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BOOKS

As per the guidelines of NEP 2020

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Revised and Updated

ICSE GEOGRAPHY

Based on the latest ICSE syllabus

R K JAIN

Includes latest toposheets G43S7 and G43S10 issued by the Survey of India

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GEO-GLOSSARY 255

ICSE GEOGRAPHY

Class 10

Chapter 20: India- Mineral-based Industries)

Industries that receive their raw materials from the minerals are called **mineral-based industries**.

THE IRON AND STEEL INDUSTRY

Due to its hardness, strength and durability, iron is the most important and widely used metal in the world. The iron and steel industry is the basic or the key industry as all other industries depend on it.

Iron and steel plant

GROWTH AND DEVELOPMENT

- The science and art of making steel is very old in India and this is evident from the famous **Iron Pillar of Delhi**, dating back to AD 350.
- The first attempt to produce iron and steel, on modern lines, was made in 1830 at Porto Novo in Tamil Nadu. However, the attempt failed and the mill was closed down in 1866.
- The modern iron and steel industry, actually had its beginning in 1870, when the **Bengal Iron Works Company** was established at **Kulti** in West Bengal.

- A turning point in the history of iron and steel industry in India came in 1907, when the **Tata Iron and Steel Company** was set-up at Sakchi (now Jamshedpur) by Shri J N Tata.
- Later on, the **Indian Iron and Steel Company** was set-up at Burnpur in 1919 followed by the **Mysuru Steel Works** at Bhadravati in 1923.

During the first two Five Year Plans (1951–1961), three integrated steel plants were started at **Bhilai**, **Rourkela** and **Durgapur**. The **Bokaro Steel Plant** started its production in 1972.

LOCATIONAL FACTORS

The iron and steel industry uses a large quantity of heavy and weight-losing raw materials, such as iron ore, coking coal and limestone. On the basis of minimum cost of transportation, the steel plants can be located at three possible places, viz.

a. near the coalfields,
b. near the iron-ore mining centres,
c. at places among coal and iron ore producing areas.

DISTRIBUTION OF IRON AND STEEL INDUSTRY

India has 12 integrated steel plants and about 150 mini steel plants.

India – Main centres of iron and steel industry

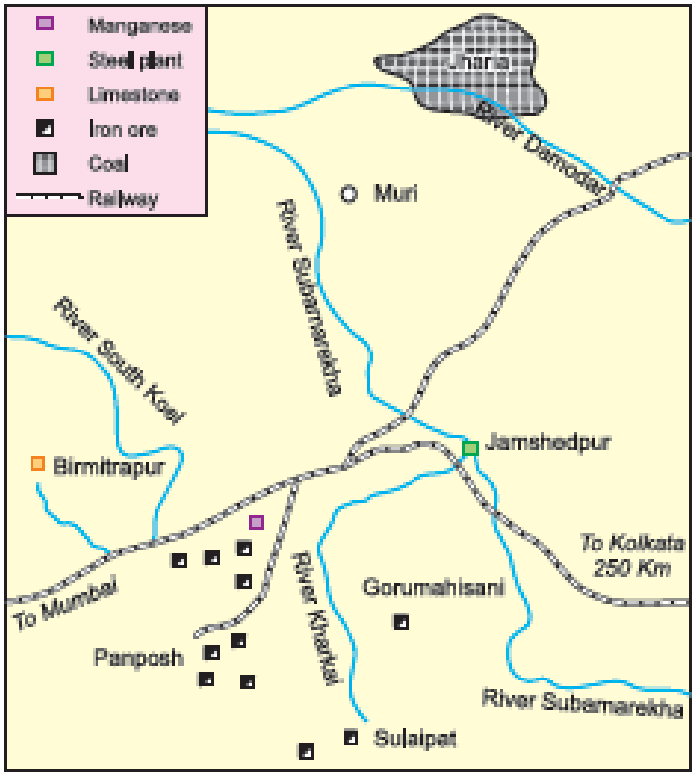
Except TISCO, now **Tata Steels Ltd.**, India's all integrated steel plants are managed by **SAIL**.

Tata Steel Ltd. (previously TISCO)

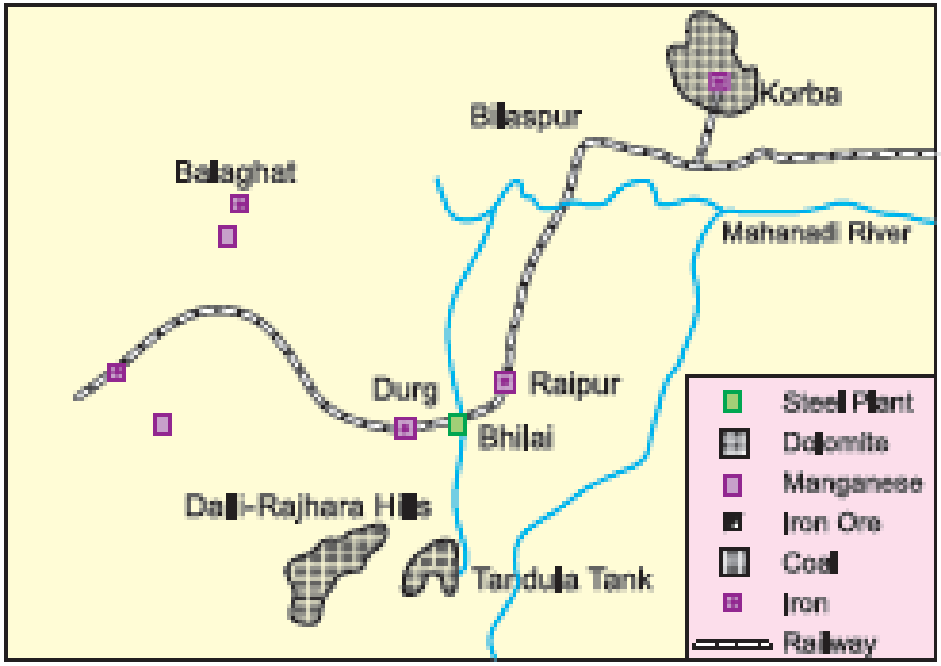
TISCO is the oldest and the largest iron and steel plant in India, located at Jamshedpur (old name Sakchi) in Jharkhand. Jamshedpur is located at the confluence of Subarnarekha and Kharkai rivers. Jamshedpur is at a distance of about 240 km from Kolkata.

Bhilai Iron and Steel Plant

The Bhilai Iron and Steel Plant was set-up in **Durg** district of Chhattisgarh in 1957 with the technical and financial support of the then **Soviet Union**. The installed capacity was fixed at 10 lakh tonnes, which has now been raised to more than 50 lakh tonnes.



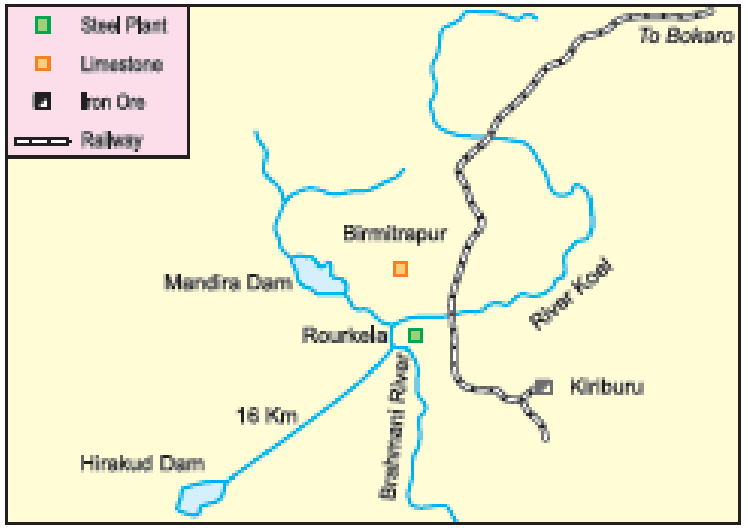
Location of steel plant at Jamshedpur



Location of Bhilai steel plant

Rourkela Iron and Steel Plant

The Rourkela Iron and Steel Plant is located in Sundargarh district of **Odisha**, along the Kolkata-Nagpur main railway line. It was built with technical and financial cooperation of the then **West Germany**. The capacity of the iron and steel plant has been increased from 10 lakh tonnes to more than 40 lakh tonnes.



Location of Rourkela steel plant

Visakhapatnam Steel Plant

This steel plant has a unique location on the sea coast in Andhra Pradesh. It is the first steel plant in India based near a coast. This steel plant was built by the **Rashtriya Ispat Nigam Limited** and was dedicated to the nation in 1992.

Inside view of a steel plant

The Visakhapatnam steel plant is the most sophisticated modern integrated steel plant in the country. It is a major export-oriented steel plant. Its blast furnaces are biggest in the country. Its installed capacity is about 10 million tonnes of hot metal, liquid steel and saleable steel per year.

MINI STEEL PLANTS

The mini steel plants with a capacity ranging from 10,000 tonnes to 5 lakh tonnes per year, operate through electric furnaces and generally use ferrous scrap, pig iron or sponge iron as raw materials. While the integrated steel plants mainly produce mild steel in bulk, the mini steel plants produce mild steel as well as alloy steel, including the stainless steel.

There are more than 150 mini steel plants with an installed capacity of about 120 lakh tonnes of crude steel per annum. Most of the mini steel plants are located far away from the major steel plants, so that they can meet the local demands.

PRODUCTION OF IRON AND STEEL IN INDIA

There has been a rapid increase in the total production of pig iron and steel in our country during the last 50 years. There has been an increase of more than 10 times in the output of pig iron, more than 15 times in the steel ingots and 22 times in the finished steel during the last 50 years. India produced about 44 million tonnes of pig iron, 74 million tonnes of crude steel and about 75 million tonnes of finished steel in the year 2013–2014.

PROBLEMS OF IRON AND STEEL INDUSTRY IN INDIA

- The iron and steel industry requires huge capital investments, which a developing country like India cannot afford.
- Most of the public sector plants are functioning inefficiently and thus incurring heavy losses.
- The per capita labour productivity in India is one of the lowest in the world.

PETROCHEMICALS

The petrochemicals are those compounds and chemicals which are derived from petroleum. The main raw materials for petrochemicals are naphtha and natural gas. These are used in the manufacture of synthetic fibres, plastics, synthetic rubber, dyestuffs, insecticides, pharmaceuticals, etc.

The petrochemical industry is of very recent origin. At present, it is one of the fastest growing industries in India. The first petrochemical plant was set up in India by **Union Carbide** (India) Ltd, at Trombay in 1966. The first public sector plant, **Indian Petrochemical Corp. Ltd. (IPCL)** was set-up in Gujarat, which started production in 1973.

India – Main centres of petrochemical industry

ELECTRONICS INDUSTRY

A very wide range of products are included in the electronics Industry in India such as radios, television, telephone exchanges, cellular mobile phones, computers, and equipment for railways, defence, communication, etc.

The setting up of **Indian Telephone Industry** in 1950 at Bengaluru gave a boost to the electronics industry. It now meets the entire requirements of post and telegraph, defence, railways, electricity boards, etc. It has 7 manufacturing units.

Bharat Electronics Ltd. was also set up at Bengaluru in 1956. It fulfills the needs of the armed forces, All India Radio and meteorological departments, etc. It has 9 manufacturing units in different parts of India.

Bengaluru has now become the largest centre of electronic goods production and is rightly called the **Electronic Capital of India**. The **Information Technology** (IT) which includes the computers and electronic mass media is now part of the electronics industry. The main components of information technology are **software** and **hardware**.

India – Main centres of electronic industries

The government helped in setting up **electronic parks** in different parts of India. Thus, the Indian software industry expanded almost twice as fast as the world's leading US software industry. The centres are in Bengaluru, Mumbai, Pune, Srinagar, Mohali (near Chandigarh), Noida (near Delhi), Hyderabad, Jaipur, Gandhinagar, Kolkata, Chennai, Mysuru, Coimbatore and Thiruvananthapuram.

THANK YOU