

Introduction : Iron and steel industry is the key of modern industrial development of any country. It is a basic industry which supply basic machinery for other industries. The iron and steel industry is one of the most important industries in India. During 2014 through 2015, India was the third largest producer of raw steel and largest producer of sponge iron in the world.

Historical Development :- India has a glorious history in iron & steel industry. Iron working in India may have begun as early as 1500 B.C.E. The famous Iron Pillar of Mehrauli near Delhi is of 350 A.D. Wootz steel was widely exported and traded throughout ancient Europe, China and the Arab world and particularly famous in the Middle East, where it is became known as Damascus steel. Indian swords and blade made of Damascus steel found their way in to Persia.

The modern Iron & Steel industry has started with the unsuccessful effort in 1830 in Porto-Novo (Tamil Nadu) and Bepur (Kerala), Coimbatore (Tamil Nadu), Birbhum (West Bengal) and Kaldhungi (U.P.) between 1830 to 1860.

The first successful beginning of the modern iron & steel industry took place at Kulti (West Bengal) in 1871. But the outlet of bigger production became noticeable with the establishment of a steel plant in Jamshedpur in 1907. The plant started production of pig iron in 1911 and steel in 1913. In 1908 a steel plant is has established in Hirapur (Asansole, West Bengal). Indian Iron and Steel Company (IISCO) has established in 1918 in Burnpur of West Bengal. A another steel plant has established named Vishveshvaraya Iron and steel limited (VISL) in Bhadravati of Karnataka in 1923. In 1936, factories of Kulti and Hirapur have merged

- in IISCO. After the independence of India during ~~planning~~ planning years the following 3 new steel plants have established.
- (i) Hindustan Steel Limited, Bhilai (Chhattisgarh) → With Soviet alliance
 - (ii) Hindustan Steel Limited, Durgapur (W-Bengal) → With British alliance
 - (iii) Hindustan Steel Limited, Rourkela (Odisha) → With German alliance
 - (iv) Bokaro Steel Limited, Bokaro (Jharkhand) → With Soviet alliance

Steel Authority of India Ltd. (SAIL) has established in 1973 to the development of public sector plants. In present, factories of Durgapur, Rourkela, Bhilai and Salem comes under SAIL.

Localisation : Iron & steel industry is a weight-losing industry, therefore it is established in source region of raw material. Iron-ore, coal, manganese, lime stone, dolomite etc are important raw material is necessary for this industry. Generally 2.5 tonnes raw materials is necessary to produce 1 tonnes pig iron. Besides it, water, transportation facilities, huge capital and political support etc are also important factors for its localisation.

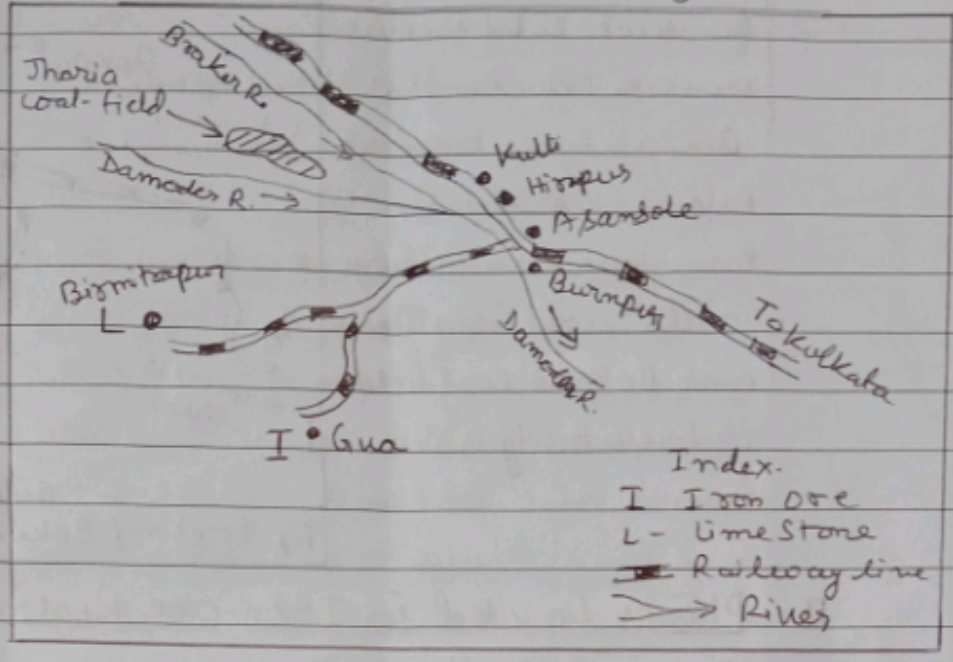
Distribution :- On the basis of location iron & steel industries can be classified in to following four groups-

I. Plants located in Coal region :- In the Coal region following plants of iron & steel industry are located-

1. Kulti - Burnpur and Hirapur (IISCO) :- These all three factories of IISCO are located near to Asansol. Iron-ore comes from Singhbhum area (Jharkhand), coal from Raniganj, Tharia, Ramgarh (Jharkhand), lime stone from Vizmitrapur, Gangpur (Odisha) ^{canal} & Manganese from Banspani (Odisha). Water is obtained from Damodar river and its tributaries. Rail and Road links connect it to

Kolkata which is just 200 km away.

Fig. Location of Kulti - Burmpur & Hirapur Steel Plant.



2. Durgapur Steel Plant, Durgapur (West Bengal) : This plant of the Hindustan Steel Ltd. is located ^{at Durgapur} in Bardhaman district of West Bengal. It was set up in 1959 with the help of United Kingdom. The production started in 1962. Effect of Tharia - Raniganj coal area is more on its localization.

Iron ore comes from Noamundi (Singbhum, Jharkhand), limestone from Birmitrapur (Odisha), manganese from Keonjhar (Odisha) and hydro-power and thermal power from D.V.C.

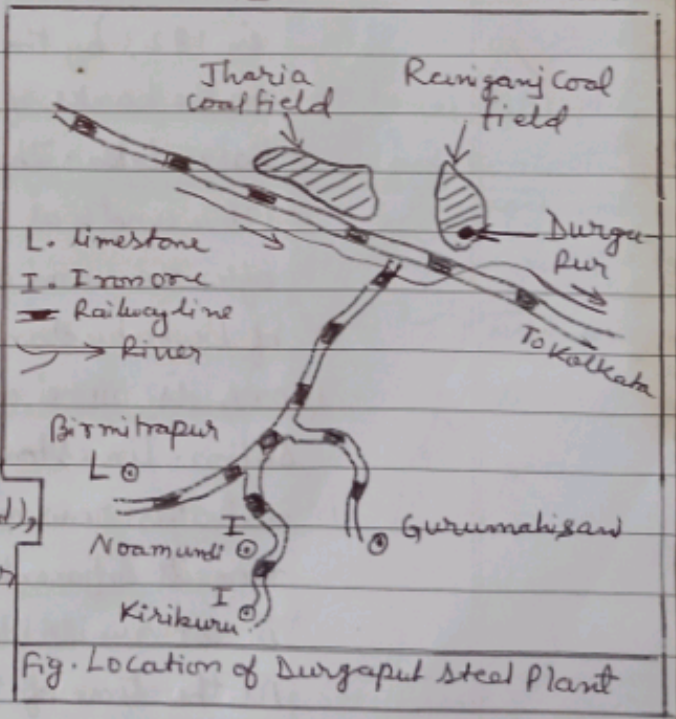
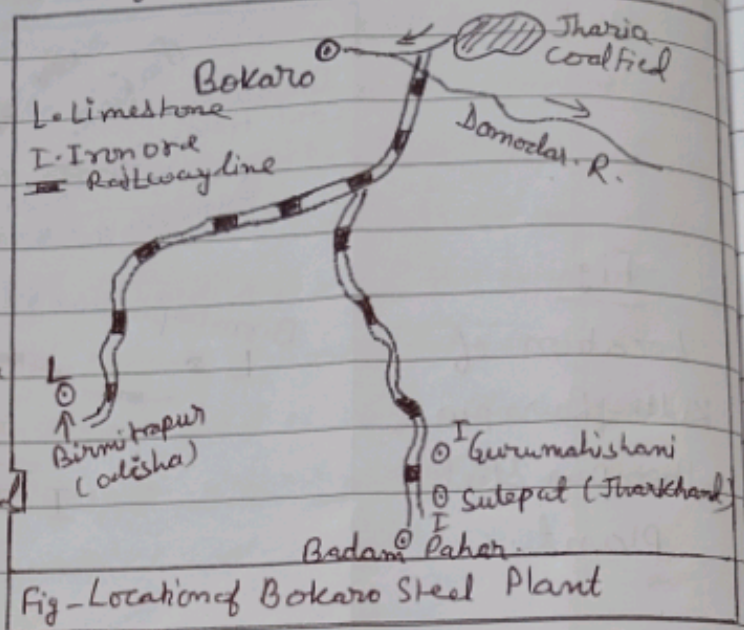


Fig. Location of Durgapur Steel Plant

3. Bokaro Steel Plant, Bokaro (Jharkhand) :- The Bokaro steel Ltd is established in 1964 with the help of Soviet Union at Bokaro near the confluence of the Bokaro and Damodar

Rivers in Hazaribagh district of Jharkhand. It started production in 1972. It receives iron-ore from Keonjhar (Odisha), limestone from Palamu (Jharkhand), manganese from Kiriburu (Odisha), coal from Jharia and Bokaro coal field. Hydroelectricity is obtained from D.V.C.

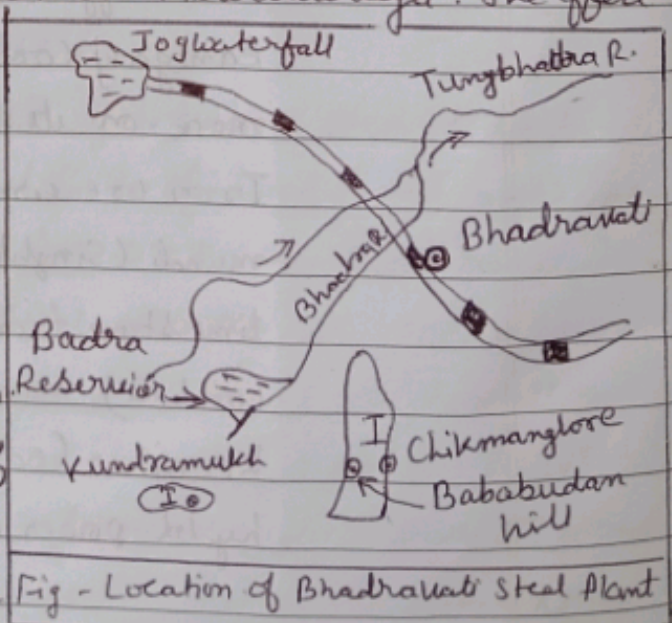


II Plants Located in Iron-Ore Region :- The plants

comes under this category :-

4. The Visweswaraya^{Iron &} Steel Ltd, Bhadravati (Karnataka): It was established as Mysore Iron and Steel Company (MISCO) in 1923 by the erstwhile state of Mysore. It is located on the banks of river Bhadravati in Shimoga district of Karnataka. This plant was brought under state control in 1962 and was renamed as Visweswaraya Iron and Steel Ltd after the name of great engineer Dr. Visweswaraya. The effect

of Bababudan hills of iron-ore is more on its localisation. Limestone, manganese and other raw materials come from its adjacent areas. Coal is not available in this region. At the time of the setting up of the plant in 1923 (till 1951)



the charcoal obtained from

the forest wood was used for smelting. Now it uses hydroelectric power obtained from Sharavati Power Project.

5. Rowakela Steel Plant, Rowakela (Odisha) : It has been established in the Sundargarh district of Odisha with the help of Germany in 1959. It receives iron ore from Keonjhar & Sundargarh (Odisha), coal from Jharica, manganese from Keonjhar and limestone from Birmitsapur (Odisha). Hydroelectricity is obtained from Hirakund Project. Pure water comes from Koel and Shankh river. It is located on the main Kolkata - Mumbai railway line and enjoys facilities of railway transport.

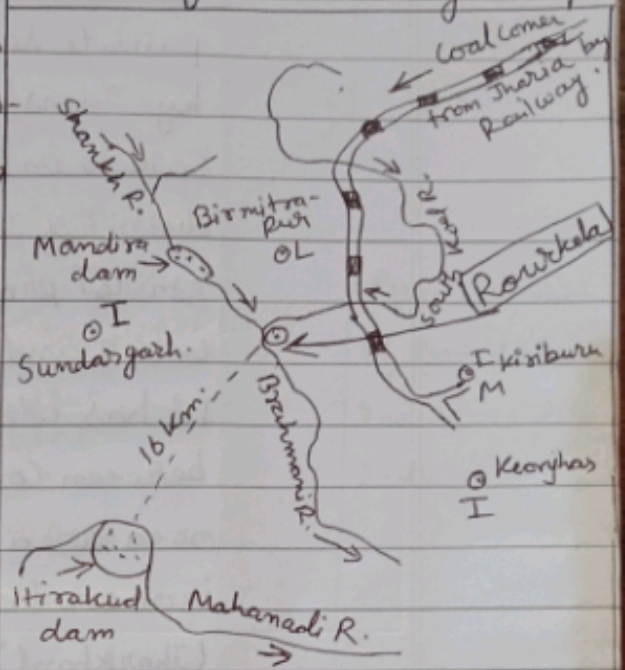


Fig - Location of Rowakela Steel Plant

6. Bhilai Steel Plant, Bhilai (Chhattisgarh) :- It was set up in Durg district of Chhattisgarh in 1957 with the help of Soviet Union. It started production in 1959. It receives Iron-ore from Dalli-Rajhara range, coal from Korba (Chhattisgarh) and Kargali (Jharkhand), manganese from Balaghat-Bhamdara region, dolomite from Raipur and thermal power from Korba Thermal Power station. It is connected with Kolkata - Mumbai railway line.

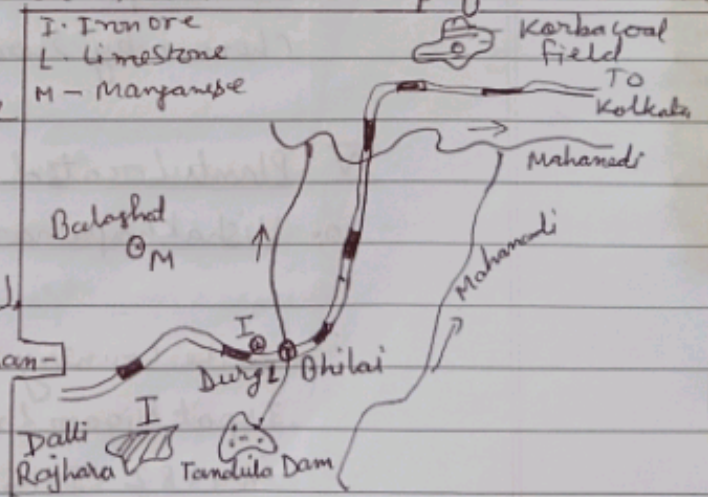


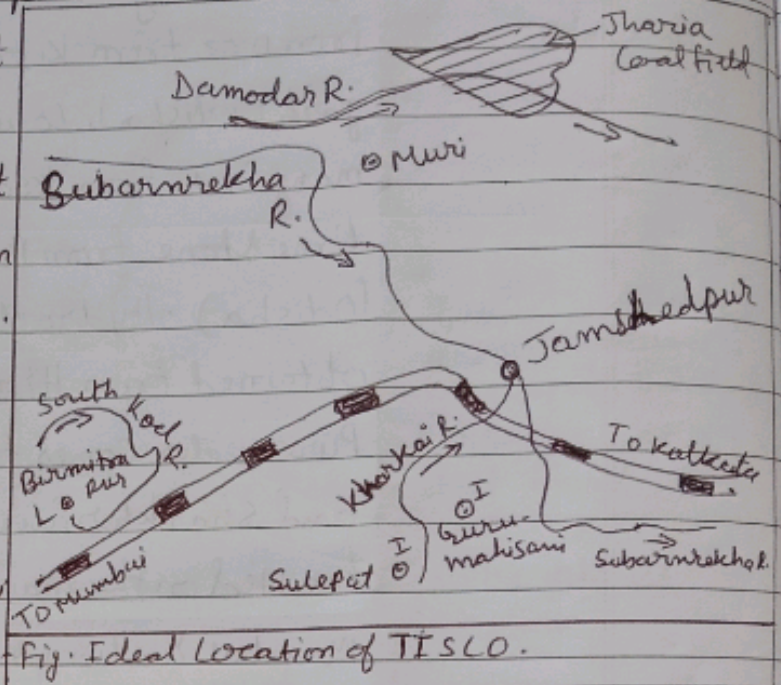
Fig - Location of Bhilai Steel Plant.

7. Salem Steel Plant → Salem district of Tamil Nadu → 1982
 8. Vijayanagar Steel Plant → Hospet in Bellary district of Karnataka

III Plant Located in between Coal and Iron-Ore region :-

9. Tata Iron and Steel Company (TISCO), Jamshedpur :- It is a private sector enterprise which was established in 1907 by Jamshedji Tata at Sakchi in Singhbhum district of Jharkhand. It started producing pig iron in 1911 and steel in 1912.

It has ideal location between coal and iron ore area. It obtains iron-ore from Noamundi (Jharkhand) & Gurumahisani (Odisha),



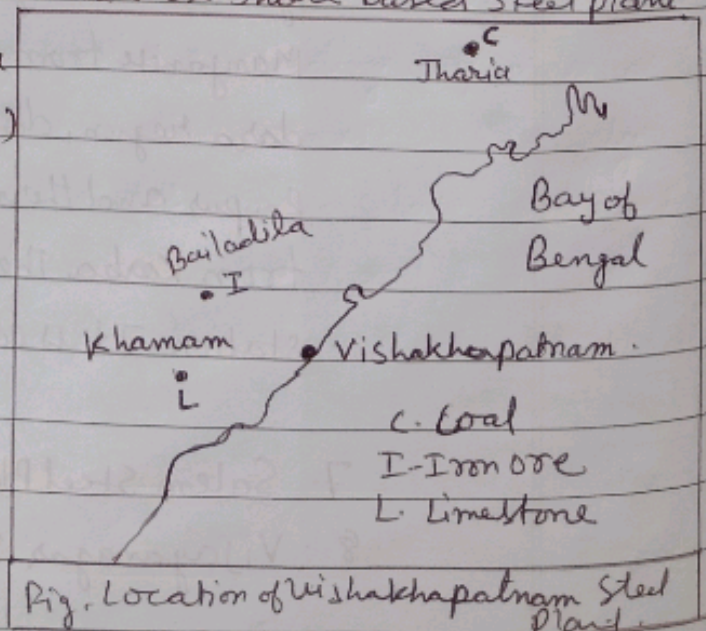
Stone and dolomite from Birmitrapur, and manganese from Isda mines of Odisha. It is located on the confluence of the Subarnrekha and Kharkai rivers which provides water. Jamshedpur is well connected with Kolkata, Mumbai and Chennai by road and rail.

IV Plants Located in the Coastal Region

10. Vishakhapatnam Steel Plant, Vishakhapatnam (Andhra Pradesh)

It is the first Shore based Steel plant

in the Country by Rashtriya Ispat Nigam Limited (RINL) in 1982. Iron ore comes from Bailadila (Chhattisgarh), lime stone from Khamam (Telangana) and coal from Damodar Valley and Australia (Imported).



Important Iron & Steel
Centre of India

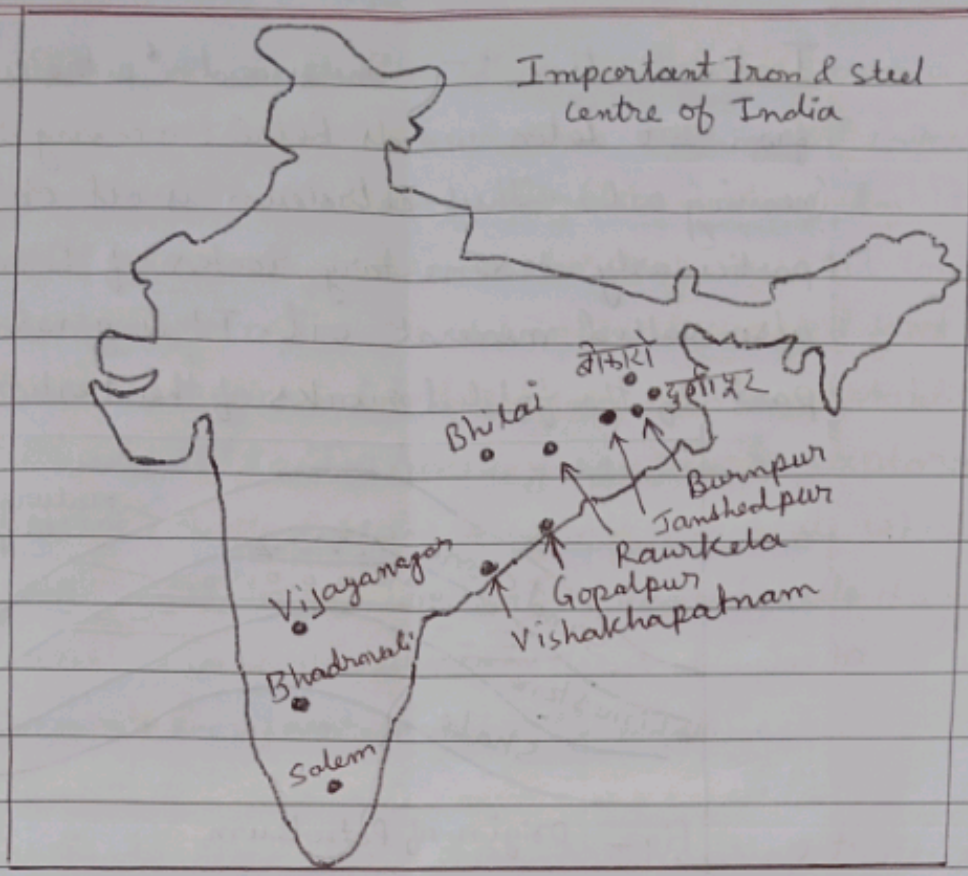


Fig:- Distribution
of Iron & Steel
Industries in
India.