

**CHAPTER-V.**  
**INDUSTRIES.**  
**INTRODUCTION.**

Dhanbad is the most highly industrialised district in the State of Bihar. The dominant industry of the district is coal mining and it is coal which has attracted and brought about a concentration of numerous other industries within its limits. The metallurgical coal of the Jharia Coalfield within the district which feeds the existing steel plants and has enabled the country to launch upon an ambitious scheme of iron and steel production has given Dhanbad a very important and prominent place in the industrial programme of the nation. There are five coke plants located in this district. They are fed mainly by the metallurgical coal produced in the Jharia Coalfield of Dhanbad. The rich variety of coal by products from these coke plants has provided the basis of a high chemical industry in the country. Due to its supreme importance, the subject of coal has been dealt with separately and in some details in this chapter and also elsewhere.

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Next in importance among the industries in this district is the Fertilisers and Chemical Industry at Sindri and the Bihar Government's Superphosphate Factory there. The production capacity of the Sindri Fertiliser and Chemical Factory is under expansion and will be producing an additional quantity of 250 tons of ammonium sulphate, 70 tons of urea salt and 150 tons of ammonium nitrate. The ammonium sulphate and ammonium nitrate thus produced will be sold as a mixed fertiliser whereas urea will be sold as it is. The Sindri Fertiliser and Chemical Industry has brought about at Sindri the existence of two other undertakings', a cement factory and a coke plant.

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There is one lead and silver refining and smelting industry in the district, the only one of its kind in India, run by the Metal Corporation of India, Ltd., at Tundoo. It is producing lead and silver from the ores received from the Zawar mines in Rajasthan and other raw materials from different places.

One other major industry in the district is the Refractory and Ceramic Industry. The various large concerns engaged in this industry within the district are the Kumardhubi Fireclay and Silica Works, the Reliance Firebricks and Pottery Co., at Chanch the Bihar Firebricks and potteries, Ltd., at Mugma, the Gulfabari Fire Clay and Silica Works, the Bengal Bihar Firebricks and pottery Works, the Nirsa Refractory, the Jharia Firebricks and pottery Works, etc. A very big industry has grown up and is being further developed to meet the increasing demands of the country in refractories ceramics, firebricks potteries, etc.

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There is a Radio Manufacturing Factory, namely, the Hindustan General Electric Corporation, situated at Karanpura, Nirsa within the district, producing radio sets, electric switches, etc. The Khandelwal Glass Works at Chota Ambona is the only glass factory in the district producing different kinds of glass wares.

To serve the requirements of and with the impetus given by the coal industry, quite a number of engineering concerns and workshop have been established in the district and are in a flourishing condition. Some of them are the Kumardhubi Engineering Works, the Eagle Rolling Mills, the Meamco, Shri Ram Krishna Engineering Co., and various other units mainly engaged in the manufacture of different parts and equipments required in the collieries.

Apart from these heavy, medium and small industries, there are quite a number of small-scale units scattered all over the district. In Chas, there are a number of shellac factories, in Chandankeari, quite a large number of weavers have been carrying on their trade from generation to generation. In Tundi and Gobindpur, there are rearers of silk yarn and a number of potters, carpenters and blacksmiths engaged in their family trades. Besides these, there are a number of small *bidi* manufacturing units, scattered in different parts of the district. From the State Government of Bihar, financial and technical help is given to these small local industries and efforts are being made to improve their working techniques and economic conditions.

## **COAL INDUSTRY.**

Among the States in India, Bihar is the largest single producer of coal with West Bengal a distant second and Madhya Pradesh a very distant third. In 1956, out of a total output of 39.28 million tons of coal in India, Bihar produced 20.08 million tons representing 51.1 per cent and valued at Rs 31,65,25,491. Next came West Bengal with an output of 11.27 million tons representing 28.7 per cent of the total valued at Rs.18,86,65,031.

Most of this coal produced in Bihar comes from the Jharia Coalfield in the district of Dhanbad which contains the largest coal deposits and is the most developed single coalfield within the country. The newly formed district of Dhanbad on separation from the predominantly agricultural Sadar subdivision of Manbhum has truly become the coal district in Bihar. As a result of reorganisation of the States, the two revenue thanas of Chas and Chandankeari with their coal-bearing areas on the north side of river Damodar have been transferred from the Sadar subdivision of Manbhum to this new district of Dhanbad which, therefore, contains today practically the entire coal-bearing areas of the former

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district of Manbhum except the small coal area with a few colliery units on the border line of West Bengal which remains included in the new district of Purulia now incorporated in West Bengal. There are six collieries in the said area which has gone over to West Bengal, namely, Deoli, Hirakhun, Parbelia, Ranipur, Saltore and Moutha whose total output in 1956 was 4,92,907 tons and labour strength 4,886 persons.

The famous Jharia Coalfield in the district is the richest treasure-house of India's metallurgical coal which has brought Dhanbad prominently on the industrial map of the world. In the task of rapid industrialisation of the country with particular emphasis on the development of basic and heavy industries one of the principal objectives of the Five Year Plans, the metallurgical coal of this district has been playing and is destined to play in future a vital role not only as a source of fuel, energy and chemicals but also as the sole supplier of the raw material for manufacture of hard coke for the steel works and other consumers. The availability of Jharia's superior quality metallurgical coal has made it possible for the country to launch upon an ambitious scheme of steel manufacture by starting new iron and steel works,- one each at Rourkela, Bhilai and Durgapur and later on one at Bokaro also and by expanding the two existing steel works of TISCO and IISCO at Jamshedpur and Burnpur respectively to almost double their present capacity. There will be more steel works under the Third and subsequent Five Year Plans all depending mostly upon the reserve of metallurgical coal in the district of Dhanbad.

The high grade metallurgical coal of the district is utilised for manufacture of hard coke not only in the coke plants of the various steel works for use in their blast furnaces but also in several unattached coke plants which meet the requirements of various engineering works and other special consumers of hard coke. There are five such coke plants in the district of Dhanbad,- one each at Loyabad, Bararee, Bhowra, Lodna and Sindri. Outside the district, there is one old coke plant at Giridih in the district of Hazaribagh and another new coke plant has been contracted at Durgapur in the Burdwan district in West Bengal. Most of these coke plants produce coal by products, which have laid the foundations of a big chemical industry in the country.

The inferior and medium grade coking coals of the district, both in the Jharia and the Mugma Coalfields, are pre-eminently suitable for manufacture of soft coke and in fact the entire soft coke at present being manufactured in the country is the product of the lower seams of coal of this district of Dhanbad. The expanded use of soft coke throughout the country, particularly in the countryside, has become imperative in view of the urgent

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necessity of conserving cattle dung and forest products, so extensively used for domestic fuel purposes, for the benefit of agricultural lands as natural manures and fertilisers. For replacement of cattle dung and forest products by soft coke as domestic fuel in increasing quantities, the manufacture of soft coke will have to be stepped up rapidly during the coming years. As the only raw material for this manufacture of soft coke, the lower grade coking coals of the district are thus called upon to play another important role in the interest of the country's agriculture even as the higher grade coking coals of the district are providing the basis of the country's steel and other heavy industries.

The rich deposit of coal in the district with its immense potentialities in so many directions has attracted to this coalfield a number of industries and it is due to this concentration of so many industries within the Jharia Coalfield that it has come to be regarded as the Ruhr of India. The coalfield of Jharia was selected in preference to the gypsum field of Rajasthan for location of the great Fertiliser and Chemical Industry at Sindri which is the biggest Fertiliser and Chemical Factory in Asia and which has also brought into existence a modern coke plant and a cement factory close to it within the limits of Sindri. Other industries which have grown up round about the coalfields of the district of Dhanbad are a large size ceramic industry, pottery works, lead and zinc smelting industry, a superphosphate industry and numerous other mills, factories, workshops and engineering establishments. Due to its coal wealth, Dhanbad is thus the most industrialised district in the State of Bihar.

The Gondwana formations in the Jharia Coalfield, according to the Geological Survey of India cover an area of approximately 175 sq. miles as follows :-

- |     |                          |   |                   |
|-----|--------------------------|---|-------------------|
| (a) | Barakar coal measures .. | : | 85 sq. miles      |
| (b) | Middle (Barren) measures | : | 69 ,, ,,          |
| (c) | Ranigunj coal measures   | : | <u>21</u> ,, ,,   |
|     |                          |   | Total : 175 ,, ,, |

The available in situ reserves of all types of coal in the Barakar measures of the Jharia Coalfield up to a depth of 2,000 feet according to most recent estimates are of the order of 11,727 million tons. In addition, some 180 million tons reserves of coal indicated to be Selected B and Grade-I according to Coal Commissioner's classification exist in the Ranigunj measure of the coalfield as estimated by the Committee of Conservation of Metallurgical Coal, 1949. Large additional reserves in the Barakar measures exist at depths greater than 2,000 feet, but no estimates of these are available at present.

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The detailed estimates of coking coal in the Jharia field made by the said Metallurgical Coal Conservation Committee, 1949 are as follows :\_

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**A. In the working areas –**

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<b>Selected grades-</b>	<b>865.9 million tons.</b>
<b>Grades I and II -</b>	<b>680.6 „ „</b>

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**B. In the Virgin areas –**

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<b>Selected grades -</b>	<b>325.6 „ „</b>
<b>Grades I and II -</b>	<b>88.5 million tons.</b>
<b>Total-</b>	<b>1,960.6 „ „</b>

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The deposits of Grades III A and III B and of non coking coal were excluded by the Committee from the above estimates.

According to the report of the Chief Inspector of Mines in India for the year 1956, the number of working mines in the then district of Manbhum were 447 of which 215 were worked mechanically and 232 manually. With the transfer of the six collieries as stated above to the district of purulia in West Bangal, the number of working collieries in the district of Dhanbad are 441 only. The total number of collieries in India are 843 and the number in Bihar (excluding the said six collieries) are 527. The district of Dhanbad, therefore, contains 52.3 per cent of the total number of mines in India and 83.6 per cent of the total number of mines in Bihar.

In 1956 out of a total all India coal output of 39.28 million tons and Bihar's total coal output of 20.28 million tons, the total output in the then district of Manbhum was 15.34 million tons. Deducting the output during the year of the six collieries transferred to West Bengal, i.e., 0.49 million tons, the total output in Bihar was 19.69 million tons and in the district, therefore, represented 37.5 per cent of the all India output and 75.3 per cent of the total output in Bihar.

The average daily number of workers employed in 1956 in all the collieries in India 3,52,212 and in all the collieries in Bihar was 1,82,194 persons. The total number employed in the collieries in Manbhum was 1,38,212 persons. Deducting 4,886 persons working in the six collieries transferred to West Bengal, the total number of workers employed in the collieries in the district of Dhanbad may

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be taken at 1,33,326 persons rerepresenting about 37.8 per cent of the all India number and about 75.2 per cent of the all Bihar number. In 1956, the average weekly earning of mine workers in the district ranged between Rs. 10-6-4 earned by a surface woman worker and Rs. 17-5-10 earned by the underground workers. Besides these cash earnings in basic wages, there are other payments and concessions. The average number of hours worked by a worker in the mines is 48 hours per week.

Out of the total soft coke amounting to 1.60 million tons made in India, the soft coke made in the collieries in Dhanbad district comes to about 1.46 million tons representing 91.3 per cent of the total all India figure. Soft coke is, therefore, the Jharia Coalfield and the Mugma Coalfield. It is proposed to increase the output of soft coke to 3 to 4 million tons in the next few years and the district of Dhanbad is destined to play the major role in the production of this large quantity. The ultimate target is, however, an overall production of 15 to 20 million tons of soft coke and in view of the abundant deposits of lower grade coking coals of this district preeminently suited for manufacture of soft coke, the soft coke manufacturing industry of this district will assume great importance and immensely benefit India's agriculture by assisting conservation of cattle dung and forest products to be utilised for manuring purposes.

Manufacture of hard coke in coke plants with or without extraction of coal by products is another major industry of the district which has assumed considerable importance today due to expansion of the steel works and other heavy basic industries. There are nine coke plants in India of which three are attached to the steel plants. As already stated, there are five coke plants in Dhanbad district and at Loyabad, Bararee, Lodna and Sindri. The production of coke in coke plants was 2.42 million tons in 1956 of which those attached to the steel plants produced 1.90 million tons and the unattached plants produced 0.52 million tons in the district of Dhanbad. The by products made in these coke plants during 1956 were tar 24,991 tons, pitch 859 tons, sulphate of ammonia 1,744 tons, sulphate acid 4,074 tons, soda sulphate 22 tons, naphtha (solvent, light and heavy) 21,898 naphthalene 84,725 lbs., benzene 1,27,399 gallons, benzol 2,30,445 gallons, barclene 7,397 gallons, toluenes 12,361 gallons, tar acid 425 gallons, solvent oil 10,187 gallons, creosote oil 57,516 gallons, heavy anthracene 40,839 gallons, creosote, heavy and light 45,533 gallons and middle oil 22,592 gallons. These by products were mostly made by the coke plants in the district of Dhanbad. The Shalimar Tar Products (1935), Ltd., situated at Lodna Colliery area produces road and other kinds of tar, pitch, creosote, oils, refined naphthalene, disinfectants, etc., its total monthly capacity being 4,160 tons.

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**TABLE**  
*Statistic of*  
*Number of persons employed and above*

<i>Number of mines.</i>							
<i>District. Name of years--</i>		<i>coalfield.-----</i>					
		<b>Under the scope of the Act.</b>	<b>Opened during the Year.</b>	<b>Closed during the Year</b>	<b>Worked with mechanical power.</b>	<b>Worked without mechanical power.</b>	
1	2	3	4	5	6	7	8
<b>Dhanbad</b>	Jharia	<b>1956</b>	<b>368</b>	<b>2</b>	<b>3</b>	<b>189</b>	<b>179</b>
		<b>1957</b>	<b>363</b>	<b>4</b>	<b>4</b>	<b>254</b>	<b>109</b>
		<b>1958</b>	<b>369</b>	<b>..</b>	<b>1</b>	<b>244</b>	<b>125</b>
		<b>1959</b>	<b>363</b>	<b>4</b>	<b>1</b>	<b>256</b>	<b>107</b>
		<b>1960</b>	<b>347</b>	<b>..</b>	<b>1</b>	<b>276</b>	<b>71</b>

Source. Annual Reports of Chief Inspector of

**TABLE**  
**Statistics of**  
**Number of persons employed in and above**

		<b>Males.</b>		
<b>District.</b>	<b>Name of coalfield.</b>	<b>Years.-----</b>		
		<b>Open cast workings.</b>	<b>Workers in any attached factory.</b>	
1	2	3	4	5
<b>Dhanbad .. ..</b>	<b>Jharia .. ..</b>	<b>1957</b>	<b>7,070</b>	<b>2,359</b>
		<b>1958</b>	<b>8,509</b>	<b>2,739</b>
		<b>1959</b>	<b>9,133</b>	<b>2,094</b>
		<b>1960</b>	<b>11,550</b>	<b>2,133</b>

Source.---Annual Reports of Chief Inspector of

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**1.**  
**Mines (Dhanbad).**  
**the mines subject to the Mines Act, 1952.**

Labour		Daily average number of persons employed during the year.						
Direct.	Contract.	Total.	Below ground.			Open cast workings.		
			Overmen and Sirdars.	Miners and loaders.	Others.	Overmen and Sirdars.	Miners and loaders.	Others.
9	10	11	12	13	14	15	16	17
	Not available		2,126	21,554	23,317	222	2,841	2,839 1,16,671
10,492	1,27,163	2,163	43,942	24,317	256	3,421	3,393	
1,16,222	12,450	1,28,672	2,218	44,722	25,050	282	4,263	3,964
1,15,530	12,152	1,27,682	2,182	43,643	25,081	316	4,802	4,015
1,13,690	14,341	1,28,031	2,226	43,409	25,264	345	5,653	5,552

Mines, Government of India at Dhanbad.

**2.**  
**Mines (Dhanbad).**  
**the mines subject to the Mines Act, 1952.**

Males ---concl.			Females.		
Others.	Above ground.	Total males.	Open cast workings.	Above grounds.	Total femeles.
6	7	8	9	10	11
24,567	31,933	1,09,930	3,716	13,393	17,144
24,479	31,904	1,12,493	4,118	12,078	16,185
24,092	31,063	1,11,102	4,512	12,038	16,580
22,671	29554	1,11,993	5,253	10,785	16,038

Mines, Government of India at Dhanbad.

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**TABLE**  
Statement showing the raisings.

District	Name of the Coalfield.	Year	Opening Stocks (in tons)	Raising (in tons)	Value (in rupees)
1	2	3	4	5	6
Dhanbad	Jharia	1955	19,95,223	1,32,70,838	17,86,45,697
		1956	20,50,800	1,38,21,909	21,57,99,369
		1957	Not available	Not available	Not available
		1958	19,99,346	1,47,89,290	26,91,00,264
		1959	15,28,640	1,47,56,067	27,31,24,010
		1960	13,41,352	1,58,49,994	37,61,28,607

Source: Annual Reports of Chief Inspector of

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3.

dispatches and stocks of coal (Dhanbad).

Total of Coal.4 and 5(in tons)	Dispatch (in tons)	Colliery consumption (in tons)	Shortage due to fire rains and other causes (in tons)	Closing stock (in tons)	Coal dispatch to coke factor- -ies (in tons)
7	8	9	10	11	12
1,52,66,061	1,00,29,764	7,96,161	23,76,062	20,64,074	12,52,127
1,58,72,709	1,08,93,176	7,77,767	23,49,404	18,52,342	13,31,249
Not available	Not available	Not available	Not available	Not available	Not available
1,67,88,036	1,18,90,365	7,66,562	25,91,361	93,343	5,09,141
1,62,84,707	1,16,43,309	7,30,020	25,39,281	48,995	5,23,730
1,71,91,346	1,22,69,728	7,56,747	23,19,856	95,145	2,06,118

Mines, Government of India at Dhanbad.

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## SINDRI FERTILISER AND CHEMICAL INDUSTRY.

Of the coal-based industries which have been established in the district, the Sindri Fertiliser Factory is the biggest one. It also represents a unique national

achievement. The first industrial project completed by India after independence was achieved, it is the largest fertiliser factory in Asia and one of the most modern and major fertiliser producing units in the world. It is the nucleus of a heavy chemical industry which will eventually lead to further industrialisation. Already it has given rise to a number of allied industries such as those manufacturing coke and cement and important industrial by-products like benzol, benzene, toluene, naphthalene and coal-tar.

The idea of starting a Fertiliser Factory at Sindri can be traced to the troubled years of the war and to the grim tragedy of the disastrous Bengal famine of 1943 which involved the death of three million people of starvation and brought home to the Government of India the urgency of undertaking long-term measures to increase food production in the country. The question was examined by the Foodgrains Policy Committee and other bodies and it was found that a high level of fertiliser consumption was essential for high crop yields. The Committee estimated that India would require between two and three million tons of artificial fertilisers and it recommended that as the first

step a factory with a production capacity of about 3½ lakh tons of ammonium sulphate annually should be set up as early as possible. Accepting the recommendations the Government carried out a survey of the necessary raw materials, particularly coal and coke as fuel, gypsum and power supply and held consultations with an expert British Technical Mission invited to advise the Government on the point.

The Mission recommended that one large factory should be set up whether at Harduaganj near Aligarh or at Sindri in Bihar for production of 3,50,000 tons of ammonium sulphate per annum by the gypsum process. There was some controversy about the location of the fertiliser factory but the final choice fell on Sindri because of its nearness to two of the three principal raw materials required for the operation of the factory, namely coal and coke and because it was comparatively advantageous to bring gypsum, the third raw material from Jodhpur and Bikaner in empty coal wagons returning to the coalfields.

The construction of the factory which started in 1947 with the combined technical skill of engineers from three countries, India, the U.K. and the United States and involved tremendous problems of importing giant plants from abroad, their transport from port to the factory site by special roads and their installation was completed in 1951 after years of intensive activity and hard labour. The factory was inaugurated on the auspicious Diwali day in October, 1951 and

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produced 7,445 tons of ammonium sulphate in the two remaining months of the year. The production in 1952-53 was 2,19,340 tons which rose progressively from year to year and reached the level of 3,33,70 tons in 1956-57.

The Sindri Factory spreads over nearly 1½ square miles and has more than 7,000 workers on its rolls. It has 80 miles of pipe lines, 170 miles of electric power cables, 7 miles of belt conveyors, 12 miles of telephone lines, 18 miles of tarred roads and 12 miles of railway tract in the factory and the marshalling yard. The factory consumes about 1,700 tons of coal, 600 tons of coke, 1,800 tons of gypsum and about 400 tons of other raw materials per day. The outturn amounts to about 1,000 tons of ammonium sulphate, 33 million cubic feet of gas, 270 tons of anhydrous ammonia, 900 tons of chl<sub>k</sub> and 300 tons of ash per day. The figures place Sindri among the biggest industrial enterprises in the country.

There are five main groups of plants in the production of ammonium sulphate at Sindri (1) the power Plant, (2) the Gas Plant, (3) the Ammonia Plant, (4) the Sulphate Plant and (5) the Coke Oven Plant. The Power House has an installed capacity of 80,000 Kw. The Coke Plant constructed by the German firm, Messrs. Carl Steel in 1954 reached its full rated capacity of 600 tons per day within two months of its inauguration. The plant built at a cost of Rs. 2.8 crores utilises coal of low quality and thus saves high grade coal for our expanding steel industry.

With a view to utilise the many by-products released by the Sindri Factory, several allied industries have grown up. The associated Cement Company has started a cement factory at Sindri at a cost of about Rs. 2 crores which uses about 900 tones of cement per day . The production capacity of the cement factory will be increased further to about 900 tons per day to utilize all the chalk accruing from the expanded plants of the Sindri Fertiliser Factory. The benzol plant in the factory which went into production in May, 1955 has the capacity to produce 300 gallons of motor benzol, 700 gallons of pure benzene, 20 gallons of pure xylene, 40 gallons of solvent naphthalene and 32 tons of tar per day. According to present plants, Sindri will set in an almost unending chain of allied industries.

Sindri is also going to make use of the surplus coke oven gas for production of 70 tons of urea and 400 tons of ammonium sulphate-nitrate per day. Both these fertilisers are suitable for our crops and soils. They have successfully used in Europe, America and Japan. The cost of the plant is Rs. 7crores in addition to the sum of Rs. 4 crores to be spent on consequential internal expansion of the factory.

Until January 15, 1952 the Sindri Factory worked under the direct supervision of the Union Ministry of Works, Mines and power. On December 18,1951, the Sindri Factory was registered as

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a private limited company with the Registrar of Joint Stock Companies, Bihar, under the name of Sindri Fertilisers and Chemicals Private, Limited. The company started functioning from January 15, 1952. It has an authorised capital of Rs. 30 crores in addition to which a loan of Rs. 6 crores in the form of debentures has been advanced by

the Government of India. Repayments have been made on this account. All the shares of the Company are held by the Government of India. The factory is managed by a Board of Directors nominated by the President of India with full time Managing Director.

With an enlightened labour policy, the Sindri Factory has been aiming at setting a pattern in enlightened management. A spirit of disciplined service inspires the workers who are well paid, well treated and well looked after. As a result the production of the factory has been going up and its production cost showing a progressive decline.

### **SUPERPHOSPHATE FACTORY.**

The Bihar Government Superphosphate Factory is located on Dhanbad Sindri Road near Chasnalla about 16 miles from Dhanbad.

The production capacity of the factory is 25 tons of sulphuric acid and 50 tons superphosphate per day.

The value of superphosphate produced per annum is about Rs. 33,00,000 and the value of raw materials imported is about Rs. 20,00,000. The factory has been provided with independent water-supply from Damodar river. Electricity is being supplied by the Bihar Electricity Corporation at 11 Kv. and is stepped down to 400 volts for distribution inside the factory.

The factory is capable of expansion to about 60,000 tons superphosphate per annum, as the demand increases, by installing additional equipments. Expansion in the various sections has been taken up. The factory has also plans to manufacture mixed fertilisers to supply the nitrogen and phosphorus required for a healthy plant growth.

### **CEMENT INDUSTRY.**

The Sindri Cement Works of the Associated Cement Companies, Ltd., situated at Sindri within the district, is the latest addition to the network of A.C.C. Factories and is unique in many ways. It went in to production in September, 1956. It does not have the conventional limestone quarries. The principal raw material is the calcium carbonate sludge, which is a waste product of the Sindri Fertiliser Factory. This is said to be the second cement factory of its kind in the world and first in Asia, using the type of raw material for manufacture of cement.

The A.C.C.'s Sindri Cement Factory was initially designed to produce 2,00,000 tons of Portland cement per annum which was related to the capacity of the Fertiliser Factory to produce ammonium sulphate. With the expansion of the Sindri Fertiliser, producing

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more of sludge, the A.C.C.'s Sindri works embarked on expanding its plant capacity to produce 900 tons of cement per day. There is expectation of further extension of the factory.

As stated under refractories section, refractory fireclays and cement for all purposes are also manufactured at the refractory factories at Kumardhubi and other places in the district.

### **ROLLING MILLS.**

Eagle Rolling Mills, Ltd., at Kumardhubi established in 1927 is a re-rolling mill comprising of one 18" breakdown mill and one 12" finishing mill. The mill was driven by steam engine at first which was later replaced with electric drive. It rolls from billets received from either Indian Iron and Steel Company, Burnpur Works or Tatas Jamshedpur Works or from imported sources according to the planning of Iron and Steel Control.

Its sections vary from  $\frac{3}{8}$ " to 2" Rds.,  $\frac{1}{2}$ " to 2" sqrs.,  $\frac{3}{4}$ "X $\frac{1}{8}$ " to 2" flts and  $1\frac{1}{4}$ " x  $1\frac{1}{4}$ "x $\frac{1}{8}$ " to 2"x2"x $\frac{1}{4}$ "angles. The mills output was approximately 24,000 tons in 1961-62 and its labour strength was about 500.

### **REFRACTORIES INDUSTRY.**

The industry came to be started in Bihar in the last part of the 19<sup>th</sup> century and practically all its important units are located in the district of Dhanbad. A small works at Golfarbary near Mugma within the district of Dhanbad is the oldest unit in Bihar. In the early part of the 20<sup>th</sup> century in 1907. Messrs. Kumardhubi Fireclay & Silica Works, Ltd. (of Messrs. Bird & Co.) commenced the manufacture of firebricks on a very modest scale in order to fulfil the demands created by the small engineering works and foundries established by that time in the country.

The establishment of a large steel industry at Jamshedpur in the first decade of the century gave an impetus to the Refractories Industry and a number of other works gradually came into existence. For many year however, and until the late thirties the firebricks trade was in doldrums, the demand being negligible. During the war years, the today apart from the Kumardhubi Works, several other factories which came into existence are meeting those demands. Mention may be made here of the Reliance Firebricks & Potteries, Ltd. Behar Firebricks & Potteries, Ltd. at Dhansar and Bengal Bihar Firebricks Company, Mugma and Jawahar Firebricks, Mugma.

Messrs. Bird and Co.'s range of refractories made in the Kumardhubi factory is now very well known in India. Their products have been modified and expanded and comprise a full range of moderate heat, high heat and special heat duty fireclay refractories together

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with silica bricks, insulation bricks, fireclay and cement for all purposes. Situated at Kumardhubi on the Grand Trunk Road and Eastern Railway, the factory is most advantageously, located with respect to transportation of raw materials and finished products. It has all kinds of most up to date high quality plants for production of

refractories of different descriptions. Refractory fireclay and cement for all purposes are also manufactured by this company, which have achieved wide popularity over the course of years.

The Silica Brick Works of the Company, messrs. Kumardhubi Fireclay & Silica Works, Ltd., is the largest and oldest established in India. Extensive tests by the leading refractories testing establishments in Europe have proved that the company's silica bricks are equal to the high grade silica products of any country and they supply extensively to the iron and steel, gas and glass makers in the country as also to the Ordnance Factories and many other industrial concerns. After remodeling their Firebrick section with the installation of a tunnel kiln, the first of its kind in India and a rotary kiln to handle the calcinations of raw materials, the company increased their firebrick output from 1,550 tons in 1939 to 3,350 tons in 1955. A scheme for doubling this output of the Firebrick Department was completed in 1957, the extended plant being thoroughly mechanised with the most modern machineries and two tunnel kilns. The company which produced the first silical brick in the country in 1916 has at present (1962) an output of this quality of brick approximately 87,000 tons. The company employs 3,300 workers.

The Harry Refractory & Ceramic Works is situated at Kallobathan, Nirshachatti in the district of Dhanbad. It was registered under the Factories Act on 1<sup>st</sup> July, 1957. It manufactures refractories and refractory articles such as firebricks of all shapes, descriptions and specifications, fire-clay powder and other allied refractory materials to meet the requirements of steel plants, glass works, cement factories, paper mills, etc. Output per month is six wagons of standard 3" firebricks at present and expansion has been taken in hand to make it a full fledged firebrick making plant. Its output is 4,000 tons per annum and employs about 400 workers.

The Behar Firebricks & potteries, Limited at Mugma was established in 1919 and is now managed by a Board of Directors at Calutta who took over from the original Managing Agents, M/s. A. C. Banerjee & Company. The authorised capital of the company is Rs. 20 lacs. The factory went through substantial expansion and now its total installed capacity is 50,000 tons insulation bricks 200 tons, silica refractories 13,200 tons and fire cement 6,000 tons per annum. Its labour strength is near about 1,200.

These factories are not only located in the district of Dhanbad but most of their raw materials and coal are also drawn from the district. The total production of refractories in Bihar (all situated in this district) is today about 5,00,000 tons and about 75 per cent

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of this is utilised by the steel industry and the balance by others industries, such as, sugar, cement, glass, railways, ordnance factories, etc. It is because of the availability of coal and most of the raw materials that the refractory industry has grown up in the proximity of the coalfields of this district.

## LEAD SMELTING AND REFINING INDUSTRY AT TUNDOO.

Till recently it was hardly known to the industrial world that a most promising industry founded about 16 years ago in a village near Katrasgarh ,district Dhanbad had emerged to occupy a position of pride as the pioneer and only producer of virgin lead and fine silvering in purity with international specification .

In 1942,a deposit of lead ore in a village was taken on lease by the Eastern Smelting and Refining Company ,Limited and the present smelter at Tundoo near Katrasgarh in Dhanbad was simultaneously installed on a pilot scale. A few hundred tons of lead were smelted in the following 3 to4 years which marked the beginning of lead mining and smelting industry in Indian on a commercial scale.

The present source of lead and silver is the company's mines at Zawar in Rajasthan about 30 miles from Udaipur. A prospecting license was granted by the state in 1945 to Messrs. Metal Corporation of India, Limited promoted by the Eastern Smelting and Refining Company, Limited as Managing agents. a lease of the Zawar mines was granted to the company in 1950.

The lead concentrates from the above mines is mixed with different fluxing materials and undergoes different operating processes of bedding, sintering ,smelting and refining. The final product is refined lead which is marketable and assays 99.995 plus. Silver in the form of crusts is lead refining operation and is subjected to the operations of liquation ,retorting and cupellation . Refined silver produced in the smelter is marketable and assays 996 plus. fine.

About 90 per cent of refined lead is shipped to Calcutta and the remainder to places all over India. Refined lead is used in the manufacture of pigments ,storage batteries, pipes, sheets, alloys and other ancillary products. Fine silver is dispatched to Calcutta and sold to the bullion markets through selling agents.

Refined lead production at Tundoo was 76.0 tons in 1944-45 which progressively rose to 2,143.0 tons in 1955-56 and to 3,470.0 tons in 1956-57. Zinc concentrates at present are being shipped to Japan for treatment and the metal is being returned to India for home consumption. Minute quantity of gold to the extent of 5oz.per ton of silver bullion is present .In the near future when production is greatly increased, attempts to concentrate the gold in silver

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bullion will be made. Progress at the corporation's mines at Zawar has reached its second development state with prospects to raise the level of its run-of-mine ore production to 500 tons daily.

The outlook for lead and zinc industries in India has very bright prospects and is of national importance to the country, which is very short of these important non-ferrous metals. The district of Dhanbad has reasons to be proud that it has harboured and nourished to pioneer the only producer company near its coal-field at Tundoo in respect of virgin lead and fine silver of a quality comparable in purity to foreign products and meeting with inter-national specifications.

The main raw materials ,lead concentrate, is received by the company, the Metal Corporation of India, Limited ,in the smelter from its mines packed in gunny bags and averages 72-75 per cent lead and 20-30 oz./ton of silver . Metallurgical hard coke is received from local sources in Dhanbad. Limestone and iron ore are obtained from Maihar in U.P. and Bara Jamda in Orissa respectively. Sand and quartzite materials are available locally. Furnace oil is supplied by Burmah Shell Company, Calcutta from their Budge-Budge Depot.

The company employs about 500 men including supervisory staff and labourers. The company handles about 70 wagons in a month both inwards and outwards and has its own truck and other road transport arrangements.

### **RADIO AND ELECTRIC GOODS.**

The Hindusthan General Electric Corporation, Limited, popularly Known as H.G.E.C. is the first full-fledged radio receiver manufacturing factory constructed on a plot of land measuring 500 *bighas* on the grand Chord Line between Mugma and Kalubuthan Railway stations within the district of Dhanbad. H.G.E.C. is also the trade mark of the company.

With a manufacturing capacity of about 200 radio sets per days, the factory has a total labour force of about 500 persons . A large number of component parts for the radio sets are made at the factory and its dependence on imports is confined only to a few items. This dependence is gradually being removed by manufacture of more component parts . The H.G.E.C. Factory is equipped with 1,000 ton Bakelite press to make cabinets for the radio sets. It is also well-equipped for the production of electrical accessories.

The H.G.E.C. radios are made in this factory in technical collaboration with Messrs. Saba of West Germany ,a firm of great repute. A number of German Engineers work in the factory and the company has also a number of trained Radio Engineers in its company, Limited ,Oldbury, Birmingham ,pioneers in the British

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Electrical Industry has enabled the company to arrange for manufacture of a wide range of simplex-H.G.E.C. products such as ironclad switch and fuse proof equipments and lundburg accessories.

Among the small and medium sized industries, mention may be made of (1) grinding and breaking of cereals of which there are about 125 establishments providing employment to about 250 workers; (2) Sri Ram Krishna Rice and oil Mills, Limited in Dhanbad town with milling capacity to produce nearly 100 maunds of oil per day and providing to about 100 workers ; (3) ice and ice cream factories –those worth mentioning being the Prag Ice factory and Jharia Ice and cold storage, both in Jharia ,Shree pure Ice Factory at Katrasgrah and Jai Ice Factory at Dhanbad with total capacity of nearly 80 maunds per day during summer season ;(4) paper printing presses about 18 in number of which those employing more than 10 workers number 8 and (5) timber sawing-nearly 12 establishments employing a total of about 250 workers .These illustrate the variety of industries of this district. Even then, the district is not yet fully developed and it will take sometime to develop the rich and almost unlimited potential of this growing district.

### **ENGINEERING WORKS,KUMARDHUBI.**

It was established in 1917 in kumardhubi . This industry si managed by Bird and Company .It employs about 2,850 workers. It has been started to repair electric drills, coal-cutting machines, haulages ,pumps and steam plants ,etc. The industry undertakens fabrication works also like,headgears, steel trusses,transmission posts and other steel structures like mixing cones,ventilation fitting ,etc. Manufacture of coal tubs is also made.

Steel scrap and sand are the main raw materials.The raw materials are procured from Railway workshop,viz., Chittaranjan and Jamalpur , etc., from open market and Tata Iron and steel Company and Indian Iron and steel Company ,Burnpur. Sand comes from Damodar river and also from Rajmahal in Santhal Parganas district.

The statement below will give an idea of approximate output in tons during 1957-58 to 1961-62:-

1957-58	..	..	..	7,954 tons.
1958-59	..	..	..	8,268 tons.
1959-60	..	..	..	8,028 tons.
1960-61	..	..	..	8,381 tons.
1961-62	..	..	..	9,294 tons.

### **McNALLY BIRD ENGINEERING COMPANY,LTD.,KUMARDHUBI.**

McNally Bird Engineering Company,Ltd.,was formed in 1962 at kumardhubi. It was registered on the 10<sup>th</sup> July,1961 in Calcutta. About 60 per cent of the shares are met by the American counterparts and the rest 40 per cent by Bird and Company. The

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factory is in final construction stages. the higher technical staff have taken up the work of setting up plants and machineries.Recruitment of supervisory and subordinate staff is going on . It is expected that the concern will go into production in 1964-65.

The Board of Directors who have got their offices in the Chartered Bank Building at Calcutta, the registered office of the company, are final authorities regarding the operation of the company.

There are three American experts with this company as Chief Technical Adviser respectively with a view to train the Indian Personnel in the specialised line manufacture of coal washery equipments.

The main items of raw materials for this industry are rolled steel plate and sections for which they have to depend on the Iron and steel Controller for quotas and others rules and regulations made by the Government.

The factory has been licensed for the manufacture of local preparation plants machinery, coal and bulk material handling systems and miscellaneous heavy machinery.

The total strength of labourers working in this factory is now only about 150. this number will go up considerably when the factory goes into production. Most labour is now (March, 1963) recruited on the factory gate who report for employment. The minimum wages per day for a worker in the factory is Rs 2.50 nP.

The Government of Bihar has made 575 houses under its subsidised Industrial Housing Scheme at Kumardhubi and about 150 tenements for the employees of this factory has been reserved. About 25 houses have been occupied by now.

#### **SOURCES OF POWER.**

The district of Dhanbad is receiving power from Damodar Valley Corporation. There is a Thermal Station at Loyabad but it is a private one. The other coalfields of the district have their own power supply. The Bihar State Electricity Board is purchasing power from Damodar Valley Corporation and Loyabad power House. The following statement supplied by Electricity Board Department, Dhanbad, will show the units purchased and sold for the period of 1959-60, 1960-61 and 1961-62:-

TABLE I.

Months.	Units Purchased.	Units sold.
1. April, 1959	34,03,344	28,65,007
2. May, 1959	33,49,363	29,59,729
3. June, 1959	31,61,123	2,84,767
4. July, 1959	37,89,760	30,53,646

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5. August, 1959	47,05,933	36,38,631
6. September, 1959	49,43,854	43,39,644
7. October, 1959	50,24,777	44,13,905

8.November,1959	46,16,487	40,67,620
9.December,1959	46,08,060	40,83,271
10.January,1960	44,79,953	39,99,664
11.February,1960	41,47,840	37,35,288
12.March,1960	41,92,330	39,05,482
13.April,1960	39,73,696	25,16,801
14.May,1960	41,76,864	35,65,986
15.June,1960	41,90,517	36,43,997
16.July,1960	46,50,423	40,26,201
17.August,1960	54,11,870	51,82,077
18.Sepyember,1960	67,03,120	59,39,415
19.October,1960	70,21,359	64,24,248
20.November,1960	60,69,475	57,26,454
21.December,1960	59,82,634	53,10,208
22.January,1961	55,95,238	52,42,554
23.February,1961	52,13,974	48,27,370
24.March,1961	56,85,117	49,37,043
25.April,1961	48,09,235	38,67,775
26.May,1961	50.63,000	44,96,916
27.June,1961	47,56,667	43,71,666
28.July,1961	55,75,667	44,11,377
29.August,1961	62,68,194	57,94,789
30.September,1961	66,55,512	54,07,976
31.October,1961	67,91,962	58,27,634
32.November,1961	59,25,696	49,78,226
33.December,1961	61,62,232	56,67,499
34.January,1962	60,23,489	49,62,627
35.February,1962	51,80,940	42,65,476
36.March,1962	56,84,706	44,58,112

The supply of electricity may broadly be categorised into four classes,namely ,domestic,commercial ,industrial and others.A detailed list of units sold from April, 1959 to March,1962 have been stated in the above table .

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The valuation against the total units sold from June,1959 to December,1961 is given below:-

Months.	Amounts in rupees
1.June,1959	2,83,365.48
2.July,1959	3,03,123.27
3.August,1959	2,89,735.01
4.September,1959	3,59,209.67
5.October,1959	4,52,439.47
6.November,1959	5,02,022.95
7.December,1959	5,00,041.61
8.January,1960	4,56,090.62
9.February,1960	4,88,276.44
10.March,1960	4,98,644.61
11.April,1960	4,61,493.98
12.May,1960	4,23,465.11
13.June,1960	4,18,961.25
14.July,1960	4,43,582.52
15.August,1960	4,69,839.90
16.September,1960	5,90,136.94
17.October,1960	6,04,908.49
18.November,1960	6,74,061.72
19.December,1960	5,90,134.80
20.January,1961	Not available.
21.February,1961	Ditto.
22.March,1961	Ditto.
23.April,1961	5,33,029.01
24.May,1961	4,86,302.01
25.June,1961	5,03,943.41
26.July,1961	5,21,690.90
27.August,1961	5,80,723.94
28.September,1961	6,48,861.11
29.October,1961	6,48,681.67
30.November,1961	7,15,767.03
31.December,1961	6,72,891.42

In Dhanbad proper there are 4,845 consumers out of which 4,163 belong to domestic group. The Dhanbad Electric supply Company cannot supply adequate power for the requirements. The town of Dhanbad has had an enormous expansion in the course of the last one decade. The incidence of urbanisation will go up

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and there is no doubt that in another ten years the requirements of electricity will go up much higher. In this connection it may be mentioned that Bihar has tremendously increased its power production in the recent years. In Bihar, the installed capacity of

public supply undertakings was 202,978Kw. in 1955,the corresponding generation being 440,322 million Kw. 40 per cent higher than the above and the corresponding output was 891,509 million Kw.

Various efforts have been made to increase the supply of electricity.In all a total investment of Rs.10.89 crores was made during the First Plan period resulting in 7,000Kw. of diesel capacity. The benefit of Damodar Valley Corporation system added over 150,000Kw. of installed capacity.Progress in Bihar in the field of electrification has been striking although the progress falls far short of the requirements.The Bihar Government's plan envisages an outlay of Rs.19.18 crores during the period of second plan.

There are four subdivisions of Electricity Department in Dhanbad district, namely, Dhanbad Electricity Supply subdivision, Nirsa Electricity supply subdivision ,Ganeshpur subdivision ,and Digwadih subdivision.

Regarding the present low incidence of consumption of electricity it may be mentioned that high rate of electricity has resulted in less consumption of energy for domestic purpose.

A chart of the rates for the supply of energy immediately preceding September,1959 is given below:-

***Domestic Service-(Supply DS)***

**(i) Applicability.**-To residential consumers for all *bona fide* domestic uses , including lights,fans,domestic pump sets and household appliances in single private dwelling and their appurtenances .Service to space in private dwelling which is used for office and professional work and occasionally used for business purpose by the constomer is permitted where a portion of the dwelling is used regularly for the conduct of business,all energy used in the dwelling will be considered as non-domestic unless separate circuits are provided by the customer to permit separate metering and billing of energy used in business portion. This tariff does not apply to clubs ,institutional homes, recognised tourist home,boarding houses,etc.Re-sale of sub-metering to tenants ,others flats or household and other parties is strictly prohibited.

**(ii) Character of Service-**

(1) A.C. 50 cycles,single phase,230 volts for loads up to 3 Kw.

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(2) A.C. 50 cycles,three phase,400 volts for loads more than 3 Kw.

(iii) **Tariff.**- First 30 Kw.at 34 nP. per Kw.

Next 50Kw.at 27 nP.per Kw.

Next 220Kw.at 17 nP.per Kw.

Above 300 Kw .at 21 nP.Per Kw.

(iv) **PromptPayment rebate.**- The rate is subjected to a prompt payment rebate at 2 nP.per Kw.provided the monthly bill,including arrear,if any,is paid in full by the date

soecified on the bill (15days from the date of the bill )

### ***Street Light Service***

(i) **Applicability.**- Applicable to street lighting system,including signal system and street lighting in municipalities, *Panchayats*,ect.

(ii) **Character of service.**- A.C.50 cycles single phase 400/230 volts.

(iii) **Tariff.**-(a) Energy charge based on metered supply at 19 nP.per Kw. Repairs and attendance charges will be at 30nP.per lamp per month for ordinary fittings.Replacement of bulbs will be charged from the consumer.

(b) All-in-rate for unmetered supply,including energy, repairs and attendance,but excluding replacement of bulbs which will be charged at cost.

(i) For lamps up to 40 watt.at Rs.1.20 per lamp per month.

(ii) For lamps of 60 watt. at Rs.2.70 per lamp per month.

(iii) For lamps of 100 watt.at Rs.4.20 per lamp per month.

(iv) For lamps of 200 watt.at Rs.8.00 per lamp per month.

### ***Commercial Service.***

Applicability to all commercial and non-domesticconsumers, such as business houses cinema, clubs, public offices, schools, hostels, hotels, Railway stations, etc., for light, fans appliances and motors, whose total demands do not exceed 10 Kw.

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Re-sale and sub-metering to tenants,adjoining house and to other parties is strictly prohibited.

Character of Service- A.C. 50 cycles, single phase 230 volts for demands up to 3 kw. and 3 phase 400 volts for demands above 3 kw. to 10 kw.

Tariff.- First 100 kw. at 34 nP. per kw.

Next 200 kw. at 27 nP. per kw.

All in excess of 300 kw. at 20 nP. per kw.

The rate is subject to a prompt payment rebate of 2 nP. kw. provided the the monthly bill, including arrear, if any, is paid in full by the date specified on the bill (15 days from the bill). There will be a minimum charge of Rs. 1.28 nP. per month for each single phase service whether electricity is consumed or not.

### **Industrial Load.**

Applicability to consumers with small and medium industrial load with a demand not exceeding 60 kw.

**Character of Service.**-A. C. 50 cycles, 3 phase, 400 volts.

**Tariff.**- All consumption at 15 nP. per kw. consumers under this category will be allowed energy for lighting directly and exclusively used for the operation of the industry or the pumps only on the above tariff.

### **High Tension Supply.**

At the option of the company for large industrial consumers guaranteeing a minimum monthly payment of Rs. 250.00 transformer and all high tension equipment being provided by the consumer and energy being metered at low tension.

(1) Traiff for supply at 33 kw.-

### **SCHEDULE A.**

(a) Available to all power consumers for loads of 1,500 KVA to 30,000 KVA.

(b) Character of service.- A. C. 50 cycles three phase.

(c) Tariff .

**Demand charge.**- First 2,000 KVA –Rs.8.50 per KVA per month.

Next 3,000 KVA- Rs. 7.50 per KVA per month.

Above 5,000 KVA- Rs. 6.50 per KVA per month.

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Energy charge.- First 3,00,000 kw. per month- Re. 0.40 per kw.

Next 7,00,000 kw. per month- Re 0.34 per kw.

All excess over 10,00,000 kw. per month- Re. 0.31 per kw.

### **SCHEDULE B.**

(a) Available to all power consumers for loads of 15,00 KVA to 30,000 KVA.

(b) Character of service.- A. C. 50 cycles 3 phase.

(c) Tariff .

Demand charge.- First 5,000 KVA- Rs. 9.00 per KVA per month.

Next 10,000 KVA- Rs. 8.00 per KVA per month.

Above 15,000 KVA- Rs. 7.00 per KVA per month.

**Energy charge.**- All energy consumption per month –Re.0.28 per kw.

(2) Tariff for supply at 11 KVA-

(a) Available to all power consumers and distributing licenses for loads at 75 KVA and above.

(b) Character of service.-A. C. 50 cycles 3 phase.

(c) Tariff.

**Demand charge.**- First 500 KVA- Rs.9.00 per KVA per month.

Next 1,500 KVA – Rs. 8.50 per KVA per month.

Next 3,000 KVA – Rs. 8.50 per KVA per month.

Above 5,000 KVA- Rs. 7.50 per KVA per month.

**Energy charge.**- First 50,000 kw.per month –Re.0.50 per kw.

Next 1,50,000 kw. –per KVA Re. 0.46 per kw.

Next 3,00,000 kw. –per KVA Re. 0.40 per kw.

Next 5,00,000 kw. –per KVA Re. 0.38 per kw.

All excess over 10,00,000 per month- Re. 0.35 per kw.

Energy for factory lighting up to ten percent of the total monthly off take will be allowed at the above rate. Any consumption in excess of ten percent will be charged for at the standard lighting rate.

### **LARGE-SCALE INDUSTRIES.**

The main large-scale industries of this district are-

(1) Firebricks Industries.

(2) Fertiliser Factory.

(3) Coke oven Plants.

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(4) Cement Factory.

(5) Lead and Silver Plant.

(6) Glass Factory.

It may be mentioned that there are no textile mills, jute mills, sugar factories, paper mills in this district. There is also no industries manufacturing machine tools and automobiles. One heavy industries, viz., Bokaro Steel Plant is proposed to be set up at Marafari in Chas thana of this district which is at a distance of about 30 miles from Dhanbad. This may be the biggest steel plant in India.

## LARGE-SCALE INDUSTRIES AND MANUFACTURE OF THIS DISTRICT.

### Coke Oven Plants.

The Bararee Coke Company, Limited located at Kusunda, Dhanbad, is a highly mechanised plant. This factory is manufacturing sulphuric acid, coke, coal tar, coal pitch, medium coal oil (disinfected fluid), barcolene, middle oil, creosote oil, anthracene and naphthalene. It is working three shifts per day and the average number of persons employed per month is in the following manner:-

Workers as defined under the Factories Act.	Average no. of persons employed during December, 1961.	Average no. of persons employed in the corresponding month of previous year.
1. Supervisors ..	..	11
2. Clerical ..	..	13
3. Skilled ..	..	46
4. Semi-skilled ..	..	70
5. Un-skilled ..	..	297
6. Others ..	..	12

The main raw material of this industries is coal which is made available locally and the main market is Calcutta. There are two coke plants in the district one at Loyabad and the other is at Lodna.

(a) Loyabad coking and bye-products recovery plant is located at Bansjore in this district. Here again, it may be mentioned that coal is the main raw material of this unit. Average quantity of coal and electricity consumed per month is 10,700.00 tons of coal and 70,000 units of electricity as reported by the Industries Department, Dhanbad.

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The statement below supplied by the office of the District Industries Officer, Dhanbad will give the details of finished products and bye-products:-

<b>Period.</b>	<b>Name of the products.</b>			<b>Value in rupees.</b>
March, 1960	1. Hard coke	..	..	3,53,753.40
	2. Soft coke		..	2,879.00
	3. Coke breeze		..	1,848.00
	4. Sulphatae of Ammonia		..	22,140.00
	5. Coal Tar		..	22,000.00
	6. Phenyl		..	607.06
March, 1961	1. Hard coke	..	..	3,22,198.80
	2. Soft coke		..	7,427.82
	3. Coke breeze		..	1,925.00
	4. Coal Tar		..	22,000.00
	5. Sulphate of Ammonia		..	19,372.50
	6. Phenyl		..	555.00
March, 1962	1. Hard coke	..	..	3,53,753.40
	2. Soft coke		..	2,879.00
	3. Coke breeze		..	1,848.00
	4. Coal Tar		..	22,140.00
	5. Sulphate of Ammonia		..	22,000.00
	6. Phenyl		..	667.06

The figures of average number of persons employed per month is given below-

March, 1960	..	..	417.96
March, 1961	..	..	438.35
March, 1962	..	..	441.03

The market of the manufactured items is Calcutta where it is in bulk consumed.

**(b) Lodna coke plant.**- This factory was established in 1920. The factory is located at Lodna. The manufactured items are coke and tar. Coal is the main raw material of this industry which is made available locally, i.e., Jharia. The market of the manufactured items is local and West Bengal and also other parts of this State. The average number of persons employed during the 1960 and 1961 were 356.5 and 340.2 respectively.

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The statement below shows the average product of this firm since 1956:-

Year.	Quantity produced.	
	Coke.	Tar.
1956 .. ..	4,559.9 tons	162.9 tons.
1957 .. ..	7,229.5 tons	261 tons.
1958 .. ..	8,037.0tons	270.3 tons.
1959 .. ..	5,534.4tons	170.5 tons.
1960 .. ..	7,220.4 tons	246.6 tons.
1961 .. ..	6,765.3 tons	222.1 tons.

There is one more coke plant at Bhowra in this district. The raw materials consumed in the factory are coal and oil, soft goods, iron and steel, tools and electricity. The name of the products and bye-products are hard coke, cole tar, pitch road tar and light creosote. The average number of persons employed per day during 1961 was 168. The price of coke during the year 1957 was Rs. 44.44 per ton, coal tar Rs. 100 per ton, Rs. 225 per ton, light creosote oil Rs. 1.87 per gallon.

### **GLASS INDUSTRY**

In 1958, there were eight glass factories in Bihar and in Dhanbad district there was one, viz., Khandelwal Glass Works located at Chota Ambona. The main products of this industry is glass lamp, jar and bottles, etc. The most commonly used raw materials are sand, borax, soda ash, salt cake, dolomite, limestone, saltpetre, sulphur and other materials. Sand which constitutes 70 percent of the materials is available in the various parts of the country and it is transported from Uttar Pradesh. Borax is not found in India and has to be imported from U. K. and U. S. A. There are abundant supply of good quality of dolomite, saltpetre and limestone in this State and in the neighbouring States of U. P. from where it is brought in this district.

The average number of persons employed per day in 1961 in this factory was 620 and its average monthly value of production was Rs. 1,96,444. The markets of the products of this factory are generally local but they are also sent to West Bengal, Orissa, Assam and Andhra Pradesh. One thing is to be noted that the raw materials are not standardised and often vary from consignment to consignment. For instance, Mahabir Glass Factory which was located at Chirkunda is closed at present.

### **SMALL-SCALE AND COTTAGE INDUSTRIES.**

There are different types of small-scale and cottage industries in the district which are mentioned below:-

- (1) Tar chemical.
- (2) Soap industries.
- (3) Sodium silicate.
- (4) Timber and furniture works.

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- (5) Electrical goods and manufacturing industries.
- (6) Re-rolling mills.

- (7) Engineering industries.
- (8) Foundry workshop.
- (9) Food processing industries.
- (10) Printing press industry.
- (11) Leather and footwear industry.
- (12) Stone-crushing industry.
- (13) Tassar industry.
- (14) Building industry.

**Tar Chemicals.**- The Bengal Tar Products which is located at Pradhankhanta in this district is a partnership firm . The place is at a distance of seven miles from Dhanbad Railway Station. It manufactures road pitch mainly. At present (1962) the factory is getting difficulty in the supply of employees in the factory varies from 50 to 70 per day. Recently it has taken up a programme of manufacturing insecticides but the scheme has not been approved by the Central Government. The market of the road pitah is mainly local, Patna, Jamshedpur and Ranchi.

Other tar and pitch manufacturing industries working on small-scale basis are Shalimar Tar Products at Lodna, Salkia Distillery and Chemicals Company at Chasnala and katras Products at Katrasgarh.

**Soap Industry.**- In this district and coalfield locality the soap industry has flourished well. The reason behind it is that the main consumers of these washing soaps locally produced are colliery labourers and often middle class people. They work in the collieries and the industries, they have got ready money with them and so they have sufficient purchasing capacity. The labourers are paid weekly either on Sunday or on any holiday.

The soap factories which are in the district may be mentioned as follows:-

- (1) Dewat Ram Dulichand Soap Factory, Jharia.
- (2) "V" Soap Factory, Jharia.
- (3) M/s. Sheo Karandan Kulasam, Jharia.
- (4) M/s Balmukund Soap Factory, Jharia.
- (5) M/s. Azzf Soap Factory, Jharia.
- (6) M/s. Arora Soap Factory, Jharia.
- (7) M/s. Bharat Soap Factory, Jharia.
- (8) M/s. Jharia Soap Factory, Jharia.
- (9) M/s. Shroft Soap Factory, Jharia.
- (10) M/s. Md. Sami and Md. Yakub Soap Factory, Jharia.

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It may be noted that these factories are all located at Jharia and the soaps are sent to other parts of the district. The first four factories produce about 100 tons of washing soaps per year and recently they have come under the Central Excise tax limit as a result of which they to pay the excise duty. The strength of labourers varies from 5 to 14.

Besides, there are some soap factories in the names of which are given below:-

- (1) Dwarka Soap Factory, Dhanbad town.
- (2) Hari Soap Factory, Dhanbad town.
- (3) Punjab Soap Factory, Dhanbad town.
- (4) Bajrang Soap Factory, Kerkend.
- (5) Luxmi Soap Factory, Katrasgarh.
- (6) Hanuman Soap Factory, Nirsa.
- (7) Sunder Soap Factory, Chirkunda.

These are registered small-scale industries under the Directorate of Industries, Bihar. These industries require oils of different kinds, caustic soda, sodium silicate, soap colour, assomatic chemicals, tallow, etc. They are getting important licences to import palm oil, copra, tallow, assomatic chemicals on the recommendation of the Director of Industries, Bihar. The Director of Industries issues essentiality certificate for the above items on the recommendation of the District Industries Officer. On the basis of essentiality certificate issues by Director of Industries, Bihar, Joint Chief Controller of Imports and Exports, Calcutta issues the import licences.

(3) Sodium Silicate.- It has already been mentioned that silicate of soda is an important raw material for the soap industries. There are four factories which manufacture sodium silicate in the district. They are-

- (1) M/s. Brija Silicate and Chemical Company, Jharia.
- (2) M/s. Jharia Silicate Works, Jharia.
- (3) M/s. Bharat Glass and Silicate Works, Jharia.
- (4) M/s. Durga Silicate Works, Chirkunda.

The raw materials required for the industry are soda ash, silica sand both are made available in plenty in U. P. from where it is transported. The other raw materials are imported from Calcutta. Steam coal is easily available. The markets of the product are in Dhanbad, Chaibasa, Jamshedpur, Madhupur, Deoghar, Asansol, Bermo and Ranchi. The average production of silicate of soda per year in the case of Brija Silicate and Chemical Company, Jharia is 340 tons whereas Jharia Silicate Workers produces 320 tons per year. One of the main drawbacks of these industries in the

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district is that the method of production is crude and outdated. There is sufficient scope for improvement in the production method. Brijia Silicate and Chemical Company, Jharia and Jharia Silicate Worker are registered as small-scale industries under the Directorate of Industries, Bihar, Patna.

**Timber and Furniture Industries.**-Collieries require a good quantity of wood both under the mines and outside the mines. Wood in the form of poles are required in huge quantity by almost all the collieries. Wood is generally brought from Chakradharpur, Chaibasa and Manoharpur in Singhbhum district. Some of the important industries engaged in sawing of wood are the following:-

- (1) Eastern Timber Trading Company, Jharia.
- (2) Prabhat Saw Mill, Jharia.
- (3) Ganesh Saw Mill, Jharia.
- (4) Luxmi Saw Mill, Jharia.
- (5) Shyamji Timber Company, Bhaga Road, Jharia.
- (6) Hetram Sharma Timber Works, Jharia.
- (7) Ram Gopal Agarwalla Timber Works, Dhanbad town.

Timber of various categories and size are supplied to collieries from sawing mills.

Besides, a good number of furniture making industries have grown up to meet the domestic and official need of articles of furniture of this district. Every colliery whether big or small has got some office where articles of furniture are needed. Secondly, in Dhanbad district, various Central Government offices are located from whom there is a good demand of furniture. Some of the important furniture making industries are the following:-

- (1) Royal Timber Corporation, Jharia.
- (2) Guru Nanak Furniture Workers, Jharia.
- (3) Viswakarma Furniture Workers, Jharia.
- (4) Wood Craft Works, Dhanbad.
- (5) Durga Timber Works, Govindpur.

There is one small-scale unit M/s. Steel Furniture and Allied Industries, Jharia, which manufactures de luxe steel combined with plastic cane furniture. The raw materials like steel bars procured from the open market and plastic cane brought from Calcutta. The market is practically local.

**Electrical Goods Manufacturing Industries.**- There are specially three units in Dhanbad which manufacture electrical accessories. Mention may be made of M/s. Bharat Electrical Company, Dhanbad which manufactures switches. It is equipped with up-to-date machineries. The factory is located near Dhanbad Railway Station.

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It also manufactures grease nipples, whose demand is mostly from Tisra. The other unit M/s. Shree Ram Krishna Engineering Works, Naya Bazar, Dhanbad manufactures earth leakage. The demand of this product is at present from the collieries of Dhanbad district. Other products of this unit are colliery equipment like bush bar panels, helmets, cable boxes and trailer.

Re-rolling mills.- There re-rolling mills in the district. They are given below:-

- (1) M/s. Dhanbad Industries, Dhanbad.
- (2) M/s. Sindri Re-rolling Mills, Chasnala.
- (3) M/s. Eagle Re-rolling Mills, Kumardhubi.

These three factories are Re-rolling various categories of steel like bars and rods. They get billets and other steel materials of Re-rolling purposes on the recommendation of the Director of Industries, Bihar, Patna. The markets of bars and rods are local and in the districts of Hazaribagh, Ranchi and Santhal Parganas, etc.

**General Engineering and Repairing Workshop.**- Engineering industries have an important place in the area of industries of this district. These act as a feeding industry to the coal mining industries of this district. With the expansion of the coal mining industries and the increased raising of coal from the mines, these engineering industries have expanded simultaneously. They manufacture those machineries and equipments which are mostly required in collieries. They are coal tubs, centrifugal pumps, tubewheels, bush bar bands, cable boxes and haulage.

(a) **M/s. MEMCO** manufacture mining machinery like haulage. This factory is equipped with modern types of machineries and with very skilled technicians. This industry is of own kind in this State. The average number of person employed per day is 96 and the average value of production per month Rs. 80,000. Other items of manufacture are pumps, airbrake switches, oil circuit brakes, controller resistances, cable boxes and distribution panels.

(b) **Barbed wire making units.**- M/s. Bihar Steel and Wire products, Jharia, M/s. Sindri Iron Foundry, limited and M/s. India Trading corporation, Dhanbad are the three units in the district. These units manufacture barbed wire.

(c) **Wire nails manufacturing units.**- Hind Electricals and Grnrral Industries, Dhanbad manufacture wire nails. The average number of persons employed per day is 21.

(d) **Coal tubs manufacturing units.**- There is a huge demand of coal tubs from the collieries for raising coals from the coal mines. The important small-scale units manufacturing coal tubs in this district are:-

- (1) Mehta Engineering Works, Dhanbad.
- (2) Basta Colla Engineering Works, Dhanbad.

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- (3) Carena Engineering Works, Bansjore, Dhanbad.
- (4) East Katras Engineering Works, Katrasgarh.
- (5) Ruby Engineering Works, Katrasgarh.
- (6) Ganeshpur Engineering Works, Ganeshpur.
- (7) Shri Krishna Engineering Works, Jharia.
- (8) Jain hardware Engineering Works, Katrasgarh.
- (9) Ekra Engineering Works, Katrasgarh .
- (10) Kumardhubi Engineering Works, Kumardhubi.

The production method of these units are outdated and the steel sheets are not sheared by the machineries.

**Repairing Workshops.-** The concentration of traffic has included repairing workshops at Dhanbad and Jharia. The highly equipped workshops are Howrah Motors, Limited, Dhanbad; Sudarshan Motors, Dhanbad; Rajno Motors, Dhanbad; Sardar Engineering Works and Acme Garage Works, Dhanbad. Nayabazar in Dhanbad town is the nucleus of the repairing units where hundreds of repairing units are localised.

**Trunks and Suitcase making Industry.-** There are four important small-scale units which manufacture steel trunks and suitcase in this district. They are as follows:-

- (1) Bantu Steel Trunk Factory, Jharia.
- (2) Jagdish Prasad Badri Prasad Factory, Jharia.
- (3) Best Steel Trunk Factory, Dhanbad.
- (4) A. Hassan Trunk Factory, Dhanbad.

These are registered fabricators and they get the controlled materials like sheets from the local stockist. The markets are local.

**Agricultural Implements and Domestic Utensils Making Industry.-** There are two units, viz., Kedar Industries at Chasnala and Devendra Cottage Industries at Jharia which used to manufacture agricultural implements and domestic utensils. The industry of Chasnala generally manufactures agricultural implements and Devendra Cottage Industries manufacture domestic utensils.

**Foundry Works.-** The Jaiswal Trading Company, Gandhi Road, Dhanbad casts new metric weights. It also casts some other railway equipments. The Sindri Iron Foundry casts railway slippers. Besides this there are some other foundry workshop where various categories of colliery equipments are manufactured by the process of casting. They are Shri Krishna Engineering Works, and United Engineering Works located at Jharia. The industries have about 1,500 workers.

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(1) Food Processing Industries.- Ram Krishna Oil Mill is the only mill functioning in the district which is located at Nayabazar, Dhanbad. The average number of persons employed per day is about ten. Mustard seeds and linseed are brought from Uttar Pradesh. The market is mostly local.

(2) Dhanbad Flour Mill.- It is Dhaiya which is at a distance of two miles from Dhanbad Railway Station. It has received financial assistance from the State Financial Corporation, Patna. It manufactures flour. About forty persons are employed per day. The market is mostly local.

Besides, there are a large number of flour mills employing three to four persons but they are scattered throughout the district.

(3) Rice-Milling Industry.- Though the district is industrial but it can be said to be a rice producing district. A list of such mills with average daily crushing capacity is given below:-

Name of mills and place.	Average daily crushing capacity.	
		Tons.
(1) Hanuman Rice Mill, Katrasgarh	..	10
(2) Chirkunda Rice mill, Chirkunda	..	20
(3) Dutta Rice Mill, Nirsachatti	..	15
(4) Shri Ram Haridwarilal Rice Mill, Chirkunda.	..	11

There are several more rice mills of smaller capacity in the district. The labour force required for the industry is mostly unskilled and they are recruited from the local population. Since the industry is of more or less seasonal nature labourers have to be watchful for their employments.

**Lozenges and Bakery Industries.**- As regards bakery industry it may be noted that there is one factory, viz., Mack and Company located at Dhanbad which makes pastries, cakes, etc. Its product is very popular in the colliery areas and it gets a good market. Besides, there are more units, viz., Swaran Bakery Company, etc., located at Sindri.

There are some lozenge making units also in the district. They are Thakurdas and N. Saha Lozenge Company at Dhanbad and Govindpur respectively.

**Printing Press Industry.**- This industry has flourished tremendously in recent years. The important printing presses are mentioned below:-

- (1) Kamla Printing Press, Jharia.
- (2) Star Printing Press, Jharia.
- (3) Eastern Printing Press, Jharia.
- (4) National Printing Press, Jharia.

- (5) Sheoraj Printing Press, Jharia.
- (6) Yugantar Printing Press, Jharia.
- (7) New Sketch Press, Dhanbad.
- (8) Art Press, Dhanbad.
- (9) Shree Press, Katrasgarh.
- (10) Janmat Press, Dhanbad.

Besides, there are lather and footwear industry, store crushing industry, *gur* and *Khandsari*, carpentry and blacksmithy industries in the district.

**Khadi and Village Industries.**- It will not be out place to mention here that under Khadi and village industries, the district is not important. The weaving of cotton and wool is an important occupation to the majority of the Adibasis. The hand-woven cloth, which though coarse is durable, is mostly seen amongst the aboriginal and the semi-aboriginal tribes. The blockwise list of some industrial societies is below:-

	No. of village Straw co.-op. societies.	Plam gur making.	Hand pounding of rice.
(1) Govindpur Block	3	..	1
(2) Tundi Block	1	1	1
(3) Chas Block	..	..	1
(4) Topchanchi Block	2	..	..

Outside the block areas, there are three oil ghani societies which are functioning at Dhanbad, Jharia and Katras. They have received financial assistance from State khadi Board. The products are generally sold locally. One cottage industries emporia was staeted at Jharia in 1962.

**Tassar Industry.**- Tassar industry is comparatively recent in the district and is confined to a very small area. The industries are located at Chas, Govindpur and Tundi areas of this district. The State Government has started two tassar sub-stations at Chas and Tundi. The main function is to train the tassar rearers in rearing and spinning. It is only in these three thanas that the host trees for eri-silk worm, i. e., castor plants are grown. The Agriculture Department of the State Government have taken some initiative to distribute eri-silk worm. Officers of the Government tour in the villages. They demonstrate and introduce a rational method of rearing eri-silk worm and spinning of eri-silk yarn. Though the industry is in its infancy, its future seems to be bright.

**Bidi Industry.**- Bidi industry keeps engaged more than fifteen hundred persons most of whom are bidi manufacturers (about one thousand approximately). There will also be a couple of hundreds of men engaged as driers, packers, and tobacco cleaners. It is peculiar

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that both the ingredients of the outer leaf and the tobacco are imported from outside. There is also a very large consumption of bidi within the district.

**Building Industry.**- The incidence of urbanisation in Dhanbad district has been remarkable. Dhanbad, Jharia, Sindri and other towns have expanded enormously in the last two decades and other townships are developing. The more availability of cement and steel has led to a change in the pattern of the houses. Instead of mud and brick houses more of reinforced brick and reinforced concrete houses are being built. There has been a great expansion of Government offices at the district headquarters and a number of institutions have now been located in Dhanbad. In this district there are many offices sponsored by Central Government. All this has led to a sizeable population being engaged in what may be loosely described as building industry.

This building industry has spread to many of the rural areas as well. The location of the block headquarters at important villages has led to the construction of a number of pucca houses for Block Development Office and residential houses. The well-to-do villagers have also come to appreciate better houses to live in and houses with modern comforts are coming up in many villages.

The building industry has kept engaged people in different types of work. Broadly speaking they are brick layers, carters, truck owners and drivers, masons, carpenters, etc. Stockists of coal, bricks, cement, lime, iron rods, etc., have been cropped up in the urban areas. It is understood that there are now 20 brick-kilns in the town of Dhanbad. Besides, there are brick-kilns at Jharia, Sindri, Tundi, Nirsa, Katras and other rural areas has led to a very large number of brick-kilns in the rural areas. On a rough estimate more than 1,000 persons are engaged at the brick-kilns of Dhanbad alone.

It may be mentioned here that after the earthquake of 1934 there was a craze for building light structures and attempt was made to manufacture Raniganj tiles near Jharia. But as mentioned before as more cement and steel rods were available people took to brick, cement and steel for building stronger houses and Raniganj tiles fell into disuse. Similarly the manufacture of country tiles (khapra) in the urban areas has considerably declined because of the increase in demand for houses of cement and steel. Corrugated sheets and asbestos sheets are also largely used for roofing.

Building industry will receive a further encouragement now that schemes for housing the lower income-group and small income-group have been sponsored by the State Government. The State is giving loans to further such schemes. To cope with the demand for more bricks, loans are being given to the brick-kilns and better arrangements for coal, cement and steel are being made in the district.

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### INDUSTRIAL POTENTIAL AND PLANS FOR FUTURE DEVELOPMENT.

Dhanbad is an important district from the point view of industries. Industries based on extractive raw materials appear to have greater scope for expansion on a large scale than industries based on agricultural raw materials. Industries based on metallic minerals have expansion potential on a large as well as small scale.

Availability of coal, power raw materials and presence of entrepreneurs and technical skill could accelerate the development of industries in this district.

The industrial potential of the district has not yet been properly surveyed. The Techno-Economic Survey of Bihar while discussing the "New Industrial Opportunities" has observed, "In 1955, Bihar had four registered units located at Hazaribagh, Dhanbad, Singhbhum and Monghyr employing 1,552 workers with a production capital of Rs. 134.8 lakhs. Annual production was valued at Rs. 57.4 lakhs and value added by manufacture at Rs. 8 lakhs or 4 percent. Glass sheet and plate constituted nearly 90 percent of the total imports. The market demand for glass ware, particularly glass sheets and plates is considerable and is likely to increase in the future. There are good prospects for exporting sheet glass to Ceylon, Africa, Burma, Palestine and Indonesia. All major raw materials are locally available. With State assistance in procuring machinery and easing bottlenecks in the way of transporting raw materials and coal, the industry has good prospects for expanding manufacture of sheet and plate glass at Dhanbad.

"The utilization of the Amjor pyrites for the recovery of sulphur and manufacture of sulphuric acid for the plant is Amjor as the sulphur produced can be moved easily than pyrites. The project would provide employment for 100 to 200 persons exclusive of mining which would employ about 400 persons. The best location would be Sindri where the acid produced could be utilised by the Superphosphate Factory."\*

The Techno- Economic Survey of Bihar further observed, "The plant could be located near Sindri where the petroleum coke, which is the raw material for the graphite electrode, will be produced when the refinery comes into operation."

In the Third Five-Year plan the Fourth Steel Plant is proposed to be established at Maraphari located at a distance of about thirty miles from Dhanbad town. At present (1963) it is just in the initial stage and about 50,795 persons are to be displaced in this project.

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The Plant area will be quite close to the east of the Railway line, Chandrapura to Muri near Maraphar Railway in dhanbad district. The township will cover 7.5 square miles. The potential capacity of the produce will be 10 million tons during the Third Five-Year Plan period.

The main power requirements of the plant are intended to meet from the power house under execution by Damodar Valley Corporation near Chandrapura on the northern bank of Damodar river. When completed there will be considerable changes in the economy of the district.

1. Expansion of the Superphosphate Factory at Sindri.- The State Government have established a Superphosphate Factory at Sindri. A scheme for the expansion of this factory so as to raise its annual production capacity to 50,000 tons was included in the Second Five-Year Plan. But on account of difficulties of foreign exchange and certain other factors it is not likely that the expansion scheme will be taken up during the currency of the Second Plan. It is, therefore, proposed to include the expansion scheme in the Third Plan at an estimated cost of Rs. 50 lakhs. This expansion scheme has already been approved by the Government of India's Licensing Committee.

2. Temperature Coal Carbonisation and bye-product Recovery and bricketing Plant.- At present the domestic fuel is made either by burning the coal in open air or in small coke ovens whose efficiency is very low. moreover, all the gaseous products which may be used for the manufacture of a number of bye-product such as coal tar and phenyl, etc., are left to the atmosphere. In the present plant the ratio of coal to coke will be 1:3 to 1:0 whereas in existing units it is about 1:6 to 1:0. The high ash content coal may be used for the purpose and the low ash content coal may be reserved for metallurgical purposes. This may be located preferably near Sindri, where power and water may be made easily available by the Bihar State Electricity Board and from damodar river. At present about  $1.7 \times 10^6$  tons of coal is used for coke in which all the bye-product are wasted. In Bihar the requirements of coke are about 3 to 4 million tons for domestic fuel. This will cost Rs. 4.5 crores and will employ about 600 persons.

3. Electrical Insulation Tapes.- There is no factory for the manufacture of Electrical Insulation Tapes in India. There is a good market of this product. This factory may serve the requirements of West Bengal, Bihar, Orissa, Assam and Uttar Pradesh, etc. There may be any suitable site in Dhanbad district with a siding but preferably Sindri would be a good site. The estimated cost is Rs. 1.2 crores and the employment potential will be 200.

4. Refrigerator, Air Cooler, Air Condition and Water Cooler. There is a growing demand of refrigerator and air-conditioning units in India. The iron and steel for the factory may be available from

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Durgapur, Burn and Company, Tata Iron and Steel Company and Bokaro Steel plants. There is good metallurgical coke available in Dhanbad district for the manufacture of the equipment and any suitable site in the district with a siding will serve the purpose. This will cost almost Rs. 3.25 crores and will employ about 1,000 persons.

5. Electrical Motors, Fans, Pumps and Transformers, etc.- There is a good prospect of this industry as Electrical Motors and other items are required in mining and other industries. The site could be at any part of Dhanbad district with a siding. The estimated cost will be 1.5 crores and will employ about 1,200 persons.

### **Medium and Small-Scale Industries.**

(1.) Re-rolling Mill.- There is growing of rods, flat and bars, etc. The advantage in locating this industry in this district will be the availability of metallurgical coke in Dhanbad, Iron and Steel from Durgapur, Burnpur, Jmeshepur and Bokaro Steel Plant at Maraphari near Chas police-station in Dhanbad. The site will be located at Mohuda. The estimated cost will be Rs. 8 crores and the employment potential is 500.

(2.) Wire Nail, Wood Screw, Bolt, Nuts and Door-Fittings.- A number of small-scale units can be started for the manufacture of these articles at an estimated cost of Rs. 50 lakhs. This will employ about 1,000 persons. The site will be at Dhanbad on Dhैया Road. The consumption possibilities within the district are enormous.

(3.) Machine Tools Manufacturing Industries.- There is a demand of Lathe, Drill and other machine tools, etc., which can be started at Dhanbad on Dhैया Road at an estimated in the district and the consumption possibilities within the district are great.

The ancillary industry of dairy-farming has potential for the district. There is acute shortage of milk in the district and as such this unit will have a good prospect. One good dairy farm will be started at Dhanbad on Dhैया Road at an estimated cost of Rs. 10 lakhs and it will employ about 100 persons. Pastoral lands could be acquired. The urbanisation of some places. on or near Grand Trunk Road, like Govindpur, Kumardhubi, Maithon, etc., assures ready consumption of the produce.

### **Industrial Estates.**

The establishment of Industrial Estates has already come to be recognised as a positive means to achieve decentralisation and dispersal of industry. The four Industrial Estates set up at Patna, Biharsharif, Darbhanga and Ranchi during the Second Plan have been helpful in building up an industrial outlook and for stimulating investment in consumer goods' industries.

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According, in the light of the recommendations of the working group set up by the Government of India for small-scale industries, the following schemes of Industrial Eastates have been proposed in the Third Five- Year Plan in Bihar:-

(i) Two units of large Industrial Eastates at an estimated cost of Rs. 15 lakhs each for towns having population ranging between 50,000 and 1,00,000.

(ii) Two units of small Industrial Eastates at an estimated cost of Rs. 10 lakhs for towns having population ranging between 20,000 and 50,000.

(iii) Ten units of small Industrial Estates at an estimated cost of Rs. 5 lakhs each for towns having population between 5,000 and 20,000.

(iv) Fifty units of workshop sheds for village artisans at an estimated cost of Rs. 10,000 each in rural towns having less than 5,000 population.

The total outlay on these schemes, therefore, is kept at Rs. 20,000 lakhs for the entire Third Plan period. There has been, so far, no steps taken to start an Industrial Estate anywhere in Dhanbad has got 19 towns and there is no doubt that some Industrial Estates are likely to be started sooner or later.

#### **LABOUR AND EMPLOYERS' ORAGANSATION.**

Dhanbad district is very well industrialised. The employers have got very effective organisations in the district. The industries of the district require both skilled and unskilled labour. Most of the unskilled labourers employed in different factories come from within the district itself. The supply of skilled personnel comes from not only neighbouring districts, i. e., Hazaribagh, Santhal Parganas, Ranchi but also from outside India, specially the supervisory staff. There are organised labour unions in different industries but the union of Coal Mazdoor Sangh at Jharia is remarkably well organised and influential. It may be mentioned that generally it is taken that the labourers are more conscious of their rights than their obligations. Some of these labour organisations make themselves occasionally felt by the threatening strikes complete or partial.

Following is the list of registered labour unions in Dhanbad district till 31<sup>st</sup> March, 1961:-

<b>Serial no</b>	<b>Name of the union.</b>	<b>Registration no</b>	<b>Date of registration.</b>	<b>Affiliation with central organisation</b>
1.	The Loyabad Coke Plant Workers' Union, P. O. Bansjora (Dhanbad).	33	4 <sup>th</sup> December, 1940	A. I. T. U.C.
2.	Loyabad Power House Workers' Union, P. O. Bansjora, district Dhanbad.	37	29 <sup>th</sup> April, 1941 ..	I. N. T. U. C.

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3. Bhowra Coke Plant Workers' Union, Bhowra district Dhanbad.	81	15 <sup>th</sup> June, 1946 ..	A. I. T. U. C.
4. Indian Collieres' Union, Katrasgarh, district Dhanbad	96	4 <sup>th</sup> September, 1946	H. M. S.
5. Motor Workers' Union, Nayabazar, district Dhanbad.	100	26 <sup>th</sup> June, 1946 ..	H. M. S.
6. Hindustan Khan Mazdoor Sangh, Balihari, p. o. Kusunda (Dhanbad).	111	24 <sup>th</sup> January, 1947	U. T. U. C.
7. East Indian Coal Company Workers' Union, Bhowra, P. O. Jealgora (Dhanbad)	119	4 <sup>th</sup> February, 1947	Not affiliated.
8. Eastern Coal Company Colliery Workers' Union, Bhowra, P. O. Jealgora, district Dhanbad.	122	4 <sup>th</sup> February, 1947	A. I. T. U. C.
9. Permit Managers' Union, P.O. Sijua, district Dhanbad.	129	8 <sup>th</sup> March, 1947 ..	Not affiliated.
10. Metal Corporation Workers' Union, Tundoo, P. O. Nawagarh (Dhanbad)	148	6 <sup>th</sup> June, 1947 ..	I. N. T. U. C.
11. Kumardhubi Workers' Union, Kumardhubi, district Dhanbad.	153	20 <sup>th</sup> June, 1947 ..	I. N. T. U. C.
12. Nirsha Thana coalfield and Workshop Workers' Union, P. O. Nirsachatti, district Dhanbad.	156	3 <sup>rd</sup> July, 1947 ..	Not affiliated
13. Bihar Firebricks and Potteries Workers' Union, P. O. Mugma, district dhanbad.	160	6 <sup>th</sup> July, 1947 ..	I. N. T. U. C.
14. Ashkuti Fulartand Labour Union, P. O. Katrasgarh, Dhanbad.	188	28 <sup>th</sup> September, 1947	Not affiliated
15. 15. Reliance Pottery Worker's Union, P. O. Pottery Workers' Chanch chirkunda, district Dhanbad.	190	5 <sup>th</sup> October, 1947 ..	I. N. T. U. C
16. Basdeopur Colliery Workers' Union, P. O. Colliery Kusunda, district Dhanbad.	192	8 <sup>th</sup> November, 1947	I. N. T. U. C
17. Mugma Coalfield Workers' Union, Sanga Mahal, P. O. Mugma, district Dhanbad.	204	18 <sup>th</sup> November, 1947	I. N. T. U. C

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Serial no.	Name of the union.	Registration no.	date of Registration	Affiliation with central Organisation
18	Katrasgrah Ganespur labour union kharkharee colliery, P.O .Katrasgarah, district dhanbad.	205	19 <sup>th</sup> November,1947	I.N.T.U.C
19.	bhulan Bsrree Coal Company Workers Union P.O . Patherdih (Dhanbad).	206	19 <sup>th</sup> November,1947	Not affiliated
20.	Mahuda power Station Work – shop Workers ,Union” Bhurangya Colliery, P.O- Mahuda district Dhanbad.	219	19 <sup>th</sup> November,1947	U.T.U.C
21.	Gulfarbari Mazdoor union , Gulfarbari ,P.O Mugma (Dhanbad).	224	10 <sup>Th</sup> January , 1948	I.N.T.U.C
22.	Electric Workers Union , jharia , district dhanbad.	249	14 <sup>th</sup> March, 1948	I.N.T.U.C
23.	Sindri workers ‘union Sindri , district Dhanbad.	262	14 <sup>th</sup> March 1948	I.N.T.U.C
24.	Kastsa Coalfield Mazdoor union Palash Toli Colliery , P.O Ghurulia , district Dhanbad.	270	1 <sup>st</sup> April , 1948	Not affiliated
25.	New Teturiya Colliery Workers , Union Malkera , district Dhanbad.	289	24 <sup>th</sup> May , 1948	Ditto.
26.	Coal Superintendents Employees Association , P.O . Dhanbad (Dhanbad.)	299	20 <sup>th</sup> October , 1948	I.N.T.U.C
27.	Hazaribagh and Manbhumi Coal – lieries Labour Union North Damodar Colliery , P.O . Nudkharkee , district Dhanbad.	320	21 <sup>st</sup> January , 1949	Not affiliated
28.	Khas Govindpur Colliery Labour Union Katrasgarh , district Dhanbad.	331	17 <sup>th</sup> february , 1949	Ditto.
29.	Benidih Coal Concern Labour Union Benidih Colliery , P.O-Nudkharkee, district-Dhanbad.	352	12 <sup>th</sup> april 1949	Ditto.
30.	East Katras Khan Mazdoor Union ,P.O Katrasgarh, district Dhanbad.	359	7 <sup>th</sup> April ,1949	Not affiliated
31.	Sitanala Colliery Workers’ Union Sitanala Colliery , P.O sitanala , district Dhanbad.	373	24 <sup>th</sup> July ,1949	I.N.T.U.C

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Serial no.	Name of the union.	Registration no.	date of Registration	Affiliation with central Organisation
32.	Khas kusunda Colliery Labour Union , P.O. Khas Kusunda district-Dhanbad.	374	3 <sup>rd</sup> august,1948	Not affiliated
33.	Koyla Mazdoor Panchayat , Jharia ,district dhanbad.	415	30 <sup>th</sup> December,1950	H.M.S
34.	Shahi Brothers workers union Katrashgarh, district Dhanbad.	417	6 <sup>th</sup> November,1950	Not affiliated
35.	Badjana Colliery Mazdoor union New and West Bad jana Collieries, P.O Nirsa chatti, district Dhanbad.	421	11 <sup>th</sup> February ,1950	Ditto.
36.	The Association of Indian Mine Surveyors ,at and P.O Dhanbad.	442	11 <sup>th</sup> May ,1950	Ditto.
37.	Dighpatiya junior Raj Nund khurkee Collieries Workers Union, P.O Nudkhurkee, district Dhanbad.	450	11 <sup>th</sup> May ,1950	Ditto
38.	Mandra Collieries Labour Union , P.O Nawagarh , district Dhanbad.	455	13 <sup>th</sup> August ,1950	Ditto
39.	Karamchari Sangh ,Karampura , P.O Nirsachatti, district Dhanbad.	475	4 <sup>th</sup> November,1950	I.N.T.U.C
40.	Colliery Mazdoor Sangh , Opposite State Bank of India , Katras Road ( Dhanbad)	491	7 <sup>th</sup> June,1951,	I.N.T.U.C
41.	Jharia Khas Colliery Workers Union , Indian Mine Works Federation , at and P.O Dhanbad , district Dhanbad .	499	27 <sup>th</sup> March ,1951	A.I.T.U.C
42.	Agardih Colliery Labour Union , P.O. Katrasgarh, district Dhanbad .	522	30 August ,1951	Not affiliated.
43.	Jairamdih Colliries Mazdoor Union P.O. NundKhurkee, district-dhanbad.	530	26 <sup>th</sup> September ,	1951 Ditto
44.	Damodar Rope Way labour Union , P.O . NundKhurkee, district-dhanbad.	556	30 <sup>th</sup> April , 1952	I.N.T.U.C
45.	Fertiliser Factory workers , Union L-I 586/587 Sharpura district-dhanbad.	591	31 <sup>st</sup> March , 1953	I.N.T.U.C

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Serial no.	Name of the union.	Registration no.	date of Registration	Affiliation with central Organisation
46.	Loyabad Labour union P.O bansjora , district Dhanbad.	595	10 <sup>th</sup> April , 1953	A.I.T.U.C
47.	Mahalbani Colliery Workers Union ,P.O Bhoura Dhanbad.	601	4 <sup>th</sup> May 1953	A.I.T.U.C
48.	Bagaigi Kujama workers ,union south Kujama Colliery , P.O Jharia Dhanbad.	604	19th May, 1953	Not affiliated
49.	Dhanbad Municipal Labour Union Refugee Market , District dhanbad.	605	23 <sup>rd</sup> May , 1953	A.I.T.U.C
50.	Damodar Vally Carporation Karamcharu sangh , Panchet Hill P.O-Panchet (Dhanbad).	612	2 <sup>nd</sup> July , 1953	I.N.T.U.C
51.	Ekra Engineering Workers Union , Digwadih P.O Jealgora , district-dhanbad.	630	29 <sup>th</sup> August ,1953	I.N.T.U.C
52.	Bihar Coal Miners Union , Digwadih P.O P.O Jealgora , district-dhanbad.	637	25 <sup>th</sup> September ,1953	U.T.U.C
53.	Tata Colliery Workers ,Union Digwadih , P.O Jealgora , district Dhanbad.	638	27 <sup>th</sup> August ,1953	U.T.U.C
54.	Tisco Accounts Branch Employees Union , Digwadih, P.O-Jealgora ,District Dhanbad.	651	2 <sup>nd</sup> February ,1954	I.N.T.U.C
55.	.Khas Colliery Workers Union , P.O Sijua ,district Dhanbad.	669	14 <sup>th</sup> May , 1954	A.I.U.T.C
56.	Surendra East Loyabad Colliery Labour Union P.O Kusunda , District Dhanbad .	671	21May,1954	Not affiliated
57.	Central Alkusa (Goundi ) Col liery Workers , Union , Kandwadih Bazar , P.O Kusunda , District Dhanbad.	648	19 <sup>th</sup> September ,1954	A.I.U.T.C
58.	Bararee Coke Plant Workers , union Opposite Imperial Bank district dhanbad.	688	19 <sup>th</sup> September , 1954	A.I.U.T.C
59.	Workers Union , D.V.C . Maithan , Dhanbad.	694	3 <sup>rd</sup> November , 1954	Ditto.

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Serial no	Name of the union.	Registration no.	date of Registration	Affiliation with central Organisation
60.	Centrtal Kenduadih Colliery Labour Union Central Kenduadih Colliery, P.O . Nawa garh, district , Dhanbad.	696	27 <sup>th</sup> November,1954	Not affiliated.
61.	Central Kooridih Labour Union , Central Koridih Colliery P.O . Katrasgarh district Dhanbad.	697	3 <sup>rd</sup> November , 1954	Ditto
62.	Cement Factory Workers Union , C/O Factory Workers Union , L- 586 P.O Sharpura , Sindri , district dhanbad.	710	24 <sup>th</sup> January , 1955	Ditto
63.	West Chandore Collieries Workers , Union , P.O Sijua , E. Rly Dhanbad.	711	28 <sup>th</sup> January ,1955	Ditto
64.	Shisha Sramik Sangh , Jharia, Dhanbad.	716	31 <sup>st</sup> May , 1955	I.N.T.U.C
65.	Dhanbad Subdivisional karam chari Sangh , P.B No. 51, Jharia district Dhanbad.	731	31 <sup>ST</sup> May , 1955	A.I.T.U.C
66.	Dhanbad District Press Karamchari Sangh , Near Bus Stand No 4 , at and P.O Jharia district Dhanbad.	769	14th February ,1956	A.I.U.T.C
67.	Albion Colliery Workers , Union , Albion Colliery, P.O Karmatand (Dhanbad).	770	6 <sup>th</sup> March,1956	Not affiliated
68.	Bokaro Jharia Collirty Workers Union , P.O . Karmatand , Dhanbad.	771	6 <sup>th</sup> March,1956	Ditto.
69.	Mugma Mazdoor Union , Mugma , P.O . Mugma , district Dhanbad.	772	17 <sup>th</sup> March ,1956	I.N.T.U.C
70.	Keshalpur Colliery workers Unoin Guhibandh, P.O. Karmatand, Dhanbad.	788	11 <sup>th</sup> August 1956,	Not affiliated
71.	Mines Electrical 'Supervisors' Associates , Sen's Residence, at and P.O. Katrasgharh ,district Dhanbad.	797	30 <sup>th</sup> August 1956,	Ditto.
72.	Patent Store Workers Union Loyabad Power House , P.O. Bansjora ,district Dhanbad.	798	1 <sup>st</sup> September ,1956	Ditto.

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Serial no.	Name of the union.	Registration no.	date of Registration	Affiliation with central Organisation
73.	Pure Kustore Colliery Workers' Union , Pure Kustore Colliery , P.O. Kusunda ,district Dhanbad.	804	4 <sup>th</sup> October ,1956	Not affiliated
74.	Liberty Colliery Workers Union , Liberty Colliery , P.O. Dhansar (Dhanbad)	805	5 <sup>th</sup> October ,1956..	Ditto
75.	Jharia water Board Workers Union, Jamadoba ,P.O. Dhansar ( Dhanbad).	810	29 <sup>th</sup> November ,1956 ..	Ditto
76.	Sulanga Colliery Workers Union , P.O Khas Jungarh, district Dhanbad.	811	29 <sup>th</sup> November ,1956..	Ditto
77.	Engineering and Foundry Workers Union , Badjua, P.O. Dhansar (Dhanbad).	812	29 <sup>th</sup> November, 1956...	Ditto
78.	Bera Colliery Workers Union, Bera Colliery Dhanbad ,P.O. Dhansar (Dhanbad).	813	29 <sup>th</sup> November , 1956...	Ditto
79.	Shree Ram Krishna Engineering Works Laboure Union ,Jmadoba, P.O.Jealgora (Dhanbad).	829	17 June , 1957	Ditto
80.	Mines Labour Welfare Organisation Workers Union ,Dhanbad ,C/o Indian National Mines Workers Federation , district Dhanbad.	833	25 <sup>th</sup> September ,1957	Ditto
81.	Bihar Koyala Mazdoor Sabha, Dhanbad , Indian National Mines Workers Federation ,Dhanbad.	837	16 <sup>th</sup> October ,1957	A.I.T.U.C
82.	Karanpura Workers Union Karanpura P.O. Nirsachatti, district Dhanbad.	851	18 <sup>th</sup> April , 1958..	Not affiliated
83.	Congress Mazdoor Sangh , Baghmara, P.O. Mohuda, district Dhanbad.	863	31 <sup>st</sup> August, 1958..	Ditto.
84.	Godhur Mazdoor sangh , west Godhur Colliery , P.O . kusunda , (Dhanbad)	877	12 <sup>th</sup> December,1958	Ditto.
85.	Chandro Mazdoor Sangh ., Pure Chandore Colliery , P.O Sijua , district Dhanbad.	878	12 <sup>th</sup> December,1958	Ditto.
86.	Adarash Biri Mazdoor Sangh , P.O . Jharia , district , Dhanbad.	879	12 <sup>th</sup> December,1958	Ditto.

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Serial no.	Name of the union.	Registration no.	date of Registration	Affiliation with central Organisation
87.	Nichtpur Colliery Workers union , Nichtpur Colliery P.O Karmatand, district Dhanbad.	902	30 <sup>th</sup> May , 1959,	Not affiliated.
88.	Karmatand Colliery Workers Union , Karmatand Colliery P.O Karmatand , district Dhanbad.	903	30 <sup>th</sup> May , 1959,	Not affiliated.
89.	Brock Bond ( Dhanbad Branch) Employees, Union , C/O Sri Ramautar Mistry , Manakand , District Dhanbad.	905	2 <sup>nd</sup> June , 1959,	Ditto
90.	Mines Mazdoor Union , Bihar , Sijua , P.O . Sijua , Dhanbad.	912	14 <sup>th</sup> September , 1959	H.M.S
91.	Dhanbad Paribahan Karamchari Sangh , Dari Mahalla , district Dhanbad.	934	11 <sup>th</sup> January , 1960 ,	U.T.U.C
92.	Dhanbad District Fire brick and ceramic Workers , Union P.O Chirkunda (Dhanbad).	940	20 <sup>th</sup> February , 1960	A.I.T.U.C
93.	Dhanbad Local Bodies Karamchari Sangh , Dari maholla , Dhanbad Bazar (Dhanbad.)	946	6 <sup>th</sup> March ,1960..	U.T.U.C
94	Refractory General Workers union , Kalloo Bathoon , P.O Karanpura (Dhanbad.)	964	25 <sup>th</sup> June , 1960.	Not affiliated.
95 .	Coke Plant Mazdoor Sewak Sangh , Bhowra , P.O Bhora district Dhanbad.	994	27 <sup>th</sup> December , 1960	Ditto.

### INDIAN MINING FEDERATION.

Originally Indian Mining Association was the only organisation to look after the Coal Mining Industry in India . In subsequent years it was found that the interests of the big European – managed collieries often clashed with those of the medium and small size collieries managed mostly by Indians .The necessity of an organization to look after the interests of the latter class of the collieries was therefore strongly felt. Indian Mining Federation was thus brought into being through the united efforts of several leading Indian colliery owners headed by late Rai Bahadur A.C Banerjee , C.I. E , late N.C . Sarkar , late M.N Mukherjee and others . The Federation was established in 1913 and registered under the Societies Registration ACT XXI of 1960.

The affairs of the Federation are managed by a duly elected Executive Committee consisting of 20 elected and six co- opted

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members . The committee is reconstituted every year by fresh election . The Committee has a Chairman and a Vice – Chairman and , who are also elected every year.

The members of the Federation are scattered over almost all the coal producing areas in India . For the convenience of the local members – collieries , the Federation has two branch executives , and six coalfield committee situated at the various coalfield areas of the country.

The office of the Indian Mining Federation is housed at its registered address 135, Canning street, Calcutta , where meetings are held by the Committee at regular intervals to consider communications on various subjects concerning the coal mining industry received from Governments both State and Central , Railways , Railway Board , and other establishments .

The Federation is represented on the following statutory and public bodies and committees through representatives sent by it at the time of reconstitutiion of the bodies or committees:—

- (1) Asansol Mines Board of Health.
- (2) Advisory Committee on Stowing.
- (3) Advisory Committee for the Coal Survey Station under the Central Fuel Research Committee-
  - (I) Raniganj Coal Survey Station.
  - (II) Jharia Coal Survey Station .
  - (III) Bokarao – Ramgarh – Karanpura Coal Survey Station .
  - (IV) C.I Coal Survey Station, Bilashpur.
  - (V) Nagpur Coal Survey Station.
  - (VI) Assan Coal Survey Station , Jorhat.
- (4) All India Organization of Industrial Employers.
- (5) Asansol leprosy Relief Association – Central Leprosy Board.
- (6) Bihar standing Labour Advisory board.
- (7) Board of Examiners under the Boiler Attendants Rules .
- (8) Bihar Coalfield Sub –Committee.
- (9) Coal distribution Advisory Committee.
- (10) Coal Production Advisory Committee.
- (11) Coal Transport Advisory Committee.
- (12) Coal Mines Labour Welfare Fund Advisory Committee.
- (13) Coal Mines Provident Fund –Board of Trustees.
- (14) Coalfield Recruiting Organization.

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- (15) Committee on Safety Education and propaganda.
- (16) Committee to investigate danger of subsidence in Bihar Mining Area.
- (17) Central Boilers Board.
- (18) Central hostel Committee for Gorakhpur and other labour.
- (19) Committee to investigate Pilot and Depot Capacities in the Bengal and Bihar Coalfields – Requirements in Third Five Year Plan.
- (20) Committee to investigate Pilot and Capacities in the Central India and Korba Coalfields – Requirements in Third Five Year Plan.
- (21) Coal Mines Labour Housing Board.
- (22) Committee to revise specifications of grading of Coking Coal.
- (23) Divisional Railway Users Consultative Committee of the Eastern Eastern Railway, Asansol.
- (24) Dhanbad District Board.
- (25) Employment Advisory Committee attached to the Sub regional Regional Employment Exchange, Asansol.
- (26) Employment Advisory Committee, Dhanbad.
- (27) Employment Advisory Committee for the Pilot Employment Exchange, Raniganj.
- (28) General Committee of the Asansol Health and Baby Welfare Society.
- (29) Hospital Committee for the Central Hospital, Asansol.
- (30) Hazaribagh (Bokaro – Ramgarah – Karanpura and Giridih) Coalfield Sub – Committee.
- (31) Indian Standard Institution.
  - (a) The Coal Sampling Sub – Committee CDC 14:1
  - (b) Standard sizes (for marketing Sub – Committee), CDG 14:3.
  - (c) Terminology and Classification of Coal Sub – Committee CDC 14:4.
  - (d) Soft Coke Sub Committee.
- (32) Informal Coal Allotment Advisory Committee.
- (33) Import Licence Screening Committee.
- (34) Jharia Mines Board of Health.
- (35) Jharia Water Board.
- (36) Jharia Telephone Advisory Committee.

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- (37) Joint Purchase Advisory Committee for the Supply of Uniforms and footwear to the Colliery Workers.
- (38) Mining Board for West Bengal .
- (39) Mining Education Advisory Board for West Bengal.
- (40) Mineral Advisory Board.
- (41) (Manufacture of Mining Machinery for the Coal Industry Sub Committee of the Production and Preparation Committee.
- (42) Mineral Advisory Council , Bihar.
- (43) National Mines Safety Council.
- (44) Orissa Coalfield Sub Committee.
- (45) Project Report Examination Committee.
  - (II) Technical Sub Committee –Jharia and mugma Coal fields ; Raniganj Coalfield; out lying Coalfields .
  - (III) Finance Sub Committee .
- (46) Port Import Advisory Committee.
- (47) Railways and Collieries advisory Board, Dhanbad.
- (48) Rescue Stations Committee.
- (49) Railway Rates Tribunal.
- (50) South Eastern Railway Regional Railway Users' Consultative Committee, Garden Reach.
- (51) Sub-Committee of the mineral Advisory Board on Mineral Production.
- (52) Sub-Committee to examine Training Schemes for Coal Mine Entrants.
- (53) Standing Safety Advisory Committee.
- (54) Standing Committee on Raw Materials for the Steel Industry.
- (55) Special Assistance Committee Re: Subsidy for deep, gassy and difficult mines.
- (56) Sub-Committee constituted to visit the Individual Steel Plants for examining the Coal Sampling Facilities.
- (57) West Bengal Coalfield Sub-Committee.

Now that the country is being industrilized great stress is being laid on production of more coal. But working of collieries is hampered by various hindrances, principal amongst which are the following:-

- (1) Lack of adequate transport arrangement.
- (2) Want of necessary machinery and equipment which can not imported owing to foreign exchange difficulties.

- (3) Shortage of Explosives.
- (4) Power Shortage.
- (5) Labour unrest in coalfield areas.

The Federation is actively engaged in trying to solve the various problems confronting the industry out of the above sources by holding meetings and sending representations to the various quarters.

The main functions of the Indian Mining Federation are to stimulate, develop and further the interests of coal mining industry.

### **INDIAN COLLIERY OWNERS' ASSOCIATION.**

This association was established in 1933 under section 26 of the Indian Companies Act, 1913. The office is located at Dhanbad.

The affairs of the Association are managed by a duly elected Executive Committee consisting of 15 elected and four co-opted members. The Committee is reconstituted every year by fresh election. The Committee is headed by a Chairman, a Vice-Chairman and an Honorary Secretary who are also elected every year.

The members of the Associations are scattered over almost all the coal-producing areas in India. For the convenience of the local member-colleries, the Association has seven zonal committees situated at the various coalfield areas of the country, namely, Tisra zone, Kenduadih zone, Dhansar-Jharia zone, Hazaribagh zone, Mugma zone, Katras zone and Raniganj zone.

The Association is represented on the following public bodies and committees through representatives sent by it at the time of reconstitution of the bodies or committees:-

1. All India Organisation of Industrial Employers, New Delhi.
2. Advisory Committee for the Regional Directorate of Resettlement and Employment of Bihar and Orissa.
3. Anti-Corruption Committee.
4. All India Council of Labour Welfare, Madras.
5. Board of Trustees and Executives of Coal Mines Provident Fund , Dhanbad.
6. Bihar Council (Standing ) Labour Advisory Board , Patna .
7. Bihar Chamber of Commerce , Patna .
8. Board of Examiners for Mine Managers Certificate .
9. Bihar Governments Advisory Council for Development of Industries In Bihar.
10. Coal Mines Rescue Station
11. Committee for the Physical Survey in the Raniganj Coal field.

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12. Committee for the Physical Survey in the Jharia Coal field.
13. Advisory Committee for Coal Survey Centres
  - (a) Jharia Coal Survey Station.
  - (b) Raniganj Coal Survey Station.
14. Central Boilers Board.
15. Coal Transport Advisory Committee.
16. Coal Distribution Advisory Committee.
17. Coal Mines Labour Welfare Fund Advisory Committee.
18. Committee to Investigate the Possibility of stowing , etc.  
at the Jamabad kajora Area under the Coal Board.
19. Advisory Committee om stowing.
20. Coalfield Recruitment Organisation.
21. Central Hospital Committee for the Central Hospital , Asansol , Regional ,  
Hospital , Searsole Rajabari and T.B . Clinic , Seardole Rajabari .
22. Central Hostel Committee Gorakhpur Labour Organisation.
23. Constitution of Hospital Committee for Regional Hospital , phusro.
24. Divisional Railway Users Consultative Committee on the Eastern Railway.
25. District Board , Dhanbad.
26. Dhabad District Leprosy Relief Association.
27. Engineering Divisional Council of the Indian Standards Institution.
28. Panel of Soft Coke ., C.D.C , 15:5:3 of the Indian Standards Institution .
29. Composition of standard size for marketing Sub Committee.
30. Reconstitution of Terminology and Classification of Coal Sub Committee.
31. Indian Panel of Railway .
32. Jharia Mines Board of Health .
33. Jharia Water Board..
34. Trade Panel of the Railway Rates Tribunal.
35. Zonal Railway Users “ Consultative Committee of the
  - a. Eastern Railway .
  - b. South Eastern Railway .
36. N.E.F .Railway “s western Regional Users “ Consultative Committee.

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37. Regional Railway Users Consultative Committee of the South Eastern Railway.
38. Jharia and Mugma Coalfield Sub Committee of the Government of Bihar.
39. Pinjrapole Society, Calcutta.
40. Coal Production Advisory Committee.
41. Reconstituted Telephone Advisory Committees at (i) Patna (II) Ranchi and (III) Jharia.
42. Employment Advisory Committee of the Pilot employment Exchange , Raniganj .
43. Sub Committee on foreign Trade with Pakistan and Europe as F.I.C.C.I 'representative.
44. Sub Regional employment Advisory Committee.
45. Women's College Executive Committee, Dhanbad.
46. Mining Education Advisory Board for West Bengal .
47. Mining Board.
48. Committee on Safety Education and Propaganda.
49. Standing Safety Advisory Committee (formed by the Chief Inspector of Mines )
50. National Railway Users Consultative Committee.
51. Sub Committee (formed by the Coal Board.)
52. Central Purchase Committee for Approval of a Panel of suppliers sample and price of foot wear , etc.
53. Eastern Regional Committee of the All India Organisation of Industrial Employers , New Delhi.
54. Sub Committee for assessment of Retirement of Technical person during the Fourth and Fifth plan period constituted by the production and preparation Committee ( On behalf the Joint Working Committee)
55. Sub Committee of the Coal Board.
56. Port Import Advisory Committee .
57. National Mine Safety Council .

The total strength of membership of this Association on the 31<sup>st</sup> May , 1962 was 204.

The objects for which the Association is established are –

- (a) To promote and protect the Coal mining Industry , trade and Committee of India .
- (b) To aid and stimulate the development of mining Industry in India and to protect and further the Commercial Interest of all person engaged therein.

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- (c) To watch over and protect the General Mining Industry of India or any part thereof and the Interest of persons engaged in Mining trade , Commerce or Industry in India.
- (d) To promote the study of all branches of mining , geology , metallurgy and engineering in India , with a view to disseminate the information obtained for the mineral Industries of India.
- (e) To promote or oppose legislative and other measures affecting mining Industry , trade Commerce.
- (f) To adjust controversies between members of the Association.
- (g) To establish Just and equitable principles of trade .
- (h) To maintain uniformity in rules regulation and usages of trade.
- (i) To make accept, endorse , execute , issue , negotiate promissory notes , bills of exchange , debentures and other negotiable Instruments .
- (j) To raise money by subscriptions or otherwise and to grant any rights and privileges to members or subscribers.
- (k) To do all such other things as may be conducive to the extension to the extension of trade , commerce or manufactures or incidental to the attainments of the above objects or any of them .

Every members of the Association undertakes to contribute to the assets of the Association, in the event or the same being wound up during the time that he is a member , or within one year afterwards for payments of the debts and liabilities of the Association contracted before the time at which he ceases to be a member and costs charges and expenses of the contributories amongst themselves ., such amount as may be required , not exceeding Rs.25.

### **INDIAN MINING ASSOCIATION.**

Indian Mining Association was established in 1892 .The office is located at Calcutta but their main work is in Dhanbad area . The affairs of the Association are managed by a duly elected Executive Committee consisting of ten elected members . The first election of office bearers was held on 16<sup>th</sup> May , 1892 . Mr. C.W. Gray was elected the first Chairman of the Association. The Committee is reconstituted every year by fresh election . The Committee is headed by a Chairman and a Vice Chairman , who are also elected every year.

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Besides , there are sub committees, viz., Labour Sub Committee, Import Sub Committee , Finance Sub Committee , public Relations Sub Committee and minerals other than Coal Sub Committee.

The members of the Association are scattered over almost all the Coal producing areas in India . The Association is represented on the following statutory and public bodies and committees through representatives sent by it the of reconstitution of the bodies or committees:-

- (1) Advisory Committee on stowing .
- (2) Advisory Committee for the pilot Employment Exchange at Raniganj.
- (3) All India Council of Labour and Welfare officers..
- (4) Asansol mines Board of Health.
- (5) The Bengal Chamber of Commerce and Industry .
- (6) Bihar Central (Standing )Labour Advisory Board.
- (7) Bihar Employment Advisory Committee.
- (8) Bihar State Industrial Development Council.
- (9) Board of Industries, Bihar.
- (10) Board of Mining Examinations.
- (11) Calcutta School of tropical Medicime, Governing Body .
- (12) Central Boilers Board.
- (13) Central Hospital , Dhanbad.
- (14) Central fuel Research Institute for
  - (a) Assam Coal Survey Station.
  - (b) Bokaro ramgarh Karanpura Coal Survey Station.
  - (c) Central India Coal Survey Station.
  - (d) Jharia Coal Survey Station.
  - (e) Raniganj Coal survey Station.
  - (f) Hyderabad Coal Survey Station.
- (15) Coal Advisory Committee.
- (16) Coal Mines Welfare Fund Advisory Committee, Sub Committee and Standing Committee.
- (17) Coal Mines Labour Welfare Fund Advisory Committee: West Bengal Coalfield Sub Committee.
- (18) Coal Mines Labour Welfare Fund Advisory Committee: Bihar Coalfield sub Committee.
- (19) Coal Mines Labour Welfare Fund Advisory Committee-Hazaribagh Coalfield Sub –Committee.
- (20) Coal Mines Labour Housing Board.
- (21) Coal Mines Provident Fund : Board of Trustees.

- (22) Coal Transport Advisory Committee.
- (23) Committee to discuss matters relating to the allotment of wagons.
- (24) Committee to investigate the danger of subsidence in Bihar Coal Mining Areas.
- (25) Committee on Safely Education and Propaganda.
- (26) Dhanbad and Coalfields Cemetery Committee.
- (27) Dhanbad and district Leprosy Relief Association .
- (28) Dhanbad Local Board.
- (29) Employment Advisory Committee, Dhanbad.
- (30) Sub – Regional Employment Advisory Committee, Dhanbad.
- (31) Employers’ Federation of India: Eastern regional Committee.
- (32) Fuel Research Committee of the Board of Segional Committee.
- (33) Gorakhpur Labour Organisation : Advisory Committee ,Dhanbad.
- (34) Governing Council of the India School of Mines and Applied Geology.
- (35) Hazaribagh District Board.
- (36) Hazaribagh Mines Board.
- (37) Indian Standards Institution.
- (38) Jharia Mines Board of Health.
- (39) Jharia Water Board.
- (40) Manbhum District Board.
- (41) Mineral Advisory Board.
- (42) Mineral Advisory Council for the Eastern Region.
- (43) Mineral Advisory Board : Sub – Committee on Mineral Production .
- (44) Mining Board for West Bengal.
- (45) Mining Board for Mines in Bihar.
- (46) Mining Education Advisory Board for West Bangal.
- (47) Posts and Telegraphs Advisory Committee for Bihar.
- (48) Progress Review Committee.
- (49) Railways and Collieries Advisory Board.
- (50) Eastern Railway Users’ Consultative Committee, Calcutta.
- (51) Eastern Railway, Divisional Railway Users’ Consultative Committee , Howrah.
- (52) Eastern Railway, Divisional Railway Users’ Consultative Committee , Sealdah.

- (53) Rescue Station Committee.
- (54) Ross Institute of Tropical Hygiene, India Branch,  
Committee of Control.
- (55) Standing Committee, Iron and Steel Advisory Council.
- (56) Standing Coalfield Committee.
- (57) Standing Coalfield Committee: Joint Honorary Secretaries.
- (58) Standing Safely Advisory Committee.
- (59) Sub- Committee appointed by Government to examine the  
Training Scheme for New Entrants to Coal Mines.
- (60) Telephone Advisory Committee, Asansol.
- (61) Workers' Education Training Centre at Dhanbad.

The objects of the Association is to protect , by every legitimate means, the interest of those engaged in developing the mining industries of India, to foster those industries, to provide a ready means of arbitration for the settlement of disputers between mining Proprietors, and to take part in such discussion affecting land as may have a bearing upon mines, their development ,or working and for this purpose, to enter into communication with the Government or other public bodies.

All persons or companies in conducting mining enterprises shall be eligible to be members of the Association.

After the formation of the Association , member are elected by the General Committee of the Association after being proposed by one member and seconded by another . members have to pay a subscription of Rs. 20 per mensem , in advance.

### **TRANSPORT OF COAL.**

Regarding “ Transport of Coal” the views of Indian Mining Association And India Mining federation are summarised below. These discussions have a permanent value.

Shortage of wagons and slow movement of coal from the pit- heads is a serious problem and affects industrial production in general.

The concentration of the coal production in Bengal and Bihar coalfields poses a serious problem of transport because coal has to move to consumers distributed all over the country. Although the Seriousness of the problem can be mitigated to some extent by increasing production in the outlying coalfields, this cannot offer a complete solution. In view of the fact that superior grades of coal are not found outside Bengal and Bihar coalfields, the large increase in the coal production programme during the Third Plan will mean increased pressure on the railways for moving coal to distant consumers.

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The development of the Railway for the movement of coal in the Third Five – year Plan has been formulated on the basis of the coal traffic reaching a figure of about 90 million tons in 1965-66, i.e., the last year of the Third Plan. as against 49.5 million tons fixed for 1960-61, the final year of the second Plan . This estimate of coal movement at 90 million tons corresponds to a production target of 97 Million tons, the difference of 7 million tons representing the consumption at the collieries and the anticipated movement of coal by means other than rail transport. The volume of coal traffic is thus expected to increase over that of 1960-61 by 40.5 million tons, i.e., by about 82 per cent. In regard to coal, however, calculations of transport requirement have been made on the basis of the estimated production and the probable of the production unit.

While the target of coal production has been stepped up from 60 million tons to 97 million tons during the Third Five – Year Plan period, there has be a commensurate increase in the capacity of rail transport. The phased requirement of coal transport by rail during the Third Five – year Plan which has been assessed as follows by the Ministry of Steel, Mines and Fuel would justify the doubt is as Railways will be able to cope. The phased programme is as follows:-

Year.	Daily average number of Wagons necessary.			
1961 – 62	..	..	..	7,183
1962 - 63	..	..	..	8,561
1963 – 64	..	..	..	9,610
1964 – 65	..	..	..	11,502
1965 – 66	..	..	..	12,339

Although the daily average number of wagons necessary for coal Loading has been assessed in terms of the above table as 7,183 wagons for the year 1961 – 62, the average loading in Bengal and Bihar coalfield for the year 1961, it may be noted, was only 4,768 wagons, the highest figure, reached in the month of August, being 5,101 wagons. The coal production and consumption for the Third Plan period will The coal production unless the transport improves very considerably.

How bad the wagon supply position was during 1961 under review will be evident form the figure of total despatches of coal of 50.3 million tons as against a production of 56.1 million tons.

It is true that in coal production the limiting factor is always the availability of transport; if the target of coal production is fixed at 97 million tons for the Third Plan period and 200 million tons for the Fourth Plan period there will have to be adequate arrangements for a corresponding increase in the capacity of rial transport.

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The matter was referred to the planning Commission in November, 1961 and it was pointed out that during the period January to March, 1961 the rate of coal production was 22 per cent higher to the production during the same period of the previous year but the availability of transport had increased by only 11 per cent.

At a meeting of the Coal Production Advisory Committee in December, 1961 the industry was informed that the Railway Board had giving an indication of the availability of wagons for coal loading in the different coalfields during 1962 as follows:-

West Bengal and Bihar area (in wagons per day) –

For steel Plants – 1,400.

Dugda Washery – 300.

For other consumers – 3,796 (including 150 wagons for Jamadoba Washery).

**At the meeting with Government officials in January, 1962 it was pointed out that 6,925 wagons daily would provide only for movement by rail of 55 million tons of coal. This estimate was accepted as correct by a representation of the Railway Board. According to this it was calculated that transport availability in 1962 would cater for approximately 59 million tons of coal production as against the planned production target of 68 million tons for 1962, involving a transport shortfall of approximately 9 million tons. It was also a problem if the Railway could maintain a daily average supply of 6,925 wagons throughout 1962, particularly since wagon offerings were in Fact well below this level. The Government, however, advised the representative of the industries not to take a pessimistic view and not to cut down their production.**

#### **Movement of coal by Road.**

At a meeting of the coal Transport Advisory Committee held on 27th February, 1961 the solution that road permits should be issued freely to alleviate to some extent the distress of the collieries producing lower grade coals in clearing accumulating stock at their pitheads was discussed. It was at first considered by the Coal Controller that free movement of coal could not be permitted because of the difficulties in collecting various ceases payable by collieries and on Which many statutory bodies subsisted.

On subsequent representations made by the industry in this Regard, the coupon system come into effect from 24th July, 1961 Throughout India except Assam and Andhra pradesh whose coal has Not been graded.

It was decided that collieries in which coal of grade II and lower grader of coal are raised will be allowed to dispatch such coal to the consumers on furnishing necessary particulars as prescribed in the

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coupons. Road permits or road passes will not be required henceforth for dispatching coal which will be allowed to move under the coupon

System as the coupon itself will serve the purposes of both. It was held that the collieries will be allowed to dispatch coal by road or river up to the permissible limit fixed for it. This would be based on –

- (a) The colliery's average monthly output for three months for any quarter of the year as decided by the coal Controller's organization will be taken into account along with the month – end stock of the latest period.
- (b) Seventy- five per cent of the average output and 50 percent of the month – end stock will be treated as monthly average quota which will be the maximum permissible limit.
- (c) Relaxation may be made by the issuing authorities on the merit of individual cases represented to them. The applicant will have to deposit in advance at the local treasury or sub – treasury the ceases and excise duties payable to the Coal Mines Welfare Organization and the same manner as is being done at present. In addition to this will deposit Rs.1.50 NP. As cost of each book containing 100 coupons.

If the driver of any vehicle is found to carry coal without a road pass for coal of grade I and above or a coupon for coal of grade ii or below, the police authorities may initiate legal action against him. In other words every vehicle moving coal by means other than rail must possess a road permit (in case of road permit, a road pass will also accompany) or a coupon while transport coal outside the colliery area.

All the collieries dispatching coal under coupon must submit a monthly statement to the issuing authority by the 10 th of the following month in a prescribed per former.

The issuing officers, in the event of being satisfied that any colliery has misused coupons or is not in a position to dispatch coal, may either refuse to issue coupon or direct the colliery to return the unused coupons to the issuing and retain them till satisfied that the colliery has attained the capacity to resume normal coal dispatches.

The following officers have been authorized to issue coupons for road movement;-

- (i) Coal superintendent, Dhanbad.
- (ii) Assistant Coal Superintendent, parasia.
- (iii) Railway Allotment Office, Bilaspur.
- (iv) Railway Allotment Office, Khurda Road.

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### **TRADE UNION MOVEMENT IN DHANBAD DISTRICT AND ITS GROWTH.**

Trade unionism in proper form was hardly in existence in India before the world war I. The British Government in India began to realize the awakening and consciousness amongst the working classes of India immediately after the cessation of the First world war.

The trade union movement in the United Kingdom particularly and other industrially advanced countries of the world generally had by then made sufficient progress and the spirit spread to other areas. Due to the economic consequences of the war and change in the political outlook in the leadership, the working class in India began to realize the necessity of organizing themselves. Madras took the lead in this direction and Madras Textile Labors Union and the Aluminum Labors Union, Madras, and the workers' Union, Ahmedabad were the first organization of the workers to be formed in 1917 –18. Subsequently, the increased trade union activities led to the formation of the first organization of workers to all India basis, namely, the All - India Trade Union Congress, which was formed in 1920 under the presidentship of Lata Lajpat Rai. It may be noted that all these organization had no legal status. This lacuna was keenly felt by the labors leader, Sri N. M. Joshi and accordingly he moved a resolution for introduction of trade union legislation in the Indian Assembly in 1921. Indian and European employers who had the vested interest opposed to move vehemently in the beginning, but in spite of their opposition efforts were continued until 1926. when the Trade Unions Act was enacted by the Indian Legislature. Union Act, 1913. As a result of the lines of British Trade Union Act, in 1926, the workers' organization got a legal status and speaking, the flowing rights and privileges:-

- (a) (i) To have a corporate existence;
- (ii) to have perpetual succession and to hold acquire property both movable and immovable;
- (iii) to contract; and
- (iv) to sue and to be sued in its own name.
  
- (b) No member of a trade union is liable to prosecution under the law for criminal conspiracy for an act done or agreed to be done in accordance with the lawful object of the trade union.
  
- (c) No civil suit will lie against a member of a trade union for an act done in furtherance of a trade dispute with which a member of the trade union is concerned on the ground that such action (i) induces any other person to break his contract of employment and or (ii) interferes with trade, business or employment of any person or disposal of capital or labors by any person.

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- (d) No legal proceedings will lie against a registered trade union for any tortuous act done by any agent of a trade union if be proved that such action was without the knowledge or against the express instruction of the executive of the trade union.
- (e) No provision in any other law will make an agreement made between member of a trade union void even though such agreement is in restraint of business or trade; but such agreement by itself is not enforceable by legal proceeding nor can any damage be claimed or awarded for breach of any such agreement.

The trade union movement continued to flourish thereafter under the leadership of a number of leaders. In 1931 the trade union movement had reached a stage when the British Indian Government felt the necessity of constituting a 'Royal Commission on Labors in India'. The Royal Commission on Labors in India made a thorough study of the problem in the country and suggested a number of important recommendations. The Royal Commission also realized the necessity of the growth of a healthy trade union movement in the country as will be seen in the paragraph quoted:-

“Nor is labors the only party will benefit from a sound development of trade union movement. While the advantage to be gained from repression are temporary and precarious those that accrue from healthy organization are lasting. Further, some from of organization is inevitable, since the need is acute and is bound to evoke a response. If that response does not take the from of a properly organized trade union movement, it may assume dangerous from. Some employers have already suffered severely from the lack of responsible trade union of their workers, and this type of suffering extends to the community as a whole.

A series of legislations were subsequently enacted to give effect to most of its recommendation.

The trade union movement in India made a great headway on an all – India basis beginning from Ahmedabad and Bombay.

The following workers' organization on an all – India basis were formed and started functioning:-

- (a) ***The All – India Trade Union Federation***. – This name was later on changed to 'National Trade Union Federation'. This was subsequently dissolved and merged in All – India Trade Union Congress in 1940.
- (b) ***The Red Trade Union congress***. – In 1935, it was dissolved and merged in All – India trade Union congress.
- (c) ***The Indian federation of Labors*** .- In 1948, it was merged with the Hind Mazdoor Sabha.

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In 1947 when the congress party came to power and formed the Government in the states in India, a necessity was felt to constitute organization of workers, similarly on the lines of the aforesaid organizations on all – India basis. Accordingly, the ‘Indian National trade Union Congress’ was formed in 1947. In this connection, Election Manifesto in 1946 enumerated below:-

“ In regard to labors, the state shall safeguard the interests of industrial workers and shall secure for them a minimum wage and a decent standard of living, proper housing, house of work and condition in the country permit, with international standards, suitable machinery for the settlement of disputes between employers and workmen, and protection against the economic consequences of old age, sickness, and unemployment. Workers shall have the right to from unions to protect their interest.

Since the first Congress Government came in power, a number Of labors enquiry committees were set up to study the working and Living conditions of working classes in the country and to make suitable recommendation for their amelioration. Notable among them Were the Bombay Textile Labors Enquiry Committee, the kanpur Labors Enquiry Committee, and the Bihar Labors Enquiry Committee, The last two under the Chairmanship of Dr.Rajender prasad. Rege Committee was also formed by the central Government in 1948. These committees made valuations of labouring classes in the country.

When independence was achieved in 1947, the Congress Government took interest in the matter of amelioration of living and working conditions of the working classes in the country. Steps were taken to from a separate ministry for Labors Department in almost all the States of India. The Congress Government amended certain important laws, notably the Industrial Disputes Act, the Indian Factories Act and introduced a number of legislations on labors matters. A number of labors legislations were enacted.

Under the Congress Government, the trade union movement got encouragement and a number of workers’ organissation came into existence. The awakening and consciousness of the working classes rapidly came into prominence which attracted the attention of the political parties in India. The rapid growth of the Indian National Trade Union Congress with the patronage of the Indian National Congress was a marked feature after 1947.The trade union movement in the recent years has reached its peak and the workers’ organization functioning on an – India basis are invited to send representatives of workers to represent their organizations in International Labors Conferences and other committees convened under the auspices of the International Labors Organization. With the growth

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of working classes, the right of workers to organize and bargain collectively attracted the attention of all those who are interested in cordial labors management relationship. The International Labors Conference has also not overlooked this aspect of the growth of trade unionism on these lines.

The provision regarding right to join organization was inserted in the Indian Trade Union Act, 1926. As regards the other point the practice bargaining has developed in majority of industries in India and the representative union successfully attempt at collective bargaining, at the first instance, without the intervention of Government conciliation machinery.

### TRADE UNION MOVEMENT IN BIHAR

The trade union movement in Bihar was officially recognized by the State Government in 1947 when a Board, namely, the Bihar Central ( standing ) Labors Advisory Board consisting of equal number of representative of employers and some selected representative of Government under the Chairmanship of the Minister for labors was set up on a tripartite basis. This was constituted with a view to enable the employers and employees to associate with the work of labors administration and labors legislation, and to advise the State Government on labors matters and suggest ways and means to maintain industrial peace in the Stats.

The trade union movement in Bihar continued to grow under the different political parties working in the labors field. Majority of the organization of workers were and are still divided into and affiliated to different political groups, namely, the I.N.T.U.C., the U.T.U.C., Hind

Mazdoor sabha, the A.I.T.U.C., Branches of these organization , namely, I.N.T.U.C., Bihar Branch K.M.p. (Hind Mazdoor sabha), A.I.T.U.C., Bihar Branch, ect., and independent organization like Hindustan Khan Mazdoor sangh, etc., are functioning in Bihar. A number of union have grown both in the coalfields and others industries. The character of leadership of some of these organization,

Due to a variety of reasons, has taken a political shape in their important activities. Group rivalries, and vested interest of particular parties and their leaders are now. More in prominence. Generally speaking the coalfield has been the hot bed of troubles in the recent years due to political pressure and a plethora of strikes was the outcome of their activities in majority of these cases. These strikes were in some cases followed by violence, intimidation, picketing, assaults and other subversive activities. Recognition of trade union

Was also at times the main feature of demands of these organization.

Of course, the right to recognition of representative union has been

Accepted by most of the industrially advanced countries, but unfortunately there is no statutory provision in existence in India. The

recognition of a union cannot constitute an industrial dispute under the existing Industrial Disputes Act,1947. The Bihar Labors Advisory Board realizing the gravity of the situation arising out of

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such demand ( recognition of union ), formulated a set of rules under which the rival union can claim to be recognized. It also lays down the procedure to deal with rival unions functioning in the same industry, It would appear from the trade union movement in Bihar that exploitation of labors by some vested interests rapidly came into prominence in the recent years. This has also resulted in multiplicity of trade unions in the same industry which is bound to bring ruinous effect to the trade union movement in Bihar including Dhanbad district. Due to this and other factors the workers' organization are gradually becoming weakened and consequently their bargaining power is likely to be diminished considerably.

In 1947, the Central Government amended the Indian Trade Unions Act, 1926, by incorporating provisions of compulsory recognition and declaring by employers and employees as 'unfair labors practice' punishable under the amended Act. This amended Act was not enforced with the result that these two important provisions could not be brought into effect. There is no provision whatsoever for these two points in the existing Trade Unions Act. Therefore, the disputes regarding 'recognition of union and unfair labors practices' both on the part of employers and employees cannot be effectively settled without resorting to Tribunal in the later case. Again, the Bihar Labors Advisory Board constituted a committee, namely, ' Standing Committee' (trade Union), consisting of the representatives of workers' organization of different affiliations to devise ways and means for the smooth running of the trade union movement in the State of Bihar. In recent years, certain unions resorted to go slow tactics against which there is no provision in the Industrial Disputes Act, 1947. The Bihar Labors Advisory Boars made a recommendation on tripartite basis to check go slow tactics and formulated a set of rules to enable the Government conciliation machinery to deal with slow strikes.

It is an established fact that the trade union movement cannot Make satisfactory progress, if exploitation of labors is generally resorted to by rival groups of union. Exploitation of labors by labors leaders having interest is a problem although this has been deprecated by a number of leaders.

### **ROLE OF EMPLOYEES VIS – A – VIS THE TRADE UNION MOVEMENT.**

Doubtless, the industrial labors cannot be disassociated from the day -to -day working of an industry. They are, to a large extent. responsible for production and industrial peace in the national interest of the country. As almost all the workers' organizations in Bihar are controlled by outsiders belonging to different political parties, the workers are sometime incited to take hasty action in the matter of redress of their grievances and thereby become sometime instrum- ental to industrial unrest. The workers in Bihar have,

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generally speaking, not become so conscious and literate as to control the working of their organization without outside help. Trade unionism in Bihar has sprung out due to economic, political and social reasons, and there fore, it may be difficult for so long as the labors become conscious enough to weed out outside leadership altogether. The worker in Bihar has yet to realize that he is a partner of the joint venture and should choose his leaders wisely.

### **LABOUR MOVEMENT IN THE COAL INDUSTRY.**

The existence of coal deposits in various parts of India particularly, in Raniganj and Jharia Coalfields was known even in prehistoric ages. The names Damodar (fire in the womb), Barakar (bigmines) and kalipahari (black hillocks),ect., indicate this. But coalmin ewre first opened in the Raniganj area only about a century ago immediately after thr Railway lines were constructed in this side. Later on the industry shifted to Asansol and Jharia Coalfields (including Giridih). During and after the First Great also War coal – mines were opened in several other provinces and states also such as Central province (Madhya pradesh), Orissa, Assam, Hyderabad, ect. But the Jharia coalfield on account of its rich deposits of metallurgical coal, became the most important coalfield of India. It is for This that the Mines Department of the Government of India, the School of Mines and some other establishment connected with mining were set up at Dhanbad, the central town of the Jharia Coalfield. The flourishing coal – mining industry naturally attracted thousands of labourers from outside who were well exploited for a mere pittance.

Labour movement in the mining industry was organized by late Swami Viswanand about the year 1919. He had an unlimited fund of energy and a good organising capacity. He walked incessantly against heavy odds. There were no fast-moving luxurious cars to take him round. He was a great orator and had an attractive personality. He did not, of course, organize a trade union in the proper sense of term, but he did a lot of ground work. He awakened the labour to such an extent that he could collect hundreds and thousand of labourers by his presence. At the same time it must be said that the great National Movement organized by Gandhiji about the same time gave a grate impetus to his movement in the coalfields. Next year following formation of the All-India Trade Union Congress by the veteran labour leader Mr.N.M.Joshi and some others, a number of regular Trade union were formed at Jamshedpur under the presidentship of Mr. Surendra Nath Halдар, Bar.-at law and another was formed at Jharia under the presidentship of Mr. Indu Bhushan Sen, Bar.-at -law.

The Second Annual Session of All-India Trade Union Congress was held at Jharia in 1921 on the invitation of Swami Viswanand. Mr. Joseph Baptista, Bar.-at-law of Bombay, presided over the sessions.

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Four delegates including late P.C. Bose of Dhanbad had participated in the sessions which was attended by not less than sixty thousand miners and the entire coal industry remained closed for three days. Labour conferences were quite unknown at that time and the very idea of holding this conference frightened the mine-owners. Some of the mine-owners got so panicky that they sent a telegram to the Viceroy asking him not to allow the conference to be held within 200 miles of Bengal and Bihar coalfield. The Viceroy did not, of course, accede to this request of the mine-owners but battalions of infantry and cavalry were deployed to protect the lives and properties of the mine-owners and their superior staff. It has, however, to be held in his own colliery compound and bore the cost of the conference. Emboldened by his example, several other colliery owners came to the conference as distinguished visitors. The conference, Shri Dipnarain Singh and others and created such an atmosphere in the coalfields after the conclusion of the conference.

The condition of labour in the coal industry was extremely miserable in those days. The labourers, were recruited and paid through the raising contractors. The contractors would deduct the wages, as they liked. The management had little contact with them. There was no provision for housing, water supply, medical and sanitary arrangements, etc. Their income was extremely meager and they continually suffered from hunger and disease. There was no labour legislation worth the name to protect the interest of the labourers. The policy of the government was to get as much coal as possible at the cheapest possible rate for the loco and other industries. Most of the evils in the coal industry today, such as contract system (now abolished), unscientific mining, premature collapse and underground fire, etc., are substantially due to the short sighted policy of the Government. Labour union also could not function properly for the joint opposition of the employers and the Government. Conditions, however, improved slightly after the Trade Unions Act was passed in 1926. Meanwhile some minor legislations also were passed to provide water supply, housing and sanitation, ect.

In 1928, the ninth session of All-India Trade Union Congress was held at Jharia without any opposition from any quarter. This was to be presided over by C.F Andrew but owing to his absence Md.Daud of Seamen's Union Presided. The conference was very well attended. The Community party wanted to capture the office of the All-India Trade Union Congress in this session and set up a candidate for election as president. But pandit Jwaharlal Nehru whose name was put up by the Congress it's was elected president

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by a thumping majority. Pandit Nehru, Diwan Chamanlal, V.V.Giri and a number of prominent leaders had attended the session. Some delegates from foreign countries had also attended the session.

The Indian Colliery Employees' Association had continued its activities and remained as a sort of representative of labour in the coalfield till the year 1928, When different labour association were formed to safeguard the interest of Tata Collieries labour. In 1932 there was a break in the Indian Colliery Employees' Association and another union, a river union, namely, the Indian Miners' Association was formed with Shri K.N. Bhattacharya as President. None of these unions were registered, but the Indian Colliery Employees' Association was registered as "Indian Colliery Labour Union" in 1932.

This in short is the history of early trade unionism in the area, which remained more or less a reformist movement till the year 1936-37 when the Congress Ministries were formed in many of the Provinces in India as well as in Bihar. But one point should be also mentioned that when in 1931 a Royal Commission on Labour in India were appointed to investigate and report on the living and working conditions of workers, the coal labour was represented there by Shri K. N. Sen Gupta and Shri Sheo Kali Bose.

In 1938 Gandhi Sewa Sangh Mazdoor Samiti under the instruction and guidance of Gandhiji started a course of training for the labour workers at Ahmedabad Textile Labour Association. Some young men like Shri Mukutdhari Singh and other after getting their training in Ahmedabad came to Jharia Coalfield and started organizing labour here. The first attempt in organizing a general union of coal workers was made in 1939, when Chotanagpur Association was formed. It had a very large membership and some of the biggest strikes in the coalfield like the three labour strikes of Kustore collieries involving about six thousand workers and lasting each for more than three months were launched. Then came the World war II and with the rise of prices of commodities, the first demand for dearness allowance was made, and as a result of negotiations with the employers, a 10 per cent increase in wages as dearness allowance was given. It was at this time that the Bihar Labour Enquiry Committee was appointed under the leadership of Dr. Ragendra Prasad, later first time attempts were made to go deep into the living and working conditions of the coal miners. The efforts of the Committee went a long way in ameliorating the conditions of the workers.

As war progressed most of the labour leaders were put in jail and labour movement came to standstill for the time being. Due to war, there was a great fillip to the coal industry and coal owners made enormous profits. But wages and other amenities for workers

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were not appreciably increased. Naturally, there was discontentment, but due to various ordinances and stiff measures nothing tangible was visible and labour agitations were almost negligible. It should be noted that during this period more specially when Russia entered the war on the side of the allied, Communist elements got some hand and in collaboration with interested persons tried to organize the workers in the name of war efforts. In coalfield, the followers of Mr.M.N. Roy formed a branch of Indian Federation of Labour (Radical Democratic Party) and for sometime they were the only people seen moving about and working among the workers. But they could not fully succeed in leaving lasting impression on the workers.

The Kustore Workers 'Union, the first militant labour movement was started under the aegis of Kustore Workers' Union in the year 1939, when the first successful strike of about six thousand workers began on the question of reinstatement of a few workers, but resulted in other important grants to the workers. Another strike in Kustore began in 1940 and yet another in 1941 both lasting over 100 days. Regular union was started there which properly functioned till the war came. Its activities were again revived in 1946 and yet another big strike was fought successfully by the workers in 1946-47, just on the eve of the appointment of Conciliation Board.

Then ended the war and the Congress Ministries were formed again in most of the provinces. Coal workers who had their grievances all thought the war felt very much agitated. They had their own Government and that instilled a new fate in them. At this very period (1946-47) the Congress Socialist party members took up organization of workers and a series of strikes over length and breadth of the coalfield began. The employers who were then unaccustomed to mass movements were taken aback and felt unnerved. At the same time they were conscious that there was scope for increase in wages and other amenities of workers. Concessions were granted to workers and union after union began to be formed. Government also stepped in and appointed the first "Conciliation Board" in 1947, which after a thorough enquiry, submitted its report and this was considered quite favorable. For sometime the formation of union after union continued, but the need for one centrally organized labour union was felt and the Koela Mazdoor panchayat was formed in 1949 to organize the coal workers. But unfortunately coal workers' rival trade unionism was growing and with the formation of I.N.T.U.C.(1947-48) that rivalry became all the more apparent and I.N.T.U.C. People began to organize the labour in right earnest and the Indian National Coal Mines Workers' Federation was formed to February 1949. Subsequently, Bihar Colliery Mazdoor sungh was formed to organize coal workers in Bihar and it was registered on 6th February 1961. Of late, there is tendency on the part of labour leaders of organizing rival trade union in the same industry in this district.

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**STATISTICS OF REGISTERED TRADE UNION AND FACTORIES IN DHANBAD DISTRICT**

Side by side with the growth of trade unionism in the State, the number of registered trade union were also increased considerably. There were only 18 registered union in 1938-39 and in 1945-55 the number rose to 498. In Dhanbad district the number in 1961 is 95. This is the largest number of registered trade unions in a district in Bihar.

There are about 470 registered factories excluding collieries in the district of Dhanbad employing 28,349 workers. A number of unregistered establishments employing a large number of workers have also sprung up in this district.

The conciliation machinery of the State Government looks after the labour matters in these industries and in recent years it had successfully intervened in the disputes raised by different workers' organization. As a result of this, the following benefits were secured to must of the industrial workers in the matter of –

- (a) Bonus.
- (b) Payment of retrenchment relief's.
- (c) Reinstatement and re-employment of discharged workers.
- (d) Holidays.
- (e) Revision of scales of pay.
- (f) Welfare amenities, etc.

The district if Dhanbad has got two main district portions. The Town of sindri and the areas of Kumardhubi from the belt which has some of the biggest factories of their kind in this district. The remaining areas are either agricultural or mining areas producing coal and other ancillary minerals.

There are altogether 402 factories running with power and 15 factories running without power according to the figure of 1959 registered under the Factories Act. About 27,349 people are working in this district in the registered factories. This number, however, does not include the workers employed on construction work relating to the factories. The following is the industrial classification of some of the factories\*:-

Serial no.	Classification.	No. of factories.
1	Flour, rice and dal mills . . . . .	192
2	Smelting and refining lead . . . . .	1
3	Saw mills . . . . .	22
4	Electricity generating . . . . .	14

\* Extract from the book registered factories under the factory Act, 1948, in the Stare of Bihar, corrected up to 30th September, 1959, pp.224-240(a).

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Serial no.	Classification.	No. of factories.
5	Ice factory(manufacture of ice) . . . . .	3
6	Fireclay . . . . .	9
7	Repairing works . . . . .	12
8	Iron casting . . . . .	7
9	Glass bangles . . . . .	2
10	Casting of machinery parts . . . . .	10
11	Printing . . . . .	20
12	Ammonium sulphate . . . . .	1
13	Mining equipment . . . . .	5
14	Repairing of colliery machines . . . . .	4
15	Sodium of silicate . . . . .	2
16	Repairs and fabrication . . . . .	4
17	Nail manufacturing . . . . .	2
18	Re-rolling iron- gate . . . . .	4
19	Furniture . . . . .	7
20	Miscellaneous . . . . .	96
	Total . . . . .	417

According to the annual report of the Inspector of Factories, Dhanbad, there are 570 factories in total in 1962 in the district, employing about 38,349 workers.

### Labour welfare.

For the successful implementation of the different objectives to be realized through various labour laws regarding advancement of the general condition of work, health, remuneration, safety and security it had been contemplated in the two Five-Year Plans to augment the strength of the Factory Inspectorate so that frequency of inspection may be increased. To achieve the one Inspector of Factories with staff has been posted at Dhanbad.

Secondly, one Labour Superintendent and three Labour Officers are posted at Dhanbad under the programme of expansion of the Labour Department. The Labour Officer looks after labour welfare work in the different industrial establishments in the district. His duty covers housing condition, recreational, educational and sanitary facilities for the workmen. The employees have to be provided with canteens, dispensaries, hospitals and other requirements under the Factories Act. Provisions under the Minimum Wages Act, 1948 safeguard the interest of the workers employed under its schedule in a motor transport, road construction and building operation, stone breaking, rice, oil and dal mills and local bodies. The Minimum

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Wages Act has also been made applicable to the workers employed in agricultural operation.

### **Welfare amenities supplied by Factories in the district under the Factories Act.**

As regards provision for welfare facilities to industrial workers it may be noted that under Bihar Factories Act, 1948, there has been provision for welfare facilities mentioned below:-

**Washing Facilities.** – In every factory adequate and suitable facilities for washing shall be provided and maintained for the use of the workers therein. Separate and adequately screened facilities shall be provided for the use of male and female workers. In every factory suitable arrangements for sitting shall be provided and maintained for all workers obliged to work in a standing opportunities for rest, which may occur in the course of their work

**First-aid boxes** have be maintained. In every factory with more more than five hundred workers an ambulance room of the prescribed size containing the prescribed equipment and in the charge of such medical and nursing staff as may be prescribed has to the workers.

**Canteens.**- The state Government may make rules that in any Specified factory where more than two hundred and Fifty workers are ordinarily employed, a canteen or canteens shall be provided and maintained by the occupier for the use of the workers.

**Shelter, rest rooms and lunch room.**- In every factory where more than one hundred and fifty workers are ordinarily employed, adequate and suitable shelters or rest room with provision for drinking water shall be provided and maintained for the use of the workers.

**Crèches.**- In every factory where more than fifty women workers are ordinarily employed there shall be provided and maintained a suitable room for the use of children under the age of six years of such women. Such room shall provide adequate accommodation, shall be adequately lighted and ventilated, shall be maintained in a clean and sanitary condition and shall be in charge of women trained in the care of Children and infants.

**Welfare Officers.**- In every factory where five hundred or more workers are ordinarily employed the occupier shall employ in the factory such number of Welfare officers as may be prescribed.

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### **Welfare Facilities Provided by Factories.**

*Loyabad Coking and By-Products Recovery Plant, Bansjora.*-Majority of the workers have been provided with quarters free of rent. Free fuel is provided to the workers of the factory. Free electricity and street light have been provided in general. Drinking water facilities have been provided from taps. Sanitation in the labour and staff quarters' area is looked after. Ten service latrines and one sanitary latrine have been provided in the plant premises for the use of workers.

A dispensary for both workers and dependent is provided. This dispensary is staffed by one doctor and two compounders. Serious cases is staffed by one doctor and two compounders. Serious cases are treated at the Loyabad Hospital managed by the company and free diet is given to the children of the workers.

**Burn and Company, Limited, Gulfarbari.**- The company has built 29 houses for staff, 238 houses for labourers and six house for security guards. No rent is charged for the quarters allotted to employees. Those who have not been provided with quarters or any accommodation are given Rs. 6 per month.

A canteen, a crèche and a rest-shelter have been provided.

**Fertilisers Corporation of India, Ltd., Sindri.**- About 5,727 persons have been given accommodation in the company.

A hundred-bedded hospital at sindri with dispensaries in Shaharpura, Rohraband, Domgarh, Sindri and Rangnati areas and a separate public health wing has provided.

The Company runs two high school for boys and girls, one middle school, one upper primary, two lower primary and one Kindergarten school for the children of the employees. The children of staff up to Rs. 150 per month are exempted from paying the tuition fees in the schools.

A welfare center with recreational and culture facilities are provided to the workers. The center has provisions for indoor games, library, adult literary center and training in sewing knitting, embroidery and fine arts.

For outdoor games the Factory has opened Sindri Central Sports Association. The company grants Rs. 6,000 per year to the Association.

**Kumardhubi Fireclay and silicate Works, Kumardhubi.**- An adult education center has been opened. A well-equipped and spacious club for the workers has been provided in the workers' colony with a number of indoor and outdoor games, library and other recreation facilities. Hindi and Bangali pictures are exhibited twice a week. Frequently dramas, social and religious functions are arranged. The factory runs a number of schools for the benefit of the workers. The factory provides free housing accommodation to about 1/3 rd of the employees. It has 3,300 workers.

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**Eagle Rolling mills, Kumardhubi** .- The Factory employs about 500 workers. It has started an adult education center in 1954. A well equipped club has been providing for the workers with games and library. Hindi and Bengali pictures are shown twice a week. A canteen has been started. The factory provides free housing accommodation to about one – third of the employees. Under Industrial Housing Scheme, about 100 quarters have been constructed for the employees of this factory by the State Government. There is a crèche for the female labourers. A Welfare Officer has been appointed by the Company to look after the interests of the workers.

**Engineering Works, Kumardhubi.**- This factory employs about 2,850 wrkrs. Since 1959 there is a middle school with about 200 students and five teachers. A well equipped club has been provided for the recreation of the workers. The factory provides free housing accommodation for about 1,000 workers. Under Industrial Housing Scheme 200 quarters have been allotted by the State Government to the workers of this factory. A canteen and a crèche have been provided by the factory. A welfare officer has been appointed to look after the welfare interests of the workers.

There is a labour welfare center sponsored by State Government and also a voluntary welfare center started by the Company where the workers of all the industrial units of Kumardhubi

have an access. A hospital with about 57 indoor beds has been started by the Company. Besides, the Employees' State Insurance Dispensary has been started by the Government where only the registered employees of all the factory's within Kumardhubi town are treated. Ten beds in the Company's hospital are reserved for hospital cares from the E.S.I Dispensary. A Labour Liasion Offcer has been workers of the four industries in the town.

**Reliance Firebricks Factory, Chanch.**- The factory employs about 1,400 workers. The factory has appointed a Welfare Officer to look after the interests of the workers. A recreation club has been started in 1960 in the workers' colony with a number of indoor and outdoor games and a library. The factory has started one voluntary welfare center, one middle school with 425 students and 9 teacher. The factory provides free housing accommodation to about 600 workers. The factory has a 10- bedded hospital. The State Government has also started one Employees' State Insurance Dispensary for the workers in 1959 with one doctor, three compounds and two dressers.

**The Bihar Firebricks and Pottery, Limited Mugma.**- The factory employs about 1,200 workers. A Welfare has been appointed by the factory. A recreation club, a voluntary welfare center, a middle school with 315 student and seven teachers, a canteen, a crèche, and a library have been provided by the factory. About

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579 workers have been given houses. There is one Employees' State Insurance Dispensary with one doctor, two compounds and two dressers. The factory has one six-bedded dispensary for the workers.

**Bihar-Bangal Firebricks Factory, Mugma.-** The factory employs about 735 workers. A Welfare Office has been appointed. A canteen, a crèche and a small recreation club have been provided by the factory. The factory runs one small dispensary for the workers. About 243 employees have been given housing accommodation.

**Jawahar Firebricks Industry, Mugma.-** It employs about 575 workers. For the welfare facilities a canteen, a crèche and a recreation club and a dispensary have been providing by the factory. About 129 employees have been given housing accommodation. The workers of the three about factories at Mugma are given the usual facilities in Labour. Welfare Center and Employees' State Insurance Dispensary at Mugma.

**Lead Smelting Refinery Industry, Tundoo.-** The factory employs about 500 workers. A recreation club, a primary school, a dispensary, a canteen and a crèche have been provided. There is no Welfare Officer. About 93 employees have been given housing accommodation and the other workers are given house rent allowance, i.e., a sum of Rs. 6 per month. Every month a film show is held for recreational purposes.

**Khandelwal Glass Works, Chota Ambona.-** A canteen has been providing for workers in which the management pay overheads, but try to recover the cost of food-stuffs. Tea and snacks are provided in the morning and meals during the break.

A rest shelter with benches has been provided where drinking water is supplied. A dispensary for both workers and their dependents is provided.

**Welfare Centres.-** There are several welfare centers in the district for the benefit of workers run either exclusively by the Government or on the employers' and workers' contribution.

The only welfare center run by the Labour Department of the State Government is Known as Shram Kalyan Kendra situated at Kumardhubi. Recreational and cultural facilities are provided here to the workers and their dependents. Education in sewing, Knitting, embroidery and fine arts is also imparted here. The center has also got a film projector of 16 mm and a propaganda-cum-health van. Facilities for indoor and outdoor games also exist here.

The welfare centers run on the contributions of the employers and labourers are situated at Chanch, Mugma, Sindri, Gulfarbari Kuranpura, two at Kumardhubi, Chota Ambona and Jharia and there are libraries in each of the welfare centers for the benefit of workers. There are called voluntary labour welfare centers and get

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occasional grants in cash or kind from the Labour Department. Canteens and crèches are maintained as provided under the Factory Act and Mines Act.

### Workers in Shops and Establishments,

From 15<sup>th</sup> July, 1958, the State Government enforced the Bihar Shops and Establishments Act in Dhanbad which grants adequate protection to the unorganized workers employed in shops, commercial establishments, hotels, cinema houses, etc.

There are 11,924 shops and establishment registered under the Bihar Shops and Establishment Act, 1953, in Dhanbad District. Approximately 55,000 workers are covered under this Act in the district. The Act regulates working conditions, period of payment, deduction of wages and refusal of leave by the employers of the shops and establishments. The enforcement of the Act is the responsibility of the Labour Officer, Dhanbad.

### Minimum Wages Act.

The Minimum Wages Act was enacted in 1948. The following schedule shows the scale of minimum wages payable to the employees in the stone- breaking and stone-crushing industries and in the employment in Damodar Valley Corporation:-

#### SCHEDULE.

Serial No.	Category of employees.	Minimum rates of wages.
1	Unskilled adult Mazdoor . .	Rs. 1.37 per day.
2	Mining and carting --	
	(a) Within and up to a quarter mile.	Rs. 8.50 per 100 cubic feet.
	(b) For every quarter mile . .	Rs. 1.75 per 100 cubic feet.
3	Mining chilly breaking and transport.	Rs. 2.50 per box of 25 cubic feet.
4	Hand breaker-	
	(a) Chelly breaker from boulders.	Rs. 2.00 per box of 25 cubic feet.
	(b) Chelly breaker from niztolai.	Rs. 0.65 per box of 5 cubic feet.
5	Ballast breaker from boulder-	
	(a) 2" - 3" . . . .	Rs. 5.00 per 100 cubic feet.
	(b) 2" - 2 <sup>1/2</sup> " . . . .	Rs. 6.50 per 100 cubic feet.
	(c) 1 <sup>1/2</sup> " - 2" . . . .	Rs. 8.00 per 100 cubic feet.
	(d) 1" . . . .	Rs. 10.00 per 100 cubic feet.

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Serial No.	Category of employees.	Minimum rates of wages.
6	Ballast breaker from niztolai	Re.0.77 per box of 5 cubic feet.
7	Chips breaker -	
	(a) Hand-made chops of ¾" down.	Re.0.28 per cubic feet.
	(b) Hand-made chops of down.	Re.0.20 per cubic feet.
8	Earth cutter -	
	(a) For soft earth . . . . .	Rs.1.50 per 100 cubic feet.
	(b) For hard and semi hard earth . . . . .	Rs. 1.75 per 100 cubic feet.
9	Borer or driller . . . . .	Rs. 0.50 per feet.
10	Miner . . . . .	Rs. 2.40 per 25 cubic feet.
11	Wagon loader (full lode of broad gauge wagon of 500 cubic feet and upward).	Rs. 6.60 per wagon.
12	Unskilled Mazdoor	Rs. 1.75 per day.
13	Feeder . . . . .	Rs. 1.90 per day.
14	Fitter . . . . .	Rs. 2.25 per day.
15	Fitter ( untrained) . . . . .	Rs. 1.65 per day.
Monthly – rated.		
16	Operator . . . . .	Rs. 77.00 per month.
17	Clerical staff . . . . .	Rs. 66.00 per month.
18	Work sardar or mate . . . . .	Rs. 55.00 per month.
19	peon or Darwan . . . . .	Rs. 45.00 per month.
20	Stone set (stone bricks)-	
	(i) Breaking size 9" x 6"x 4"	Rs. 8.00 per hundred.
	(ii) Stone set (stone brick pouching)	Rs. 4.50 per hundred.
	(iii) Stone set (stone brick)	Rs. 3.25 per hundred.
	Carting and transporting from a Distance of 2 to 4 miles.	
21	Chowkider . . . . .	Rs. 45.00 per month.
22	Labour (Blacksmith) . . . . .	Rs. 45.00 per month.

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Serial No.	Category of employees.	Minimum rates of wages.
23	Mate . . . . .	Rs. 2.50 per day.
24	Rode mate . . . . .	Rs. 2.50 per day.
25	Mason . . . . .	Rs. 3.25 per day.
26	Carpenter . . . . .	Rs. 3.25 per day.
27	Painter . . . . .	Rs. 3.25 per day.
28	Motor Truck Driver . . . . .	Rs. 100.00 per month.
29	Bullock cart driver with bullock and cart . . . . .	Rs. 6.00 per day.

As regards Minimum Wages Act of agricultural classes of people it may be mentioned that in exercise of the powers conferred by clause (b) of sub-section (1) of section 3 of the Minimum Wages Act, 1948 (xi of 1948), the Government of Bihar has been pleased to fix, within the meaning of clause (iii) of sub-section (i) of section 4 of the said Act, the minimum rates of wages, which shall be payable in the whole of the Dhanbad district to employees in respect of the different classes of work in agriculture and in operation ancillary to agriculture specified in the said schedule. The rates are as follows:-

Category of employees.	Name of agricultural operation.	Minimum rates of wages.
(a) Adult and adolescent employees.	Ploughing, embanking, harrowing, Manuring sowing of weeding, irrigating, traeshing, winnowing, uprooting, transplanting, harvesting and all other agricultural operations in cliental or ancillary to agriculture not mentioned in this schedule.	3 seers 12 chat tacks of paddy and 4 chat tacks of rice or chura or murhi or satto per day.
(b) Child employees	Ditto ditto	. . 2 Seers 4 chat tacks of paddy and 4 chat tacks of rice or chura or murhi or satto per day.

Where the minimum rates of wages are paid in cash , the cash Value of the wages to be paid in kind shall be computed in accordance with the Bihar Minimum Wages Rules, 1957 but in no case the minimum rates of wages payable in cash to adult and adolescent employees shall be less than Rs. 1.25 nP. per day in the district. For child employees, the minimum rates of wages to be paid in cash shall not be less than 75 nP. Per day in this district. Men and women shall get same rate of wages.

### **COAL MINES LABOUR WELFARE FUND.**

The Coal Mines Labour Welfare Fund was started in 1944 in Dhanbad. It is under the Center Government. It is, by far the biggest statutory fund in the country, devoted to the task of promoting the welfare of colliery workers, completed the 18 the year of

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its existence assiduously continuing its endeavours to improve the living and social conditions of the labour population in the coal mining industry.

The main activities of the fund are –

- (i) Provision and improvement of housing accommodation.
- (ii) Provision of adequate medical facilities both preventive and curative.
- (iii) Provision and improvement of water-supply arrangements.
- (iv) Anti-malaria operation.
- (v) Provision and improvement of educational and recreational facilities.
- (vi) Improvement of the standard of living.

*Medical facilities.*

Medical facilities on an extensive scale, one of the most outstanding achievements of the fund, continued to be provided by the organization. The facilities provided inter alia include provision and maintenance of hospitals, maternity and child welfare center, T.B. treatment facilities, dispensary services including Ayurvedic dispensaries, etc. The progress with regard to these is summarized below in brief:-

Central Hospital.-- This 250-bedded modern hospital staffed and equipped to render all types of specialists diagnosis and treatment to colliery workers and their dependents has been functioning since 1951. The average daily number of in-patients treated in the hospital during 1960-61 was 333 against 302 during the previous year. The number of new patients treated in different departments of the hospital during the year, i.e., 1960-61 is given in the following table:-

Department.	Outdoor patients.	Indoor patients.
1. Medical . . . . .	9,891	3,292
2. Surgical . . . . .	11,514	2,683
3. Maternity and Gynaecological.	2,043	857
4. Eye and E.N.T. . . . .	3,411	331
5. Dental . . . . .	744	. . .
6. Venereal diseases . . . . .	1,055	158
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Total . . . . .	28,658	7,321

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A Blood Bank on modern lines for the benefit of colliery patients Started functioning in the hospital. Blood is collected from free Volunteers and also purchased from donors at the rate of Rs. 10 per bleeding of 250 c.c plus Re. 1 for refreshment.

The hospital has a social worker attached to it who attends to the personal needs of the patients for their correspondence, private matters, etc.

Maternity and Child Welfare Centres.—A maternity and child welfare Center is attached to the hospital.

**T.B. Treatment.**—The number of beds provided by the fund for the Treatment of T.B. patients is 12. The scheme for payment of subsistence allowance at a rate not exceeding also maintained as indoor patient at the fund's T.B. Clinics or at the beds reserved by the fund in the hospital is existing.

**Ayurvedic Dispensaries.**—In addition to Central Hospital, T.B. clinics, Maternity and child welfare centers and dispensaries providing Allopathic line of treatment, the organization also maintained three Ayurvedic dispensary at Jagjivan Nagar, Khas Jeenagora and Bhuli in Dhanbad district.

Besides, the Central Hospital has been provided X'ray facilities. The fund has also provided ambulance vans to the hospital.

Family counseling center are run at the Central Hospital and about Five thousand cases attended to the center and sterilization was done on 293 cases.

Incidence of leprosy in the coalfields is not inconsiderable and to provide facilities for treatment to colliery-to-colliery leper cases, wards have been provided at the cost of the fund at the Tetulmari and Asansol leprosy hospitals which are run by the Dhanbad District Leprosy Association and the Asansol Leprosy Board respectively. Twenty-two beds have been provided in Dhanbad. The wards have been equipped and electrified at the fund's cost. With a view to protecting from infection the coal miners whose parches are suffering from infectious diseases like leprosy and T.B. and who have not been segregated and are living with their Families, the Coal Mines Labour Welfare Fund Organisation has set up a residential home at Bhuli township for those children

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in the age- group of 6-14 years. It was started on the 6 th September 1960 with twelve children on the opening date. The children admitted at the home are provided with nourishing food, education and recreation.

**Anti-Malaria Measures.**- The malaria control work, the first major project undertaken by the organization from its very inception, entered into its sixteenth year of systematic operation. Three thousand seven hundred and eighty-two persons received anti-malaria drugs during the year. In recognition of the good work done, the Malaria Unit of the organization was awarded a certificate of merit for 1958-59 by the National Society of Malaria and other Mosquito Borne Diseases.

### **Education and Recreation.**

**Miners' Institute.**- To the chain of Miners' Institute set up by this Organization, one more was added at samla Kendra Colliery in West Bengal Coalfield on 18th August 1960. These institutes, each comprising of an Adult Education section and a Women-cum-children's Welfare and Education section have been established by this organization in different coalfields for providing educational and recreational facilities to colliery workers and their dependents. Fifty-six such institutes are functioning in different coalfields in the district.

**Women's Welfare-cum-Children Education Centers.**- Sixty Women's Welfare-cum-Children's Education centers are functioning in Multi-purposes Institutes and accommodation has been offered by the colliery owners. Nine Feeder Adult Education Centers for women are also opened. The centers provide elementary education to workers' children up to Class 2 standard. The children attending the center are given bath in the morning. They are then dressed with garments supplied free by all centers. Free supply of milk and tiffin is distributed amongst the children attending the Women's Welfare Centers.

Besides training in handicrafts like sewing, tailoring, embroidery, repair of garments, etc., literary classes are held for women at all the centers as usual. The total number of women turned literate up to 31<sup>st</sup> march, 1961 was 1,146. All the centers have been provided with a sewing machine and other materials required for handicraft work.

**Adult Education centres.**- sixty-one Adult Education centers are Functioning in various coalfields. During the year 1960-61, 1,816 adults were made literate. A small library containing about 400 books is being maintained at each center and the same is being used by a large number of persons. Study tours and excursions to places of interest are arranged.

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For providing increased facilities for Adult Education the scheme of opening Feeder Adult Education centers which was introduced three years ago, has been working successfully. One hundred and thirteen centers have so far been functioning under this scheme and necessary action to add more to this was taken.

AS an incentive and encouragement to greater efforts, the organization pays scholarships to the wards of colliery workers who are meritorious in their studies. The rates of scholarships have also been enhanced as shown below:-

- (a) Rs.20 per month per student for Class V and VI.
- (b) Rs.25 per month per student for Class VII and VIII.
- (c) Rs.30 per month per student for Class IX and X.
- (d) Rs.50 per month per student for Class XI and XII.

### **Per-University Course. Degree Course including Technical Degree Course.**

**Training for Welfare personnel.-** The training course for the third batch of 33 trainees at the Welfare Personnel Training Institute, Bhuli which had commenced from November,1959 was completed. Training of the fourth batch which was started from 1<sup>st</sup> August,1960 with 21 trainees was completed in January, 1961. Twenty trainees are declared successful.

**Facilities for Training Leadership and Discipline.-** The National Discipline Scheme introduced in six institution in West Bengal Coal-field was continued and free supply of uniforms by the organization to the children of colliery workers undergoing training at the institution are continuing. Efforts are in hand to cover more schools in the coalfield areas by extending the facilities to them also.

**Training Camps for Children of Coal Miners in Leadership and Discipline.-** Training camp for the children of coal miners was introduced in September, 1959 at Bhuli township for imparting training in physical education, leadership and discipline. Under this scheme (of children's training camp) 180 children are being trained.

**Games and Spots.-** A total sum of Rs. 50,900 was spent on organizing games and sports for colliery workers in the different coal-fields. Besides this, the first All-India Coalfield Food-ball Tournament was also conducted during the year under report and a sum total Rs.

9,000 was spent for the purpose.

**Health week.-** Health Week Fortnight was also organized in almost all the coalfields at a cost of Rs.23,500.

**Exhibition of Films.** – The four mobile cinema units maintained by the organization one each in Jharia, Raniganj, Karanpura and Ramgarh and PENCH Valley Coalfields give a total of 714 shows during 1960-61. Arrangement was made for provision of similar projectors in the other coalfields also.

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**Yogic Exercise.-** A yogic teacher was appointed for teaching yogic exercises to the colliery workers at the Miners' Institute of the fund at Dhanbad. The workers are taught different exercises by him, which they are encouraged to practice regularly.

### **Enforcement of Statutory Provision.**

1. **Coal Mines Pithead Bath.** – The Coal Mines pithead Bath Rules, 1946 continued to be administered by the Coal Mines Labour Welfare Organization. Pithead Bath has to be given at every coal mine whose monthly output during the previous calendar year exceeded 500 tones. Exemption from the provision of pithead Bath is granted in case of those mines the resources of which are likely to be exhausted within the next three year. The total number of collieries where they are under construction was 80.

2. **Creche in Coal Mines.-** Under the existing rules the owner agent or Manager of every mine in which not less than 50 women workers have been employed on any one day of the preceding twelve months is required to provide a crèche. Supply of diet to children at the crèches is now compulsory. A total number of 392 creches are completed and 61 are under construction.

3. **Prosecution.** – For compensation of the Coal Mines pithead Both Rules and Mines Creche Rules 104 prosecution were launched in 1961.

4. **Workmen's Compensation.-** With a view to getting the settlement expedited, the members of the Inspectorate staff of the organization follow up cases of accidents in coal mines which involve payment of compensation. Out of a total of 6,510 cases were admitted and 770 were not. Payment was made in 3,006 cases.

### **Miners' House.**

(a) **Township.-** Under the fund's first scheme of construction of experimental township, the organization constructed in all 1,566 houses at Bhuli, 48 Houses at Bijoy Nager, 219 houses at Bokaro, 180 houses at Kargali, 50 at Giridih, 50 at Bhurkunda and 40 at Kurasia.

(b) **Subsidized Housing Scheme.-** Under the old subsidy scheme of the fund envisaging payment of subsidy to colliery owners at the rate of 20 per cent of cost of the construction, the number of houses constructed were 1,638 up to end of 1961.

(c) **Subsidy-cum-Loan Scheme.-** Under this scheme which provides for payment of a subsidy of 25 per cent and loan of 37 ½ per cent of the cost, 2,060 houses were completed and 103 houses were under construction during 1961.

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(d) **New Housing Scheme.**- Under the New Housing Scheme of the fund which provides for construction of 30,000 houses by the fund at a cost of more than 10 cores, at the close of the year under report, 13,525 houses were in different stages of construction at 296 collieries. An expenditure of Rs. 1,46,10,842 had been incurred on the New Housing Scheme during 1961.

(e) **Kutchra Houses.**- Government sanctioned a sum of Rs. 6,000 during 1961 for construction of 30 kutchra houses.

### Other Amenities.

**1. Death Benefit.**- The scheme for grant of financial assistance to the windows and school-going children of colliery workers who meet with death as a result of fatal accidents at the following rates was in operation during 1961. Under the scheme a monthly allowance of Rs. 10 per month to the window of the deceased worker for a period of two years and a scholarship of .5 per month to each of the children of the deceased worker attending school for a period of three years being paid. A total sum of Rs. 15,300 was sanctioned during 1961 for payment to 57 windows and nine school-going children.

**2. Co-Operation Movement in Coalfields.**- As a result of the drive launched by the organization since 1958 to free the coal miners from the clutches of unscrupulous money-lenders the Co-Operative movements gained momentum and became increasingly popular. A total of 147 Co-operative coalfields. A sum of Rs. 4,50,000 was sanctioned out of the Coal Mined Labour Welfare Fund for extending credit facilities at a low rate of interest to the Colliery Employees, Co-operative Societies through the Co-operative Banks in the State of Bihar.

**3. Holiday Home for Coal Miners.**- The Holiday Home set up at Rijgir in patna district on an experimental basis is Becoming popular. Batches of workers are sent to the Holiday Home.

**4. Welfare of the Visually Handicapped.**- For educating and teaching crafts to the visually handicapped colliery workers and children to enable them to lead a more purposeful life for which a Blind School has been set up at Bhuli township by the Dhanbad Blind Relief Society, the question of payment of suitable non-recurring and recurring grants to the above society was taken up by the organization.

**5. excursion-cum-study Tour for Coal Miners.**- In order to provide the colliery workers the rare opportunity to visit important places in colliery, an excursion-cum-study tour is being arranged every year from 1959 by running a special train.

**6. Publicity through Exhibition.**- The publicity Section of the organization had participated in the State Industries Fair in 1960 at

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Asansol and an exhibition at Banksimulia Group of Collieries in the Raniganj Coalfield and had put up stalls to acquaint the coal miners and general public with the various activities of the Coal Mines Labour Welfare Organization in the Field of promoting the welfare of the workers engaged in an industry so vital to the Nation.

## COAL MINES PROVIDENT FUND SCHEME.

### Background

The general awakening and upsurge among all sections of the People just before the country's independence augmented the feeling of dissatisfaction among industrial workers with their unsatisfactory and, in some cases; deplorable working conditions and the pressure for immediate amelioration became irresistible. In the coal mining industry where the workers were eking out a precarious living with inadequate wages and a complete absence of social security, the unrest was acute. This led the Central Government to appoint a Board of Conciliation in 1946. In May 1947, the Board recommended, Inter alias, the payment of a month's basic wages once a quarter as attendance bonus and the institution by law of a scheme of Compulsory Contributory Provident Fund for the colliery workers. Being payable on the worker conforming to a specified minimum attendance in a quarter, the bonus served as an inducement for more regular work but it was felt in certain casual that the Provident Fund Scheme might not be successful as the labour force was extremely casual. Despite these forebodings, an Ordinance was promulgated in April 1948 to confer powers on the Central Government to frame the detailed statutory scheme of provident Fund. The ordinance was later repealed by an Act and the Coal Mines Provident Fund Scheme notified in December 1948.

### Initial difficulties.

This scheme was inaugurated in a virgin field. As the scheme increased the expenses of the employer on account of their liability to pay contribution and charges to defray the cost of administering the scheme, Government allowed an adequate increase in the selling price of coal to give the employers' objection could be understood, surprisingly enough, there was resistance in the beginning from a large number of workers as the scheme involved a reduction in their already meager take-home wages. As the employers were enjoined by penal clauses to make this deduction the workers' opposition could not prevent recovery. The illiteracy of the workers, their covert, if not expressed, hostility, the transient nature of the labour force, the far flung location of many of the coal mines and unwillingness of some of the employers to pay their contribution and to submit returns, ect., were some of the difficulties in the midst of which the scheme was born. Despite these obstacles the scheme has been a success, which belied the counsels of the prophets of gloom.

## **INDUSTRIES.**

### **Scope of the scheme.**

(i) The coal Mines provident Fund Scheme which was initially applied to the State of Bihar and West Bengal from the 12<sup>th</sup> may 1947 and to the State of Madhya Pradesh and Orissa from the 10<sup>th</sup> October 1947 was subsequently extended to erstwhile States of Rewa, Korea and Talcher as well as to the States of Assam, Andhra Pradesh, Rajasthan and Maharashtra. The scheme now, applies to 1,213 coalmines both in the public and private sectors, spread all over the country except Jammu and Kashmir.

(ii) In the States of Andhra Pradesh, Rajasthan and also in the erstwhile States of Rewa, Korea and Talcher every employee receiving basic wages not exceeding Rs. 300 per month is required to become a member of the Fund immediately after the end of the quarter following the quarter in which he qualifies for a bonus under the Coal Mines Bonus Scheme.

In the States of Bihar, West Bengal, Orissa, Madhya Pradesh and Maharashtra every employee with the exception of the following is required to become a member of the Fund on putting in 105 days' attendance if employed underground and 130 days' attendance if employed on the surface, during a period of six months:-

- (i) Such employees of National Coal Development Corporation collieries as are either pension able or governed by conditions of service applicable to Railway employees or which have been drawn up by the Corporation ; and
- (ii) Contract labour engaged in building, brick making or tile making.

The eligibility condition in Andhra Pradesh, Rajasthan and the erstwhile States of Rewa, Korea and Talcher will soon be brought at par with those prescribed for other States. Over 13 lacs of workers have so far been enrolled as members of the Fund of which a little over four lacs are now in the live list of subscribers.

### **The Rate of Contribution and Its Evolution.**

Originally the rate of contribution to the Coal Mines provident Fund was one-sixteenth of basic wages only on both employers' and employees' side. The wage structure then obtaining in the coal industry consisted of low basic wages with relatively much higher dearness allowance and consequently the amount that an average employee could accumulate in the fund was pitifully small. To give them a somewhat reasonable provision for their old age Government enhanced the rate of contribution in the middle of 1955 from one-sixteenth of basic wages to one-sixteenth of basic wages and dearness allowance including cash equivalent of food concession. The year 1958 brought in the Award of the All-India Industrial Tribunal (Colliery Dispute) which altered the wage structure and introduced

several new elements of wages .To fit in with the altered wage structure, the basis of Provident Fund deduction was changed to total emoluments from the beginning of 1958 and since then the rate of contribution to the Coal mines Provident Fund has been 6 ¼ per cent of total emoluments with a matching contribution by employers. In view of the present rising spiral of prices accumulations even at this rate cannot be considered adequate and the question of raising the rate further of 8½ per cent of total emoluments is already on the anvil.

### **Benefits.**

(i).The Coal Mines Provident Scheme ensures compulsory savings there by helping workers to have a care-free and honourable old age. Along with a high yield in the shape of compound interest the accumulations enjoy absolute safety and are protected against being charged or assigned and even from attachment by courts. As the Fund is recognized under the Indian Income Tax Act,1922, the higher paid staff get rebate in respect of their Provident Fund contribution from Income-tax . The major attraction of course is the additional amount earned by the members as employers' contribution.

(ii)The full amount including employers' contribution and interest there in refunded in the event of death permanent physical or mental infirmity, superannuation and retrenchment .In other case the member's own contribution with interest therein is refunded along with the employer's contribution according to the following scale:-

Period of membership	Percentage of employer's contribution and interest therein refundable.
Less than 3 year ..	25 per cent.
3 year or more but less than 5 years. ..	50 per cent.
5 year or more but less than 10 years. ..	75 per cent.
10 year or more but less than 15 years. ..	85 per cent.
15 year or more ..	100 per cent.

3. Accumulations of deceased members are paid to their nominees and in the absence of a valid nomination to the surviving members of the deceased subscriber's family or to the legal heirs. Till the end of February, 1962, a sum of the 3.08 crores has been refunded to members and nominees heirs of deceased members in settlement of 1,50,158 claims.

## INDUSTRIES.

### Contribution and Investment there of .

Contributions to the Fund and the administrative charges are required to be paid by the employers to the Fund by the 15<sup>th</sup> of every month. The average amount received as contribution every month comes to about Rs. 36 lakhs and so far a sum of about Rs. 26.65 crores has been received in the Fund on account of employees' and employers' contributions. All receipts of the Fund are pooled in the Fund's current Account no. 1 maintained with the State Bank of India , Dhanbad ,which is the only banker of the Fund. Leaving a reason- able amount for payment to outgoing members and administrative expenses, the balance is invested exclusively in Central Government Securities according to the following patterns:

Pattern of investment.	Amount.	Yield per cent Per annum.
National Plan Savings Certificates	10%	4.25
Treasury Savings Deposit Certificates	10%	4.00
Other medium term securities	10%	about 3.75
Long-term securities	70%	about 4.00

Up to the end of February 1962, Government securities for a total nominal value of Rs.29,61,69,400 have been purchased by the Fund.

### Penal Provision.

(i) Contraventions of the provisions of the Act and the schemes are penal. Defaulting employers are liable on conviction to imprisonment up to six months and or fine up to Rs.1,000. The unpaid amounts are recoverable as arrears of land revenue. Although the Act does not now provide for levy of damages from employers on belated payment of the dues of the Fund, it has been possible through convincing arguments put forth by the officers of the Fund to persuade the revenue officials to agree to the levy of interest on grounds of equity since the Fund is under a statutory obligation to credit interest in the accounts of its members notwithstanding the delay in realizing the amounts. A proposal for amending the Act with a view to levying damages is already under Government's consideration and once this amendment comes through, it will have a salutary effect on defaulting employers. In most cases resulting in conviction, courts have been pleased to award compensation out of the fines imposed in terms of section 545 of the Cr . P . C. The total amount of compensation awarded by courts up to the end of February 1962 comes to Rs.1.42 lakhs. Besides this a sum of dental charges in cases where prosecutions were withdrawn after getting all contraventions set right.

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(ii) Defaults committed by employers are not insignificant as would be evident from the following statistics:-

Prosecution launched till the end of February, 1962-2,063.

Recovery proceedings instituted till the end of February, 1962-1,319.

This is despite the policy that legal action is treated as the last resort at it causes, expense, delay and leaves behind a trail of bitterness.

### **Administrative Set-up.**

The Fund vests in and is administered by a Tripartite Board of Trustees consisting of the representatives of employers, workers and the Central and the State Governments. The Coal Mines Provident Fund Commissioner is the Chief Executive Officer of the Fund. The scheme is administered from one Central Office at Dhanbad although Inspectors of the Organisation are stationed in various coalfields. They conduct regular inspections and report infringement of the scheme to the Commissioner. Some controlling functions, however, vest in the Central Government, six representatives of the Employers and six representatives of the Employees. The Secretary of the Government of India Ministry of Labour and Employment, New Delhi acted as the Chairman of the Board.

Through intensive publicity of the scheme done with the help of various kinds of audio-visual aids it has been possible to dispel the suspicion from the minds of the workers that the amount contributed by them was a net loss never to be refunded to them. Prompt settlement of claims has instilled greater confidence among them and the scheme has gained immense popularity among colliery workers and the employers alike. Employers now appreciate that the scheme has been helpful in stabilizing labour force in the industry. No doubt there are still difficulties but the Organisation is proceeding with a firm step to resolve them.

### **COAL MINES BONUS SCHEME.**

The Coal Mines Bonus Scheme, 1948 was framed by the Central Government under the Coal Mines Provident Fund and Bonus Schemes situated in the States of West Bengal, Bihar, Madhya Pradesh and Orissa and came into force on the 12<sup>th</sup> May 1947, in respect of coal mines in West Bengal and Bihar and on the 10<sup>th</sup> October, 1947, in respect of the coal mines in Madhya Pradesh and Orissa. Subsequently, the Ordinance was replaced by the Coal Mines Provident Fund and Bonus Schemes Act, 1948, which also gave legal validity to the principal scheme.

The object of the bonus scheme is to ensure regularity of attendance and provide a stable labour force in the coal mining industry by arresting the tendency to absenteeism and resort to illegal strikes.

### INDUSTRIES.

The schemes are applicable to employees in coal mines whose basic earning do not exceed Rs.300 per month, excluding persons employed as (i)Malis, sweepers or domestic servants, (ii)In State Collieries(now under the control of the National Coal Development Corporation Ltd.) on pay and under conditions of service which are similar to those obtaining in Railway establishments or under conditions of service which entitle them to pension under the Civil Rules, and (iii)As labourers of a contractor for building, brick making .

The employees covered by these schemes are entitled to be paid every quarter a bonus equal to  $\frac{1}{3}$  of their basic earnings in that quarter provided certain conditions relating to attendance and strikes are fulfilled. The bonus is payable within two months of the expiry of the quarter.

The following is the qualifying period of attendance for earning bonus in Bihar :-

54 days in a quarter in case of underground miners and other underground piece workers and 66 days in a quarter in the case of other workers.

No bonus is payable to the employees who participate in an illegal strike in respect of the quarter in which such strikes take place. How ever, if an illegal strike is called off within 48 hours of its commencement, the amount of bonus that would have fallen due to the employees but for their participation in the strike, has to be credited by the employer to the “Reserve Account of the Coal Mines Provident Fund”. During the year(1960) 785 collieries employing a labour force of approximately 5,44,716 were covered by the schemes in India. Separate figures for Bihar are not mentioned in the brochure “Annual Report on the working of the Coal Mines Bonus Schemes”, Government of India. Ministry of Labour and Employment.

**The Coal Mines Bonus Schemes were amended in the following respect in 1960:-**

- (1)With a view to check causes of short payment and non-payment of bonus widely prevalent in Coal Mines Bonus Scheme, 1948, requiring the management of the collieries to make payment of bonus in the presence of the Inspector if he apprehends some irregularities in the payment of bonus and requires the employer to make payments in his presence at the time and place to be submitted by him.
- (2)For utilizing the amount of unclaimed bonus lying with the employers for the general welfare of the employees in coal mines, as recommended by the 5<sup>th</sup> session of the

## DHANBAD.

Industrial Committee on Coal Mining held in August, 1956, a provision was made in the scheme making it obligatory on the part of the employer to deposit the unclaimed bonus after a period of six months from the end of a particular quarter to the reserve account established under the schemes. This provision was given retrospective effect from the quarter commencing for the 1<sup>st</sup> January, 1958.

### Enforcement Machinery.

Prior to August, 1952 the administration of the main Bonus Scheme, 1948 was the responsibility of the Coal Mines Provident Fund Commissioner. From August, 1952, the enforcement of the main scheme as well as other schemes has been entrusted to the industrial relations machinery. The Chief Labour Commissioner, Deputy Chief Labour Commissioner, Regional Labour Commissioners, the Coal Mines Provident Fund Commissioner, Conciliation Officers, Labour Inspector, Junior Labour Inspectors and the Coal Mines Provident Fund Inspectors were appointed as Inspectors under the Coal Mines Provident Fund and Bonus Schemes Act, 1948 for the enforcement of the schemes. The field work is done mostly by the Labour Inspectors, Junior Labour Inspectors and the Provident Fund Inspectors. The Regional Labour Commissioners and Conciliation Officers also visit the collieries in their jurisdictions to check the work of the Inspectors and to assist them as and when necessary.

Legal action is taken against the defaulting employers by way of prosecution for breaches of the provisions of the schemes or by way of filing certificate cases for recovery of bonus payable to the workman as an arrear of land revenue.

The following tables are appended and show the working of the schemes for the year 1959-60:-

- (a) Frequency of inspections of collieries.
  - (b) Number of inspections, irregularities and the time taken for rectification.
  - (c) Submission of bonus, number of workers employed, amount of bonus paid.
  - (d) Average number of workers employed, amount.
  - (e) Number of 'show cause' notices issued.
  - (f) Disposal of prosecution and appeals.
  - (g) Particulars of certificate cases filed and decided.
  - (h) Disposal of applications for declaring strikes to be illegal.
  - (i) Progress of enforcement.
-

## INDUSTRIES.

TABLE A.

*Statement showing frequency of inspections of Collieries State wise (1959-60).*

Serial no.	state	No. of	Number of Collieries inspected.				Total no. of Collieries inspected.
			Once.	Twice.	Thrice.	Four times.	
1	Bihar	501	1	11	37	196	256

TABLE B.

*Statement showing number of inspections, irregularities and the time taken for rectification, etc.(1959-60).*

Serial no.	Region	No. of Inspections carried out.	No. of irregu- larities detected.	No. of irregularitie pending recti- fication at the previous year.	No. of irregularities rectified Within				Total. irregularities contested by employees.	
					3 months.	6 months.	9 months.	12 months.		
1	Dhanbad	3,052	13,522	1,558	1,405	7,025	2,631	1,768	1,098	12,522

**DHANBAD.**  
**TABLE C.**

Statement showing submission of bouns returns, number of of workers employed, amount of bouns paid, etc (1959-60)

Serial No.	Name of state.	No. of Collieries In the State.	Quarteriy average no. of bouns Retrurns received.	Average no.		Total amount of bouns paid to the workers During the year.	Total amount of bouns reamaining Unpaid.	Remarks.
				of workers employed in collieries submitting the returns.	Average no. of workers who were paide bonus.			
1	2	3	4	5	6	7	8	9
1	Bihar	501	427	2,90,042	1,30,467	1,73,63,989.81	3,39,815.50	

**TABLE D.**

Statement showing the average (for 4 quarters) number of workers, employed those who qulifide for bouns etc. (1959-60).

Serial No.	Name of the state.	No. of Collieries.	Categories of workers.	Average no.		Percentage of coltmns 5 to 6.	
				of workers employed.	who qualified for bouns.		
1	2	3	4	5	6	7	8
1	Bihar	501	(1). Supervisory and clerical	9,659	9,052	93.7	
			(2). Underground	1,45,128	58,474	40.3	
			(3). Others	1,35,255	90,640	67.0	

**INDUSTRIES.**  
**TABLE E.**

Statement showing the number of 'show cause' notice and the result therefore(1959-60)

Serial No.	State.	No. of 'show -cause' notices -			Result of 'show- cause' notices .			
		Pending at the beginning of the year.	Issued during the year	Total.	No. of pursued.	No. resulting in legal action	Pending correspondence at the end of the year	Total.
1	2	3	4	5	6	7	8	9
1	Bihar	112	200	312	173	21	118	312

**TABLE F.**

Statement showing the disposal of prosecution and appeals (1959-60).

Serial No.	State.	Disposal of Prosecutions.					Disposal of appeals							
		No. of prosecutions Pending at the beginning of the year.	No. of prosecutions filed during the year.	No. of cases resulting in acquittal.	No. of cases resulting in conviction.	Total amount of fine imposed.	Amount of fine awarded to Department		No. of appeals filed during the year.		field by department.		filed by employers.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	
1	Bihar	99	17	2	30	4,425.00	625.00	1	1	1	..	1	..	

**DHANBAD.**  
**TABLE G.**

**Statement showing the particular of certificate cases filed and decided during the year (1959-60)**

Name of State.	No. of cases Pending at the beginning of the year.	No. of cases filed during the year.	Cases decided during				Disposal of appeals.				Remarks.			
			No. of cases.	No. of employees involved.	Amount of bonus.	Amount of Interest.	No. of cases pending at the end of the year	Filed by Department.	Filed by Employers.	No. Allowed.		No. Dis-Missed.	No. allowed.	No. Dis-Missed.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
					Rs. np.	Rs. np.								
1 Bihar	26	13	3*	50	2,887.36	+	..	..	36	..	..	1++	..	

\* As the payment were made to the workers, the 3 certificate case were struct off.

+ As the payment were to the workers, the 3 certificate case were struct off and hence the question of awarding the clamied amount of Rs. 2,887.36 nP. dose not arise.

++ Still pending.

**INDUSTRIES.  
TABLE H.**

Statement showing the disposal of application for declaring a strikes to be illegal (1950-60).

State	No of application pending at the beginning of the year.	No of application filed during the year.	No of application decided during the year				Total	No of application pending for decision at the end of the year.	Appeals against Regional Labour Commissioner's decisions.			Remarks
			Holding the strike to be legal.	Holding the strike to be Illegal.	with - drawn	No. pending at the Beginning of the year.			No. filed during the year.	No. decided during the year	Allowed.	
1	2	3	4	5	6	7	8	9	10	11	12	13
Bihar	5	22	1	6	13	20	7	...	...	...	..	..

**DHANBAD.****TABLE I.****Progress of enforcement**

Year	No. of Working of collieries.	Average number of bonus returns received.	Quarterly average number of workers employed in collieries submitting the returns.	Quarterly average number of workers who qualified for bonus.	Quarterly average number of workers who received bonus.	Total amount of bonus paid.	No. of Prosecutions filed.	No. of certificate cases filed.	No. of application filed by the employers For declaring the strike as illegal.	Number of appeals filed against R.L.C.'s decision.
1	2	3	4	5	6	7	8	9	10	11
1955-56	946	353	2,73,336	1,57,778	Not available	Rs 1,15,86,101.25	29	Not readily available	9	Not readily available
1956-57	948	920	3,66,248	2,32,283	Ditto....	2,05,22,920.00	3	2	30	Ditto....
1957-58	806	627	4,34,005	2,50,751	2,37,138	2,51,91,833.36	47	Not readily available	19	8
1958-59	785	669	4,62,294	2,60,568	2,53,670	3,65,23,048.60	119	Ditto	30	5
1959-60	785	689	5,44,716	3,28,854	3,01,271	3,80,30,777.33	28	27	41	4

**SOURCE :-** “ Annual Report (for the year 1959-60) on the Working of the Coal Mines Bonus Schemes ”, Government of India , Ministry of Labour and Employment (P.8 to 18) .

**INDUSTRIES.**  
**THE COAL BOARD : ITS CONSTITUTION , FUNCTION AND**  
**ACTIVITIES ( DHANBAD ) .\***

*Introduction .*

The Coal Mining Committee, appointed by the Government of India in 1936 to suggest measures necessary for ensuring greater safety in coal mines, strongly recommended the introduction of stowing operations in mines in the interest of safety and also conservation. In pursuance of this recommendation, the coal mines Safety (Stowing) Act 1939 was enacted "to make further provisions for safety in coal mines by taking measures to facilitate or require therein carrying out of the operation known as stowing , and to provide for the creation of a fund for the assistance of such operation". In explaining the objects and the reasons of the Coal Mines Safety (Stowing) Bill it was stated that on examination of the recommendation of the committee (Coal Mining Committee, 1937) in consultation with the Provincial Government and interests concerned , the Government of India felt that, for the present, at any rate, the main objective of any proposal should be to secure the safety of the worker. Such proposal would incidentally, result in a certain amount of conservation, but safety should be the primary objective and the bill was designed to give effect to this proposal.

Thus the purpose and function of the Coal Mines safety (Stowing) Act were limited to the adoption of measures and grant of assistance, out of the stowing fund, for safety only. The Government of India was at that time obviously not prepared to undertake legislation for securing the conservation of coal resources, even when they accepted the view of the Coal Mining Committee that measures for conservation, particularly of the coking coal , were urgently required in view of the limited reserves of such coal .

The Indian Coalfields committee, 1946 in Chapter VII of its report very strongly recommended extension of the functions of the then Coal Mines Stowing Board so as to include conservation within its purview. The above recommendation of the Indian Coalfields Committee was endorsed by the Committee on Conservation of Metallurgical

Coal, 1951 and also by the Working Party for the Coal Industry, 1951. The Committee on Conservation of Metallurgical Coal, while commenting on the Coal Mines Safety (Stowing) Act, stated in paragraph 44 of its report as follows :-

"It will be apparent, therefore, that the scope of the Act is limited to Stowing for safety only and not for conservation . We feel most strongly that the time has come for enforcing stowing for conservation purposes also. All our witnesses were unanimous in the opinion that the scope of stowing should include the conservation aspect.

We, therefore, recommend that the Coal Mines safety (Stowing ) Act be enlarged to cover

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stowing for conservation and to include conservation of all coking coal falling in the Selected Grades or Grade I in the first instance.”

Similarly, the Working Party, 1951 recommended amendments of the Coal Mines Safety (Stowing) Act so as to include measures necessary for conservation in addition to those being administered for safety.

As a result of the recommendation of the various Committees, the Coal Mines Safety (Stowing) Act, 1939 was repealed, and the Coal Mines (Conservation and Safety) Act, 1952 was enacted in its place with more comprehensive and enlarged functions covering the various aspects of safety and conservation in coal mines.

### *Constitution of the Coal Board.*

The Coal Board has been Constituted under the Coal Mines (Conservation and Safety) Act, 1952 and is a body corporate. It consists of a chairman and such number of other Members, not exceeding six, as appointed by the Central Government.

#### *Powers and function of the Coal Board.*

**(A) Power of the central Government :-** Under the Coal Mines (Conservation and Safety) Act, 1952 the Central Government has acquired powers to exercise such control and take or cause to be taken such measures as it may deem necessary or proper for the purpose of maintenance of safety in coal mines or for conservation of coal, particularly :-

(a) to require colliery managements to undertake such measures, including stowing, as may be found necessary for safety ;

(b) To undertake measures, including stowing for conservation or beneficiation of coal in the case of coking coal mines ; and

(C) To levy such duty of excise, not exceeding one rupee per ton, as may be fixed from time to time for all coal and coke dispatched, and also an additional duty of excise, not exceeding Rs. 5 per ton in the case of coking coal of Selected Grade ‘A’ and Selected Grade ‘B’. and not exceeding Rs. 2 per ton in the case of grade I, as may be fixed from time to time .

**(B) Delegation of powers to the Board by the Central Government :-** It has been provided in the Act that the Central Government may, by a general or special order, delegate to the Coal Board all the above powers or such of the above powers as the Government thinks fit ; and the Government has already delegated most of the above powers to the Board.

### **INDUSTRIES.**

**(C) Functions of the Bord.-** In addition to the aforesaid powers delegated by the Central Government, the Coal Board has the following main functions:-

- (i) To undertake directly or cause to be executed through its agencies such measures as it considers necessary or desirable for the furtherance of the objects of the Act.
- (ii) To grant assistance, out of the fund created under the Act, for stowing or other protective measures considered necessary for safety or conservation.
- (iii) To meet expenses for carrying out different measures which are considered essential for effective prevention of spread of fire or inundation of water in a coal mine.
- (iv) To grant assistance for washing or blending of coal undertaken under the orders of the Board.
- (v) To meet expenses in the prosecution of research work connected with safety, conservation or utilisation of coal
- (vi) To grant loans to the colliery managements for the purchase and installation of stowing, blending, washing or any other beneficiation plant proposed to be set up in the interest of conservation.
- (vii) To draw samples for the determination of the quality of coal and to grant accordingly. No coal is allowed to be dispatched or sold under the colliery control Order, 1945, unless it has received a Grading Certificate.
- (viii) To fix the maximum quantity of production of coal from a particular seam or seams in the coal mines producing specified type and quality of coal.
- (ix) To require the management of a coal mine to adopt the method of working in the mine as prescribed by the Board for the purpose of ensuring conservation and safety.
- (x) To control depillaring operations in a mine without stowing and the splitting of pillars as a final mining operation which, in its opinion, may result in undue loss of coal, spread of fire, etc.
- (xi) To restrict supply of coking coal of any grade or grades to specified consumers so as to advance the cause of conservation by proper utilization.
- (xii) To require any steel works, coke ovens, blast furnace, etc., to undertake blending of coal for conservation.
- (xiii) To regulate the opening and re-opening of coal mines or seams so as to conform such opening or re-opening to the country's requirements of a particular type of

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coal and to utilise the transport now available in the best manner. While granting permission for opening or re-opening of a mine conditions are imposed to ensure scientific and proper method of mining in the interest of safety and conservation.

(xiv) To control the closing of a coal mine. The owner of a mine is required to give notice at least three months before the proposed date of closure. This enables the Board to examine the mine in its different aspects to

ascertain the effect of closure so far as conservation of coal is concerned. Steps to secure the interest of conservation are taken before the mine is allowed to close down.

(xv) To require, through its technical officers a colliery management to take such protective measures, including stowing, in the mine as considered necessary, if the extraction or reduction of pillars is likely to cause crushing of pillars or premature collapse or otherwise endanger human life or the mine, or if adequate provision against outbreak of fire or flooding has not been made.

**(D) Advisory Committee:-** Under the Act the following Advisory Committees have been constituted to advise the Central Government or the Board in regard to any matter to any matter connected with the administration of the Act, in respect of which their advice is sought:-

- (1) Technical Advisory Committee (Mining) consisting of the Chief Mining Engineer, Coal Board, as Chairman; Additional Chief Inspector of Mines; Chief Mining Adviser, Railway Board; Deputy Director, Geological Survey of India; and two representatives of the Inspecting Officers of the Coal Board acts as the Secretary to the Committee.
- (2) Advisory Committee on Stowing comprising a member of the Board as Chairman; Chief Inspector of Mines; Director, Central Fuel Research Institute; and two representatives nominated by the Indian Mining Association and one representative each by the Indian Mining Federation and Indian Colliery Owners' Association.

### **Activities of the Board.**

Apart from the functions of supervision of, and control on, the different aspects of mining, namely, opening of a mine, its method of working, its depillaring operation, the Board plays a very important role in the adoption of safety and conservation measures in collieries by granting monetary assistance. It also, in

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some special cases, undertakes directly or through its agencies measures, called protective measures, for controlling fires, disastrous to the mines and their workmen. As state above, a fund called Coal Mines (Conservation and Safety) Fund, has been constituted under the Act, to which the proceeds of a cess at the rate of Rs. 1.68 per ton of coal and soft coke dispatched and Rs. 2.52 per ton on hard coke dispatched, is credited by the Central Government.

(A) *Voluntary Stowing*:- As explained above, assistance is paid for voluntarily carrying out stowing

operations for safety or conservation, the present rate being as follows:-

(a) For hydraulic stowing, 100 per cent of the total cost of stowing subject to a maximum of Rs. 2.50

per ton for crushed material; and

(b) For hand packing 100 per cent of the total cost subject to a maximum of Rs. 2.75 per ton of material.

The quantities of material stowed and the amounts of assistance paid under this heading are as follows:-

Year	Quantity of material.		Amounts of assistance	
	Tons	Rs.	A.	p.
1941-42	26,71,298	1,93,694	15	0
1942-43	27,09,167	2,77,079	14	0
1943-44	30,76,794	6,31,906	4	0
1944-45	38,04,629	6,56,657	3	0
1945-46	35,84,867	6,65,282	8	0
1946-47	36,22,191	18,06,478	13	0
1947-48	35,19,349	12,05,898	4	0
1948-49	36,62,044	15,63,217	8	0
1949-50	38,96,071	47,27,370	6	0
1950-51	41,21,244	40,22,158	11	0
1951-52	45,62,199	54,63,370	11	0
1952-53	49,21,695	60,77,013	0	0
1953-54	49,63,550	61,61,138	10	0
1954-55	51,23,628	45,54,117	12	0
1955-56	52,61,790	61,41,423	15	0
1956-57	52,17,144	71,87,348	8	0
1957-58	64,96,541	81,68,278.49		
1958-59	70,37,014	1,06,57,503.72		
1959-60	69,36,625	1,51,51,590.54		

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Thus it may be seen that with the encouragement given by the Board in the shape of monetary assistance the quantity of stowing has steadily increased and is now more than two and a half times what it was in 1941-42. The amount of assistance paid by the Board has also increased from Rs. 2,77,079-14-0 in 1942-43 to Rs. 1,51,51,590.54 in 1959-60.

**(B)Protective Works :-** To the south of the Jharia Railway Station and to the east of the Jharia Bazar, there is an area which is now commonly known as the Jharia Fire Area. To a new comer in this field this area, which is covered all over by a thick layer of sand, generally poses a question as to how the sand drifted and overlaid such a large area so near to the Jharia Bazar. The deposit of sand is not a geological phenomenon; it is the result of blanketing the area with sand in the course of many years to control the fire and to protect the Jharia Bazar and the other neighbouring mines.

This fire broke out in the year 1931, and within a few years developed into such a threatening proportion that serious danger to the Jharia – Pathardih Railway line, Jharia Bazar and to a number of neighbouring mines were apprehended. Before the constitution of the Coal Mines Stowing Board, the Railway authority took some steps to halt the progress of the fire towards the Jharia Station. It has since blanketed with sand (brought in wagons from the Damodar River) a large area measuring about 70 acres and has incurred an expenditure of roughly Rs. 15 lakhs. With all these measures the fire is now under control. Similar measures have also been taken in some other areas commonly known now as Jeenagora Area, Karijore Area and Bagdigi Area. In the Jharia and Suratand areas, if the above measures had not been taken by the Board, the devastation that would have been caused by these fires would have been colossal. The Jharia town as well as many neighbouring mines would have been wiped out.

In addition to these major steps taken for the control of these bin fires, the Board undertakes directly the control of, or grants monetary assistance for dealing with, many fires that break out every year. As the years pass by, the number of fires, particularly in the old goaves and in the quarry debris where slack coal had recklessly been thrown during the years of depression in the market and also during the Second War, increases. Therefore the effective control of these fires has become one of the important recurring activities of the Board.

To prevent or, in some cases, to minimize the danger of inundation the Board also executes protective measures either directly or through the agency of the collieries.

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For the execution of the aforesaid protective measures the Board has annually incurred expenditures as given below:-

				Rs.	A.	p.
1941-42	..	..	..	2,87,271	3	0
1942-43	..	..	..	1,82,500	4	0
1943-44	..	..	..	2,00,559	3	0
1944-45	..	..	..	2,38,899	7	3
1945-46	..	..	..	6,98,639	8	6
1946-47	..	..	..	4,62,054	9	9
1947-48	..	..	..	5,51,671	14	9
1948-49	..	..	..	7,53,890	14	0
1949-50	..	..	..	6,75,787	4	6
1950-51	..	..	..	5,92,707	7	6
1951-52	..	..	..	6,46,536	5	0
1952-53	..	..	..	6,94,214	8	0
1953-54	..	..	..	3,59,848	2	0
1954-55	..	..	..	3,39,300	11	0
1955-56	..	..	..	1,47,392	12	6
1956-57	..	..	..	3,48,705	8	0
1957-58	..	..	..	4,63,287.69		
1958-59	..	..	..	5,59,202.12		
1959-60	..	..	..	4,52,532.69		

**(C) Restriction of the Output of Coking Coal:-** Coking coal is a type of coal which on high on high temperature carbonization, yields metallurgical coke of a quality required for the reduction of iron ore to pig iron in a blast furnace. Our country has limited reserves of good quality coking coal. In the past, little attention was paid to the conservation of this irreplaceable national asset, without which the manufacture of iron and steel, so very necessary for the progress of a country, will come to a standstill. Uncontrolled methods of selective mining, practiced in the past, have seriously depleted the reserves of good quality coking coal which has till recently been consumed by any consumer demanding it, irrespective of the purpose for his demanding it, irrespective of the purpose for his demand, even when it has been felt for long that the use of this type of coal should be limited only to the manufacture of hard coke for the blast furnace. From 1948 the production of coking coal showed a marked tendency to increase resulting in its increased use for non-essential purposes. In some of the case the output of this type of coal was enhanced by a method mining not conducive to conservation. It was, therefore, considered essential to arrest the tendency towards increase in the production of coking coal and to the extent, to save its wastage. With that end in view the decision of the Coal Board to peg or freeze the

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production of Selected 'A' and 'B' grades of coking coal at a fixed level come into force from 1952. In 1953, the production of Grade I and Grade II coking coals was also controlled. As a result of these measures the production of coking coal had instead of increasing, registered a slight fall as may be seen from the following:-

<b>Year.</b>	<b>Selected A and B Grades.</b>	<b>Grade I</b>	<b>Grade II</b>
	<b>(Million Tons).</b>	<b>(Million Tons).</b>	<b>(Million Tons).</b>

<b>1949</b>	<b>7.24</b>	<b>2.88</b>	<b>2.59</b>
<b>1950</b>	<b>7.39</b>	<b>2.35</b>	<b>2.80</b>
<b>1951</b>	<b>7.89</b>	<b>2.80</b>	<b>2.99</b>
<b>1952</b>	<b>7.75</b>	<b>3.69</b>	<b>3.06</b>
<b>1953</b>	<b>7.17</b>	<b>3.67</b>	<b>2.89</b>
<b>1954</b>	<b>7.21</b>	<b>3.66</b>	<b>2.74</b>
<b>1955</b>	<b>6.99</b>	<b>3.70</b>	<b>2.66</b>

Thus, the above measures have to a certain extent succeeded in conserving coking coal by limiting wastage while mining and by reduction of its use for purposes other than for the manufacture of hard coke. It should be mentioned, however, that as the new iron and steel units planned by the Government of India go into commission, the production of coking coal will need to be increased.

**(D)Control on the Opening and Re-opening of Coal mines:-**This measure to regulate the opening or re-opening of mines has been considered necessary so as to control production of coals of different qualities and in different coal-bearing areas in accordance with the needs of the country and to conform to the transport available. Until the new steel plants had been installed any increase in production of coking coal was considered not only undesirable but definitely against the national interest. Moreover, to rationalize the transport encouragement for opening, new mines in various regions, as near to the consumers as possible, is also necessary. This control also enables the Coal Board to examine the proposed lay-outs with a view to the introduction of scientific mining, particularly from the conservation aspect. For all these reasons the opening and reopening of a coal mine is strictly controlled by the Board, and permission is given only after consideration in detail of the merits of each case.

**(E)Study of Working Conditions of Coal Mines :-** On reference from the Coal Board the Technical Advisory Committee (Mining), constituted under the Coal Mines (Conservation and Safety) Act. Inspects collieries and reports on their condition, the methods of working and the necessity of measures, including stowing, from the point of view of safety and conservation, To start with, such

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reference were made to the Committee in connection with the mines producing Selected 'A' and 'B' Grades of coking coal. Of the collieries inspected and reported upon by it, the Technical Advisory Committee (Mining) have recommended in some 20 cases introduction of stowing for ensuring safety and minimizing loss of coal during extraction and the Board has accepted their recommendations in all these cases. In pursuance of these recommendations, Orders under section 7 (2) (b) of the Coal Mines (Conservation and Safety) Act, 1952 have been issued by the Board on these collieries to make early arrangements for adoption of stowing which is considered as one of the most positive methods of effecting conservation of coal.

**(F)Control of Depillaring Operations:-** Under the Coal Mines Conservation and Safety Rules mine managements are required to give notice of their intention of commencing depillaring operations in a seam. Each such notice is examined thoroughly from the technical angle by the Board's technical officers and on their reports the Board decided whether to give or withhold permission for depillaring. In a number of cases permission has been accorded on certain conditions considered necessary in the interest of safety and conservation. This control is aimed at reducing loss of coal during its extraction and eliminating the adoption of cheap wasteful methods of mining for the immediate benefit to the owner.

**(G)Coal Washing:-** Coal washing is another method by which the reserves of good quality coking coal for the use by the iron and steel industry can be augmented. While washing of coal is practically in general application in the western countries, it is still in its infancy in our country. So far 7 (seven) washeries have been set up-two by M/s. Tata Iron & Steel Company, Limited at Jamadoba and West Bokaro, one by the National Coal Development Corporation, Limited at Kargali, one by the Associated Cement Companies, Limited at Nowrozabad and two by the Hindustan Steel, Limited at Dugdha and Durgapur. Till some years back, there was a general impression that Indian coals were not generally, washable. But the washability tests carried out in the recent years have proved that coals of quite a good number of seams are washable, though the economics might not be very favourable because of lower percentage of yield. In March, 1953, the Coal Board appointed a Committee to study and report on certain aspects of coal washing in India. A comprehensive report on certain aspects of coal washing in India. A comprehensive report was submitted by the Committee with a wealth of details in the report in submitted by the Committee with a wealth of details in the report in October, 1954, since when coal washing has become a very "live" issue. It has been now recognized that to serve the expanding iron and steel industry it is imperatively necessary to improve by washing the quality of lower grades of coking coal and thus to augment the country's reserve of good coking coal. The Ministry of Heavy Industries and Steel is now engaged on the consideration of the question of installation of washery plants of

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necessary capacities so as to wash sufficient quantity of coal to feed all the projected steel plants in the Third and the Fourth Five-Year plans.

**(H) Subsidy to Collieries Handicapped by Various Adverse Factors:-** The Board also grants subsidy to collieries specially handicapped by various adverse mining factors. Such subsidy is admissible to collieries handicapped by one or more of the following factors:-

- (a) Gassy nature of coal mines.
- (b) Depth of shafts.
- (c) Inclination of seams.
- (d) Pumping cost.
- (e) Thinness of seams.
- (f) High transportation cost from pit-head to rail head.

**In regard to the various adverse factors the present rates of assistance are as follows:-**

**Rate of assistance per ton of coal.**

	<b>Coking and blendable coal used for metallurgical purposes.</b>	<b>Non-Coking Coal.</b>
	<b>Rs.</b>	<b>Rs.</b>
<b>(a) Gassy nature of coal mines (subject to additional expenditure being incurred by collieries under this head).</b>	<b>0.80</b>	<b>0.60</b>
<b>(b) Depth of shafts:- No assistance is admissible in the case of vertical which are more than 500 feet in depth, assistance is admissible for each 100 of depth or part thereof over the first 500 feet.</b>	<b>0.06</b>	<b>0.04</b>
<b>(c) Inclination of seams:- While no assistance is granted where the true gradient is less than 1 in 3, for seams with 1 in 3 or steeper true gradients, assistance is admissible.</b>	<b>0.24</b>	<b>0.18</b>

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	<b>Coking and blendable coal used for metallurgical purposes. Rs.</b>	<b>Non-Coking Coal. Rs.</b>
<b>(d) Pumping cost:- No assistance is granted in cases in which the cost of pumping is less than Re. 1 per ton of coal raised.</b>		
<b>(i) Where the cost of pumping exceeds Re. 1 per ton but does not exceed Rs.2 per ton does not of coal raised assistance is admissible.</b>	<b>0.12</b>	<b>0.10</b>
<b>(ii) Where the pumping cost exceeds Rs. 2 per ton of coal raised assistance is admissible.</b>	<b>0.25</b>	<b>0.20</b>
<b>(e) Thinness of seams :- No assistance is admissible where a seam is thicker than 5 feet.</b>		
<b>(i) In case of seams of thickness exceeding 3'-6" but less than 5 feet assistance is admissible.</b>	<b>0.60</b>	<b>0.50</b>
<b>(ii) In case of seams of thickness equal to or less than 3'-6" assistance is admissible.</b>	<b>1.20</b>	<b>1.00</b>
<b>(f) High transportation cost from pit-head to rail-head-Assistance is admissible only in cases where coal is dispatched by rail and the distance between pit-head and the nearest available loading point is 3 miles or more. In such cases assistance is granted at a rate not exceeding 10 nP. Perton per mile or part there of in respect of the distance in excess of the first 3 miles.</b>		

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This scheme of subsidy does not however, apply to collieries in Assam and Andhra Pradesh.

**(1) Mining Research Station** – It was appreciated by the Board that to take proper measures to ensure greater safety in mines, better mining methods, etc., a Mining Research station should be established. An expert committee was, therefore set up to draw up the necessary proposals, but when these proposals were submitted to the government of Indian it was decided that the mining Research station should be set up under the aegis of the council of Scientific and Industrial Research in collaboration of the coal Board, and that the Board would make a Substantial financial contribution to the Mining Research station and would have a measure of control through its nominees on the Governing Body of the Institution.

The Board had, however, its own research department to carry out research mainly on problems connected with stowing. A good number of valuable results were obtained through the research carried out by the Department and some of these results were made public for the benefit of. The industry some years back. Since 1959, the Research station, Dhanbad.

## GENERAL.

In the above paragraphs some of the important activities of the Board have been briefly set out. The objects of the enactment of the coal Mines (Conservation and Safety) Act and of the constitution of the Coal Board, namely, to ensure conservation of coal and safety in mines, are so wide as to include all the aspect of mining from its inception when a pit is sunk to its closure when the pits are sealed off.

## DEVELOPMENT OF SAFETY LEGISLATION IN INDIAN MINES.

Although the mining industry in India is over hundred years old the first concrete proposal for the inspection and regulation of mining operation in India came in 1890 from the Secretary of State, Lord Cross who while forwarding a copy of the proceeding of the Berlin Conference in 1890, asked the Government of India to consider the advisability of undertaking legislation for the inspection of mines and regulation of employment therein of women and children. As a first step ; the Government of India appointed in 1894an Inspector of mines (Mr. James Grundy) within the organization of the Geological Survey of India, to inspect the mines and to make recommendations on the type of regulations needed. In his first report to Dr. King the then need for passing of a short set of Mines Regulation Act which amongst other things would proved for the establishment of special rules having the legal standing as the Act itself . Briefly the Act was to proved for notices of opening etc.

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of mines and accidents minimum age for boys and girls employed underground, ambulances management and supervision and safety matters. Special rules for coal and other minerals were to be provided for additional safety matters including report of inspection of all parts of mines and machinery.

Following up the first report of the Inspector of mines (Mr. James Grundy), the Government of India appointed in 1895 a committee to frame general rules applicable to mines or groups of mines, and to specify the heads on which legislation was desirable and the provisions which were to be made under each of the heads. The committee submitted its report early in 1896.

In 1897, a disaster of large magnitude occurred in the Kolar Goldfields (in Mysore State) in which 52 persons were killed in a shaft accident. This was followed in 1899 by a mine fire in Khost Coal mine in Baluchistan (now in Pakistan) in which 47 persons were killed. The finalization of mining legislation was, therefore, expedited; and Mines Act was enacted in 1901 and brought into force the same year. The Mines Act which came into force on 22<sup>nd</sup> March 1901 covered all mineral excavation over 20 ft. in depth.

The main features of the first Mines Act were as follows:-

- (i) Inspectors were empowered to enter and inspect mines, and to enquire into accidents etc.
- (ii) The employment of competent managers in mines was required; managers' Competency Certificates were instituted.
- (iii) The Government was empowered to frame rules, etc. for regulating work in mines.
- (iv) Penalties were prescribed for the contravention of various provisions.

The Bureau of mines Inspectorate entrusted with the enforcement of the mines Safety Legislation was started on January 7, 1902 in Calcutta with one Chief Inspector and two Inspectors. The headquarters of the Department of mines was shifted to Coalfields (Dhanbad) in 1908.

Rules framed under the mines Act, 1901 required inter alia the provision of two outlets, maintenance of plans proper lighting and ventilation, etc, and laid down precautions to be taken against noxious gases and smokes, against falls of roof and sides, inflammable gas, inundation and use of explosives etc.

Until 1918 there were no major changes in the Rules, except those framed by Provincial Governments under section 20 of the Indian mines Act, 1901 relating to registration of workers and safety on surface. Two years later a scheme was formulated for an examination and certification of subordinate official (sirdars, etc)

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employed in the mines and this was put into effect in 1926 before the passing of Indian Mines Act, 1923 several amendments were made to rules relating to returns and notices the inspection of electrical installations to mines came within the purview of the Department of Mines in 1922 and an Inspector was appointed. In the same year the Government of India appointed a Committee to investigate the Coal Dust Problems in mines and the first report was published in 1932.

The Mines Act was re-enacted in 1923 with new provisions relating to hours and limitation of employment on the surface and underground. This Act which came into force from 1<sup>st</sup> July, 1924 also raised the minimum age of employment from 12 to 13 years.

New codes of regulations for coal and metalliferous mines were framed in 1926 to replace the old General Rules. New important provisions related to the submission of abandoned mine plans', the maintenance of adequate barriers (50 ft.) between adjacent mines and provision of detaching hooks to prevent over-winding in shafts. Separate Rules were framed in 1924 by the Governments of Bengal, Bihar and Orissa to with matters concerning health and sanitation in mines.

In 1927 competency examination for mine surveyors was introduced and the employment of qualified surveyor for preparation of mines plans was made compulsory two years later.

In 1928 the mines Act was amended the amendments relating mainly to the limitation of working hours. In the same year, the Governments of Bengal, Bihar and Orissa approved the model code of bye-laws for coal mines governing inter thr conduct of various categories of mine employees.

The mining Metallurgical and Geological Institute of India appointed Committees on two separate occasions to investigate mine subsidence and they in their report submitted in the year 1929 drew attention to the relation between the mining methods and the safety of works and the workers.

In 1933 certain provision of the regulations were amended. The important new provisions related to (i) the procedure to be observed in the case of intensional of a mine, (ii) the procedure to be followed in the event a premature collapse of the working, and (iii) appointment of shottfirers in gassy mines having Sirdar's Certificate endorsed for gas testing.

In 1934 the minimum requirements for footpaths in open working were specified.

A Royal Commission on Labour in India was appointed in 1929. the Commission in its report made a number of recommendation which were incorporated in the Act which was amended in

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1935. the amended Act came into force on 1<sup>st</sup> October , 1935. The age of “child ” was raised to 15 years. Provisions were also made in the amended Act for the medical examination of young persons below 17 years of age employed below ground. Also the weekly hours of work for both surface and underground were equalised to 54 and the maximum spread over on any one day for the two categories was fixed.

In 1936 , a coal mining Committee was appointed the Central Government with terms of reference ranging on subjects covering both safety and conservation of coal. In the following year amendments were made in the Act for ensuring the safety of working and the establishment of rescue station. The rescue stations were financed by a levy on coal dispatches. Coal Mines Rescue Rules were enforced in 1939.

In 1935- 36 there were a series of explosions and fires in coal mines resulting in heavy loss of life. The Regulations were therefore, further amended in 1936 to 1938 to provide against dangers of inundation , premature collapse, fires, inflammable gas, coal dust, blown- out shots, etc.

In 1939 the Regulations were further amended for stability of the workings the size of pillars and galleries were specified and certain restrictions were imposed for working two or more seams in close proximity and for extraction of pillars. New provision was made empowering the Inspectors to order protective works to be made to ensure stabilization of the working within a specified time, and in case of non-compliance to prohibit the extraction of coal in the part of mine in which protective works were required to be done.

In 1929 a notification was issued by the Government requiring progressive elimination of employment of women working under ground in course of next 10 years. The employment of women below ground was completely prohibited in 1937. this ban was temporarily lifted in 1943, but was reimposed from the 1<sup>st</sup> February, 1946.

In 1939 an Act known as Coal mines Safety (Stowing) Act came into force and a stowing fund was created under the Act to assist schemes of stowing fund was created under the Act to assist schemes of stowing to prevent and control fires collapses and surface subsidence and thus further the cause of safety ( and conservation) in mines. A Board set up under the Act into existence on 1<sup>st</sup> November, 1939.

In 1941 the Regulations were again amended. The main amendments related to the working of contiguous seams, maintenance of joint survey plans , determination of atmospheric conditions behind sealed – of fire areas and electric shotfiring in mines.

During the years between 1941 and 1950 welfare laws for the workers were enacted namely, Maternity Benefit Act and Rules, Creche Rules and Pit-head Bath Rules.

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Although the 1923 Act had been amended from time to time in certain respects as mentioned earlier, the general framework had remained unchanged until 1952 it was now considered necessary to include a large number of new provisions. Dealing mainly with provisions of ambulance and other medical facilities drinking water, payment of overtime wages, grant of leave with wages, etc. The Act like all previous ones defines in some detail the functions and responsibilities of the Chief Inspector of mines and other officers of the mines Department.

A new set of mines Rules was promulgated in 1955. New provisions include those relating to employment of Welfare Officers and provision of rest shelters, canteens and sanitary conveniences.

A new code of working and advances made in other countries and was enforced in 1957. These Regulations were framed keeping in view also the new developments in mining methods all over the world as well as the latest mining safety legislation of foreign countries. New provisions of the Regulations relate to machinery and plant and qualifications of persons employed in connection therewith; provisions of suitable survey instruments and preservation of field books etc. life of winding ropes precautions during depillaring operations, standard of fencing, etc.

Similarly a new set of Metalliferous Mines Regulations, 1926 which were framed over 31 years ago at a time when the metalliferous mine industry in India was still in its infancy. The 1926 Regulations contained only a few provisions and those also of a very general and often vague nature and had proved to be totally inadequate to meet the requirements of the fast developing mineral industry. The new Regulations contain very comprehensive technical provisions regarding safety in mines in all aspects including employment of competent staff, maintenance of accurate plans and sections, means of access and egress, transports of men and material safety in actual mining operations, precautions against fire dust gas and water, ventilation and lighting, safe use of explosives and machinery.

Since the coming into force of mines Act, 1952 certain anomalies had come to light as also difficulties in the enforcement of certain provisions such as those relating to leave with wages. Certain other amendments of the Act were also considered necessary for the proper enforcement of safety legislation in mines. Accordingly the Mines Act was amended in the year 1959 to make it more effective and up-to-date.

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Coal Mines Rescue Rules 1939 were amended in 1959 in order, *inter alia*, to provide for the opening of more number of rescues stations in the various coalfields and for the training of greater number of rescue workers. The rescues organization for the mines renders very useful assistance to mines in the rescues of human life in emergencies like explosions, fires and inundation, and in the recovery and re-opening of sealed off areas in mines.

The safety legislation now in force in this country has been framed from the vast amount of experience of working mines in India for over 60 years, and keeping in view the latest mining legislation of foreign countries. All the interested parties, viz., mine owners, workers, managers, supervisory staff and others were consulted and their views given full consideration before the legislation was brought into force.

Adequate safety legislation is the foundation on which the structure of mines safety is built. in order to keep pace with the changing conditions and new safe practices which come to light as a rules of research and experience both in this country as well as in foreign countries the Chief Inspector of Mines time to time issues circulars to the mine managements with a view to bringing such practices to their notice for adoption, as far as practicable. When sufficient experience has been gained in complying with these recommendations and it is considered that such a provision is applicable to most of the mines action is initiated to incorporate it in the regulations in due course.

