

9- Silicon-manganese steels.

**Second digit** indicates concentration of the major element in percents (1 means 1%).

**Last two digits** indicate carbon concentration in 0,01%.

Example: SAE 5130 means alloy chromium steel, containing 1% of chromium and 0.30% of carbon.  
  
[to top](http://www.substech.com/dokuwiki/doku.php?id=classification_of_steels_and_cast_irons)

#### Classification of steels by application

[**Stainless steels**](http://www.substech.com/dokuwiki/doku.php?id=stainless_steels)**:**

AISI has established three-digit system for the stainless steels:

2XX series – chromium-nickel-manganese [austenitic stainless steels](http://www.substech.com/dokuwiki/doku.php?id=stainless_steels#austenitic_stainless_steels);

3XX series – chromium-nickel [austenitic stainless steels](http://www.substech.com/dokuwiki/doku.php?id=stainless_steels#austenitic_stainless_steels);

4XX series – chromium [martensitic stainless steels](http://www.substech.com/dokuwiki/doku.php?id=stainless_steels" \l "martensitic_stainless_steels" \o "stainless_steels) or [ferritic stainless steels](http://www.substech.com/dokuwiki/doku.php?id=stainless_steels" \l "ferritic_stainless_steels" \o "stainless_steels);

5XX series – low chromium [martensitic stainless steels](http://www.substech.com/dokuwiki/doku.php?id=stainless_steels" \l "martensitic_stainless_steels" \o "stainless_steels);

[**Tool and die steels**](http://www.substech.com/dokuwiki/doku.php?id=tool_and_die_steels)**:**

Designation system of one-letter in combination with a number is accepted for tool steels.

The letter means:

* [W - Water hardened plain carbon tool steels](http://www.substech.com/dokuwiki/doku.php?id=tool_and_die_steels#w_-_water_hardened_plain_carbon_tool_steels);
* [O - Oil hardening cold work alloy steels](http://www.substech.com/dokuwiki/doku.php?id=tool_and_die_steels#o_a_d_-_cold_work_tool_steels);
* [A - Air hardening cold work alloy steels](http://www.substech.com/dokuwiki/doku.php?id=tool_and_die_steels#o_a_d_-_cold_work_tool_steels);
* [D -Diffused hardening cold work alloy steels](http://www.substech.com/dokuwiki/doku.php?id=tool_and_die_steels#o_a_d_-_cold_work_tool_steels);
* [S – Shock resistant low carbon tool steels](http://www.substech.com/dokuwiki/doku.php?id=tool_and_die_steels#s_shock_resistant_low_carbon_tool_steels);
* [T – High speed tungsten tool steels](http://www.substech.com/dokuwiki/doku.php?id=tool_and_die_steels#t_m_high_speed_tool_steels_t-tungsten_m-molybdenum);
* [M - High speed molybdenum tool steels](http://www.substech.com/dokuwiki/doku.php?id=tool_and_die_steels#t_m_high_speed_tool_steels_t-tungsten_m-molybdenum);
* [H – Hot work tool steels](http://www.substech.com/dokuwiki/doku.php?id=tool_and_die_steels#h_hot_work_tool_steels);
* [P – Plastic mold tool steels](http://www.substech.com/dokuwiki/doku.php?id=tool_and_die_steels#p_plastic_mold_tool_steels).

[to top](http://www.substech.com/dokuwiki/doku.php?id=classification_of_steels_and_cast_irons)

#### Classification of cast irons

* [White cast irons](http://www.substech.com/dokuwiki/doku.php?id=cast_irons#white_cast_irons) - hard and brittle wear resistant cast irons consisting of [pearlite](http://www.substech.com/dokuwiki/doku.php?id=iron-carbon_phase_diagram" \o "iron-carbon_phase_diagram) and [cementite](http://www.substech.com/dokuwiki/doku.php?id=iron-carbon_phase_diagram" \o "iron-carbon_phase_diagram).
* [Grey cast irons](http://www.substech.com/dokuwiki/doku.php?id=cast_irons#grey_cast_irons) - cast irons at slow cooling and consisting of [ferrite](http://www.substech.com/dokuwiki/doku.php?id=iron-carbon_phase_diagram) and dispersed graphite flakes.
* [Malleable cast irons](http://www.substech.com/dokuwiki/doku.php?id=cast_irons#malleable_cast_irons) - cast irons, produced by heat treatment of white cast irons and consisting of ferrite and particles of free graphite.
* [Nodular (ductile) cast irons](http://www.substech.com/dokuwiki/doku.php?id=cast_irons#nodular_ductile_cast_irons) - grey cast iron in which [Graphite](http://www.substech.com/dokuwiki/doku.php?id=graphite) particles are modified by magnesium added to the melt before [casting](http://www.substech.com/dokuwiki/doku.php?id=foundry_technologies). Nodular cast iron consists of spheroid nodular graphite particles in ferrite or pearlite matrix.

Role

The **Role of Iron and Steel Industry in India GDP** is very important for the development of the country. In India the visionary Shri Jamshedji Tata set up the first Iron and Steel manufacturing unit called Tata Iron and Steel Company, at Jamshedpur in Jharkhand. Iron and steel are among the most important components required for the infrastructure development in the country.

## Role of Iron and Steel Industry in India GDP-Facts

* The Iron and Steel Industry in India is one of the fastest growing sectors
* The demand drivers for the Indian Iron and Steel industry are increase in the activities of the automobiles industry, real estates industry, transportation system, aircraft industry, ship building industry, etc.
* India ranks 5th in the world in terms of production of steel
* The amount of crude steel produced in 2006-07 was 50.71 million tonnes
* The amount of finished steel produced in 2006-07 was 51.9 million tonnes
* The production of finished steel was increased by 16.52%
* The production of finished carbon steel was 24.8 million tonnes in the year 2006-07
* It is expected that India would become the second biggest producer of steel within the year 2016 and the production per year would be 137 million tonnes
* The exports pertaining to the steel industry was 6.26 % during the period 2006-07

## Role of Iron and Steel Industry in India GDP-Consumption

* The domestic consumption of steel has grown by12.5% in the past three years
* The domestic steel consumption in the year 2006-07 was 41.14 million tonnes
* The average growth rate of the Indian Iron and Steel Industry is 11.36%
* The construction projects all over India are major consumer of steel
* The per capita consumption of steel in India is 35kgs
* As the per capita consumption of steel is lower than other countries, so the steel industry has huge opportunities in the future

### Role of Iron and Steel Industry in India GDP-Growth in Future

* The Arcelor Mittal, which is the largest steelmaker in the world, has plans of establishing two Greenfield steel projects with capacity of 12 million tonnes annually, in India
* Acerinox SA, one of the important stainless steel manufacturers in collaboration with Nisshin Steel, Japan is setting up a steel plant in India
* The Tata Steel ranks 5th in the world steel production and the company have plans of expanding its capacity by the year 2015
* SAIL, India's biggest producer of steel has plans of increasing the production to 24.98 million tonnes annually
* Sinosteel Corp, China are planning to invest US$ 4 billion to set up a 5 million tonnes capacity Greenfield steel plant
* The acquisition of the Corus, the Anglo-Dutch steel manufacturer by the Tata Steel
* The Algoma Steel, Canada was acquired by Essar Global for US$ 1.63 billion

- See more at: <http://business.mapsofindia.com/india-gdp/industries/iron-steel.html#sthash.tJmnx5Y7.dpuf>

Products of steel industry

* [Mild Steel](http://www.justdial.com/Delhi-NCR/311/11055071_3/Mild-Steel-Dealers_b2c)
* [Stainless Steel](http://www.justdial.com/Delhi-NCR/311/10450881_3/Stainless-Steel-Dealers_b2c)
* [Stainless Steel Manufacturers](http://www.justdial.com/Delhi-NCR/Stainless-Steel-Manufacturers/ct-12255)
* [Stainless Steel Merchants](http://www.justdial.com/Delhi-NCR/Stainless-Steel-Merchants/ct-282)
* [Stainless Steel Product](http://www.justdial.com/Delhi-NCR/311/11070558_3/Stainless-Steel-Product_b2c)
* [Steel](http://www.justdial.com/Delhi-NCR/311/11072282_3/Steel-Dealers_b2c)
* [Steel Manufacturers](http://www.justdial.com/Delhi-NCR/Steel-Manufacturers/ct-26858)
* [Steel Merchants](http://www.justdial.com/Delhi-NCR/311/11054034_3/Steel-Merchants_b2c)
* [Steel Rack](http://www.justdial.com/Delhi-NCR/311/11070668_3/Steel-Rack-Dealers_b2c)
* [Steel Sheets](http://www.justdial.com/Delhi-NCR/311/11068983_3/Steel-Sheets-Dealers_b2c)
* [Alloy Steel](http://www.justdial.com/Delhi-NCR/311/11053364_3/Alloy-Steel-Dealers_b2c)
* [Carbon Steel](http://www.justdial.com/Delhi-NCR/311/11054194_3/Carbon-Steel-Dealers_b2c)
* [Cast Steel Manufacturers](http://www.justdial.com/Delhi-NCR/Cast-Steel-Manufacturers/ct-458198)
* [Fibre Steel](http://www.justdial.com/Delhi-NCR/Fibre-Steel-Dealers/ct-498935)
* [Floor Spring](http://www.justdial.com/Delhi-NCR/311/11057785_3/Floor-Spring-Dealers_b2c)
* [Mild Steel](http://www.justdial.com/Delhi-NCR/311/11055071_3/Mild-Steel-Dealers_b2c)
* [Mild Steel Manufacturers](http://www.justdial.com/Delhi-NCR/Mild-Steel-Manufacturers/ct-57415)
* [MS Round Bar](http://www.justdial.com/Delhi-NCR/MS-Round-Bar-Dealers/ct-1000028809)
* [Neon Light Steel Letter](http://www.justdial.com/Delhi-NCR/Neon-Light-Steel-Letter-Dealers/ct-12771)
* [Spring Steel Sheet Manufacturers](http://www.justdial.com/Delhi-NCR/Spring-Steel-Sheet-Manufacturers/ct-1000670723)
* [Stainless Steel](http://www.justdial.com/Delhi-NCR/311/10450881_3/Stainless-Steel-Dealers_b2c)
* [Stainless Steel Manufacturers](http://www.justdial.com/Delhi-NCR/Stainless-Steel-Manufacturers/ct-12255)
* [Stainless Steel Merchants](http://www.justdial.com/Delhi-NCR/Stainless-Steel-Merchants/ct-282)
* [Stainless Steel Product](http://www.justdial.com/Delhi-NCR/311/11070558_3/Stainless-Steel-Product_b2c)
* [Stainless Steel Raw Material](http://www.justdial.com/Delhi-NCR/311/11055697_3/Stainless-Steel-Raw-Material-Dealers_b2c)
* [Stainless Steel Traders](http://www.justdial.com/Delhi-NCR/Stainless-Steel-Traders/ct-457982)
* [Stainless Steel Tube](http://www.justdial.com/Delhi-NCR/311/11053025_3/Stainless-Steel-Tube-Dealers_b2c)
* [Stainless Steel Wholesalers](http://www.justdial.com/Delhi-NCR/Stainless-Steel-Wholesalers/ct-30653)
* [Steel](http://www.justdial.com/Delhi-NCR/311/11072282_3/Steel-Dealers_b2c)
* [Steel Angle](http://www.justdial.com/Delhi-NCR/Steel-Angle-Dealers/ct-12569)
* [Steel Bar](http://www.justdial.com/Delhi-NCR/311/11055622_3/Steel-Bar-Dealers_b2c)
* [Steel Bar Manufacturers](http://www.justdial.com/Delhi-NCR/Steel-Bar-Manufacturers/ct-106829)
* [Steel Channel](http://www.justdial.com/Delhi-NCR/Steel-Channel-Dealers/ct-486686)
* [Steel Die](http://www.justdial.com/Delhi-NCR/311/11057003_3/Steel-Die-Dealers_b2c)
* [Steel Distributors](http://www.justdial.com/Delhi-NCR/311/11057004_3/Steel-Distributors_b2c)
* [Steel Exporters](http://www.justdial.com/Delhi-NCR/Steel-Exporters/ct-464404)
* [Steel Forging](http://www.justdial.com/Delhi-NCR/Steel-Forging-Dealers/ct-278933)
* [Steel Importers](http://www.justdial.com/Delhi-NCR/Steel-Importers/ct-51092)
* [Steel Letter](http://www.justdial.com/Delhi-NCR/Steel-Letter-Dealers/ct-475917)
* [Steel Manufacturers](http://www.justdial.com/Delhi-NCR/Steel-Manufacturers/ct-26858)
* [Steel Merchants](http://www.justdial.com/Delhi-NCR/311/11054034_3/Steel-Merchants_b2c)
* [Steel Plate](http://www.justdial.com/Delhi-NCR/Steel-Plate-Dealers/ct-279562)
* [Steel Product](http://www.justdial.com/Delhi-NCR/311/11058034_3/Steel-Product-Dealers_b2c)
* [Steel Product Manufacturers](http://www.justdial.com/Delhi-NCR/Steel-Product-Manufacturers/ct-479334)
* [Steel Rack](http://www.justdial.com/Delhi-NCR/311/11070668_3/Steel-Rack-Dealers_b2c)
* [Steel Rod](http://www.justdial.com/Delhi-NCR/311/11054195_3/Steel-Rod-Dealers_b2c)
* [Steel Sheet Manufacturers](http://www.justdial.com/Delhi-NCR/Steel-Sheet-Manufacturers/ct-12629)
* [Steel Sheets](http://www.justdial.com/Delhi-NCR/311/11068983_3/Steel-Sheets-Dealers_b2c)
* [Steel Shuttering](http://www.justdial.com/Delhi-NCR/Steel-Shuttering/ct-500367)
* [Steel Tmt Distributors](http://www.justdial.com/Delhi-NCR/Steel-Tmt-Distributors/ct-1000033463)
* [Steel Tube](http://www.justdial.com/Delhi-NCR/311/11054385_3/Steel-Tube-Dealers_b2c)
* [Steel Wholesalers](http://www.justdial.com/Delhi-NCR/Steel-Wholesalers/ct-495956)
* [Steel Wires](http://www.justdial.com/Delhi-NCR/311/11068987_3/Steel-Wires-Dealers_b2c)
* [Steel Wool](http://www.justdial.com/Delhi-NCR/311/11054777_3/Steel-Wool-Dealers_b2c)
* [Structural Steel](http://www.justdial.com/Delhi-NCR/311/11059724_3/Structural-Steel-Dealers_b2c)
* [Tata Tiscon](http://www.justdial.com/Delhi-NCR/311/11089611_3/Steel-Bar-Dealers-Tata-Tiscon_b2c)
* [Tmt Steel](http://www.justdial.com/Delhi-NCR/Tmt-Steel-Dealers/ct-1000025226)
* [Tmt Steel Bar](http://www.justdial.com/Delhi-NCR/311/11135825_3/Tmt-Steel-Bar-Dealers_b2c)
* [Tmt Steel Bar Distributors](http://www.justdial.com/Delhi-NCR/311/11135820_3/Tmt-Steel-Bar-Distributors_b2c)
* [Tor Steel](http://www.justdial.com/Delhi-NCR/Tor-Steel-Dealers/ct-16975)

### Growth

### Locational Factors:

Iron and steel industry uses large quantities of heavy and weight losing raw materials and its localisation is primarily controlled by the availability of raw materials. Coal and iron ore are the two basic raw materials used by iron and steel industry and on the basis of minimum transportation cost most of the steel plants are located at three distinct places viz. (i) near coal fields, (ii) near iron ore mining centres and (iii) at places between areas of coal and iron ore production.

Most of the iron and steel plants of India such as Jamshedpur, Bumpur, Durgapur, Rourkela, Bhilai and Bokaro are located in Jharkhand, West Bengal, Orissa and Chhattisgarh. These states are very rich in coal and iron ore deposits and are important producers of these materials.

Visveswaraya Iron and Steel Works at Bhadravati is a major exception which is located far away from the main coal producing areas of the country. Earlier, this centre was depending upon charcoal which was available locally. Now it uses hydroelectricity from the Sharavati Power Project.

The other raw materials used in this industry are manganese, limestone, dolomite, chromite, silica, etc. These raw materials are used in small quantities and can be transported without much difficulty. Hence, they do not materially affect the localisation of this industry.

Another important factor influencing the localisation of iron and steel industry is the availability of market. Steel products of an integrated steel plant are quite bulky and it has been estimated that the transport cost per tonne-kilometre of steel product is about three times more than that of coal or iron ore.

Thus, following the theory of minimum transportation cost many centres of iron and steel production tend to be attracted by market. Moreover, recent technological developments in transport, the use of scrap as raw material and the agglomeration economics have made market oriented location more advantageous than ever before. With the increasing popularity of open hearth process, scrap has become a very important raw material in this industry.

About half of the metal now melted ‘in world’s iron and steel furnaces is scrap. Industrialized areas, specially with steel consuming industries, are the major sources of scrap iron. Thus, the market has double attraction, as the consumer of steel and as a source of raw materials. However, the use of scrap as raw material on a large scale is yet to pick up in India.

From the above discussion, it is clear that in the present day localization of iron and steel industry, each of the three factors viz., coal, iron ore and market has almost equal significance. The geographical coincidence of any two of the three factors would easily determine the site of the steel plant.

In another situation, when some ingredients are to be imported or finished steel is to be exported, sea port locations are preferred. This is exemplified by the establishment of the Vishakhapatnam Steel Plant at a sea port. A few more plants in the offing such as Mangalore and Ratnagiri(maharastra) also favour seaboard location.

### Centres of Production:

At present there are 10 primary integrated plants and a large number of decentralised scondary units known as mini steel plants. Besides, there are several rolling and re-rolling mills and foundries which manufacture different items of steel using pig iron and ingot steel. There are about 10,000 foundries, 95 per cent of which are concentrated in the western states of Maharashtra and Gujarat and in the southern state of Tamil Nadu.