

## SMALL AND LARGE SCALE INDUSTRIES OF CHHATTISGARH

In the previous lesson we studied in detail about industry. Under cottage industry we studied about artisans and contractors, work of soil and kosa industry. Come, in this lesson let us study about cottage industries to large industries i.e. from small to large industries we shall study how production work is done in factories.

### Small scale industry

The small form of cottage industry is called a small scale industry. This industry requires less capital and less machine. The machines used in these industries are small but electric powered. Raw materials are bought from other states and the produced goods are sold locally and to far off markets. In these industries rice mill, poha mill, cereal mill, making bread, biscuit, saw mill, factories making steel, utensils, iron factory (Almirah, chair, pipe, hammer) shoes-chappals, leather things, copper and bronze utensils etc are made.

**What can be the differences between working at home and factories? Discuss.**

To know how a small factory runs, we shall study in detail about rice mill as we know Chhattisgarh state yield more quantity of rice, so is called "bowl of rice". Here the task of removing rice from the grain was first done by threshing it with muscle and cloak. This process took much time and hard labour because all work was done by hands.

Further, many villages fitted rice huller by which the work of removing rice from grain was made easy. Other than rice huller machine, with the rice mill it was possible to remove more quantity of rice from Rusk. There are many rice mills in our state like kurud, mahasamund, tilda nevra, navapara, rajim, arang, bhatapara, dhamtari, bemetara, surajpur, gariyaband, kondagaon, janjgir champa etc.

1. Where do people go to remove rice from Rusk - Huller or rice mill?
2. How is the process of removing rice from grain is done in your village/town?

## Where does farmer sell paddy?

Farmers bring paddy to co-operative council to sell in which paddy is procured by the committee on the price fixed by the government. The support price is determined by the government every year. In addition to these committees farmers sell their paddy in the market (mandi). Mandi is a whole sale big market like (vegetable market, fruit market, paddy market), farmers sell the grain in mandi when the co-operative committee does not buy their whole grains or when their paddy are not of good variety. The grain that farmers sell to mandi of co-operative council are collected in F.C.I godowns and these are send to rice mill to remove grains from paddy.

### FCI - Food Corporation of India



Fig.5.1 Farmers carrying paddy to cooperative society

1. Where do farmers sell their grains. Make list.
2. What are the differences between wholesale market (mandi) and co-operative committee?
3. Where does the rice mill get paddy from?

## Rice Mill

The process of removing rice from paddy. This process can be divided into four parts.

**1. Cleaning :** This part consists of cleaning when the grains are brought from market of FCI godown to mill the process of cleaning starts. Paddy cleaner (Alevator machine) separates all the impurities like dust, straw, sand, clay and

heavy particles of even and uneven sizes from paddy in which labours are necessary. Alevator is a machine by which paddy is cleaned you can understand alevator as a machine which helps you to lift from one storey to other storey, in the same way by the alevator machine the grain is taken from one sieve to the another sieve.

**2. Rice Separation :** As by rubbing of huller the husk is removed from the paddy in the same way the machine have pair of rubber roller & the grains pass through there rubber rollers and get rubbed which remove the husk.



**Fig. 5.2 Cloak**

Cloak is a tool to remove husk from grain. In villages also clock is used to remove rice from paddy.

**3. Dehusking :** By supa the waste of grain is separated from the rice in the same way machine remove the separated husk from rice. This machine is called separator.

**4. Polishing :** In this part the rice is polished. In this process rice is divided into into three parts "The third whole rice, Second broken rice and in first. Small pieces of kernel are collected. In this process the covering of rice is separated from rice called rice bran, which is collected to one place.

### **Rice extraction machine**

Machine to extract parboiled rice and raw rice is the same. To extract brown rice the hundi of hundinuma vessel is half filled by water and then water is heated. Grain is put in it and it remains in it for 8 to 10 hours. The water is drained from the pipe on hundi. The grain is dried on floor and later put is machine and rice exported. This rice is imported from our state Chhattisgarh to Orissa, Bihar, Bangal, Tamilnadu, Andhra Pradesh etc.

By the help of the teacher find out the difference between mill of raw rice and par-boiled rice?



**Fig. 5.3 Boiling of boiled rice in the mill**

### Number of labours and their condition

The number of labours working in this mill is about 15-20. In such mill two types of labours are hired. One regular or permanent labour. They are given only payment with no other facility, second is regular or temporary who are paid in daily wages.

From October to February the mill run continuously, march to June there is no regular work and in rainy season it is totally closed.

#### 1. Why rice mills do not run the whole year, Discuss ?



**Fig. 5.4 Dirty water drained from the back of par boiled rice mill**

### Uses of by products out of paddy

Products out of paddy	Uses
Whole grain	As food stuff
Broken rice (khandas)	As food stuff
Brewer's rice (Kanki)	Food for hens or chicken feed
Bran	Food oil
Husk	Making poha/ Baking bricks



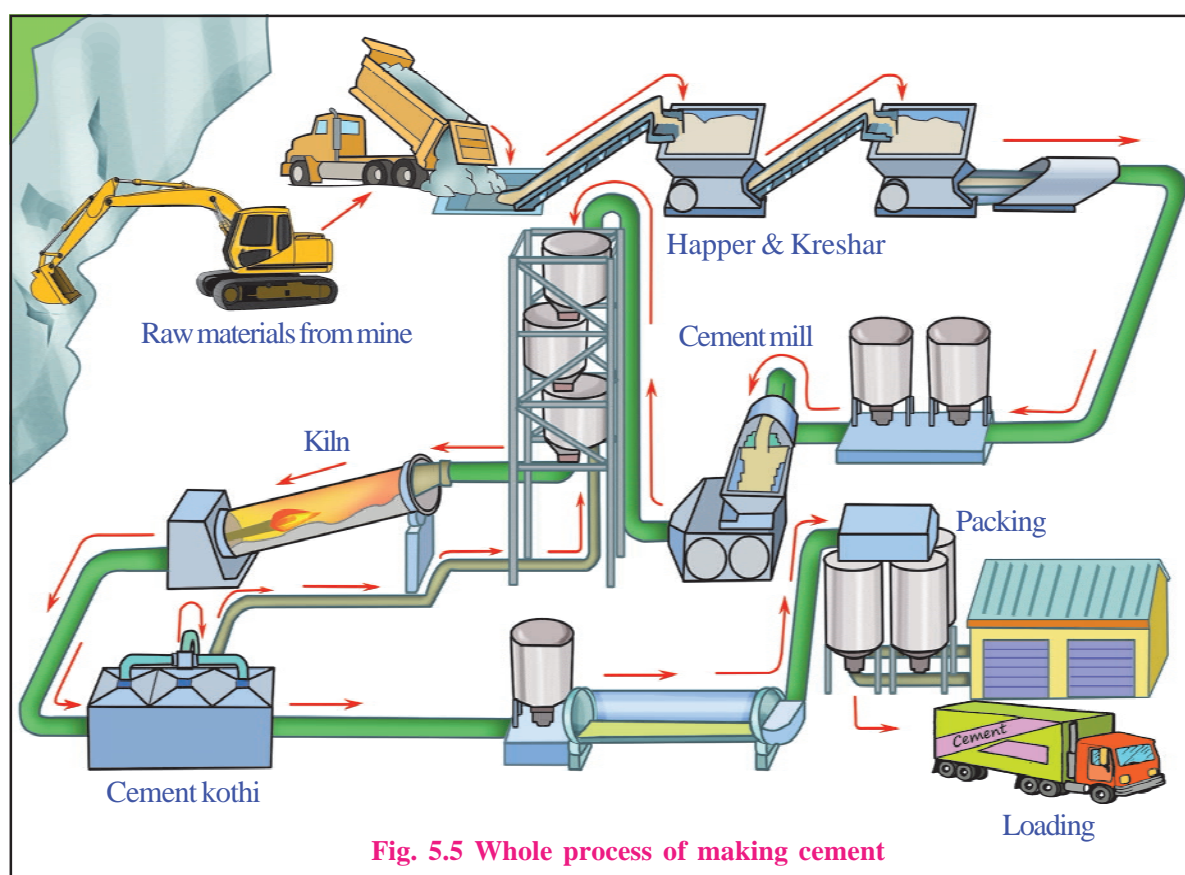
## Large scale industry

When any industrial products are used in large quantity and products produced in large scale then it is called large scale industry. It needs large amount of investment, skilled labours, high technology and machines running by electricity. Under these industries, iron and copper industry, Jute industry, cotton clothes industries, paper industries etc. come. Let us learn about cement industry which is a large scale industry.

### Cement Factory

Cement industry is an important industry in basic industries. To establish this industry surplus amount of raw material like limestone and coal is necessary. Cement is called as stone made by human being. When it dries it hardens like a stone. Cement being rather heavy material and due to effect of moisture it becomes useless very quickly. So quick transportations should be done and market should be near. To work in factories mass scale of labours in low wages and skilled and trained labours are necessary.

It is useful in all types of construction like Residential house, Bhavan, bridge, roads, Railway sleepers, canals, Dams, Electric planning etc. India is the fourth country in the world in cement production after China, Japan and America.



Following are the main cement factories in our state - century cement, Baikunthpur( Rampur ), J.K. cement Ltd., Tilda Nevra, Raipur, Lafarge cement Janjgir, Modi cement, Raigarh, Jai Bajrang cement, Bastar , Associated cement company Ltd. Jamul, Durg etc.

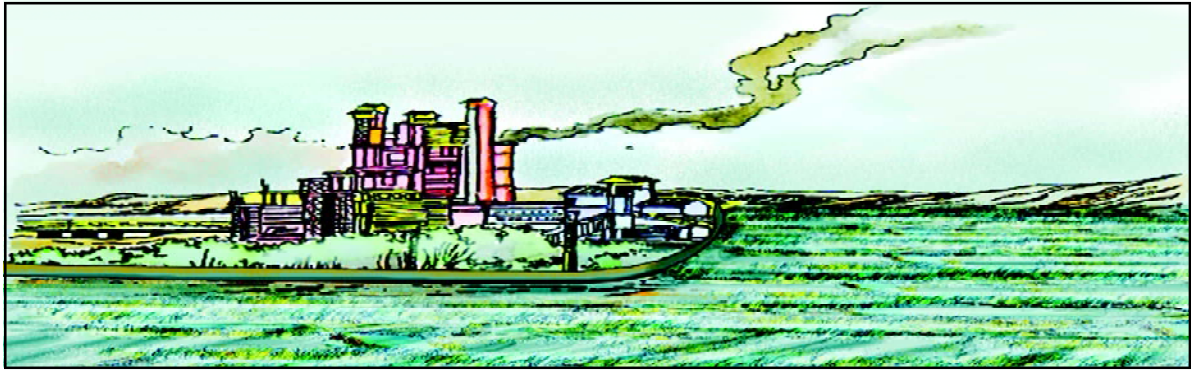


**Fig. 5.6 Cement factory**

### **Pollution caused by factories**

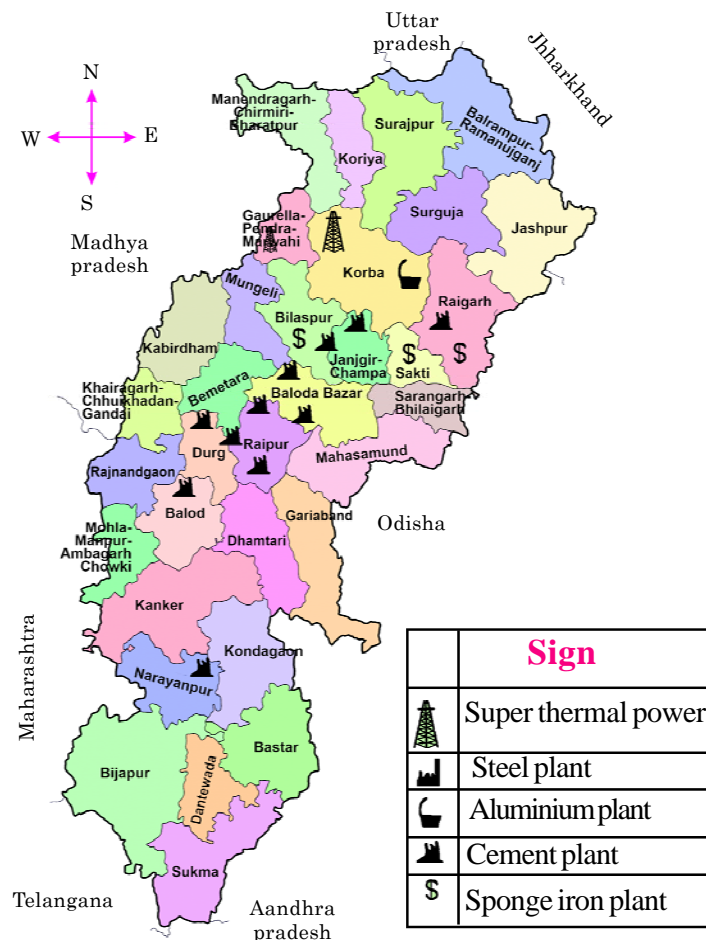
Pollution is the meaning of the natural properties of an object or element. Development of industries have made our life comfortable and luxurious. Its side effects have also come out. The biggest side effect of industrial activities is the environment pollution. Air is polluted by the poisonous gas released from the factories. It give birth to many diseases. The temperature of the earth is increasing very fast.

Earlier outside the factories there was enough pollution. The land was destroyed by the dust of cement reaching nearby villages, which affected the health of people living in nearby villages. For this reason the people raised voice against it and they went on strike, government made strict rules to stop pollution. Due to the presses to control pollution we saw the machine which controlled pollution in the factory. The problem still exists in nearby big factories however rules were made by government, The problem is in mines but due to it problems arise for people of nearby villages.



**Fig. 5.7 Pollution from factories**

Industrialization resulted of large scale forest cut down which resulted in the increase of environmental pollution. In the creation noise produced by the big machines running in the factories increased sound pollution, physical and mental disorder are caused by the high sound. The dirty water and wastes from factories are flown into the rivers and canals resulting in water pollution. The creatures living in these are destroyed.



**Map 5.1**

1. What did the villagers do to stop pollution by the cement factories?
2. What measures should be taken to prevent pollution in factories? Discuss.
3. Make a list of big industries of Chhattisgarh.

S.No.	District	Industries
1.		
2.		
3.		
4.		
5.		

### Management

There is a need of management in any factory for complete process from production to the market . Different people do different work in management Investment is done by the owner of the factory who have full control over the management from buying raw material, arrangements of employees to handle machine and its operation, packing the things after production, to send the products in wholesale markets and transportation of the products made.

### Measures to prevent pollution

It is necessary to plant more trees in large scale to prevent pollution. We should not only plant trees but take care of the trees till it grow. Cutting of trees should be prohibited.

The chimneys of the factories should be long and the fuel releasing fumes should be less used. The sound blockers should be installed in the factories which uses machines that make loud sound.

Factories should be prohibited to flow waste and dirty water to the river and canal. The factories should be established far away from the populated areas.

To keep the environment clean, awareness in people is necessary and for this people are to be made aware of the diseases and consequences by this environmental pollution.

Examples are given here based on sizes of factories. Fill in the blanks writing the names of industries of the same type.

S. No.	Factories based on size	Examples	Names of industries
1.	Cottage industries (small factory)	Things of soil	(1)..... (2) ..... (3) .....
2.	Medium industry (Small industry)	Kosa , soap	(1)..... (2) ..... (3) .....
3.	Large scale industries (large/big industries)	Cement, Iron	(1)..... (2) ..... (3) .....



Examples are based on raw materials. Write names of factories of the same kind.

S. No.	Factories based on Raw materials	Examples	Named industries
1.	Based on Forest		
	(a) Agriculture	Medicinal, pickles	.....
	(b) Forest produce	paper, match box	.....
	(c) pasture	wool	.....
2.	Based on mineral	Iron, coppe	.....

## EXERCISES

### I. Fill in the blanks :

- \_\_\_\_\_ is needed to enter a factory.
- Big stones are poured in other machines with the help of .....
- Big and small stones are powdered in a ..... process.
- Where the powder of stones are baked it is called .....

### II. Correct the false statements :

- The factory workers do not work more than 4 to 5 hours in all factories.
- The raw material for cement factory come from other factory.
- Pollution is minimized in cement factories now.

### III. Answers the following questions :

- By the help of teachers, list out the other cement factories shown in the map of Chhattisgarh.
- Write in your own words the process of making cement.
- What are the differences between the products made by artisans at home and products produced in factories?
- Works are distributed in big factories. Did you observe this in cement factory?

### Project work :

- Make a project work on the utility related to cement.
- Find out what is written on the rice sack. What is the meaning of that and why is it written?

