

CHAPTER V

INDUSTRIES

60. Old Time Industries

Majority of the population in this district live on agriculture and no big industries have so far developed here. Old village industries such as carpentry, handloom, pottery, bamboo-basket and mat-making, oil-pressing, smithy, preparation of coarse sugar, molasses, axe, plough and other agricultural implements which are still continuing are intended to meet the simple needs of the villagers. Oukhama and Bhuban were famous for brass and bell-metal utensils and weavers of Simlai produced various types of cotton clothes while Barihapur, Bhuban, and Indipur were well known for *tassar* weaving. The gold and silver smiths of Dhenkanal made attractive ornaments of gold and silver which were very popular among the women. The ivory ornaments made with artistic designs were once popular throughout Orissa. The blacksmiths of Dhenkanal produced various types of weapons, such as Tangis (axe), knives, spears, artistic sword-sticks, and even country guns known as 'Oriya Nali'.

There are a few families of iron-smelters living in the village Gati-krishnapur in Athmallik subdivision whose fore-fathers used to smelt iron-ore by crude processes and manufacture various articles of common use. This industry declined as it could not compete with the modern large-scale iron smelting industries. But still this cottage industry is continuing as iron-ore is easily available in the locality and charcoal is obtainable in plenty. The people belonging to Kamar caste have adopted this industry as their source of livelihood. Some people of Kenjam and Khemela in Pal Lahara are also similarly extracting iron from local ore and producing iron materials.

Weaving had been a flourishing occupation in the ex-States constituting the district. The handloom industry underwent a downward trend for some decades in the past. Conditions became worse, particularly in 1942, when the supply of yarn was restricted because of the war. The Yarn Control Order was, however, soon promulgated which gave considerable relief to the weavers. Organisation like the Weavers Co-operative Societies and the Handloom Textile Marketing Organisation, contributed to the prosperity of the industry by equitable distribution of yarn and quick disposal of finished products, as a result of which it is fast becoming an important cottage industry in this district.

61. Power

Electricity was being supplied to this district from the Hirakud hydroelectric power-house. A 250 megawatt thermal power-station was established in Chainpal near Talcher during 1968. This power-station is hooked up to Hirakud power system at Chainpal by 132 kilovolt tie line.

The thermal station was built at a cost of Rs. 29.67 crores and the site was selected on the basis of its proximity to Talcher coal field where non-metallurgical coal is available in plenty. Coal is carried to the plant site by means of a cross-country conveyor 9 km. long from South Balanda colliery. This power-plant has four steam turbogenerator sets each with a capacity of 62.5 megawatt designed on unit system. Each unit while operating at full load consumes 41 tonnes of coal per hour. The project has provided employment to nearly 500 engineers and 4,000 workers of various skills.

Electrification

All the towns (Dhenkanal, Talcher, Angul and Bhuban) and 125 villages of the district have been electrified. The biggest consumers of electricity are the coal fields, some small-scale industries like saw mills, rice mill and hullers. Sale of electricity to various consumers in different periods is given below.*

Period	Domestic consumption (in kilowatt hour or units)	Commercial consumption	Industrial consumption	Public and street light consumption	Total
1	2	3	4	5	6
1960 ..	301,903	22,377	163,950	33,748	536,467
1962 ..	443,588	85,100	2,912,626	63,242	3,504,556
1964 ..	402,776	539,674	6,768,852	172,774	7,884,076
1966 ..	464,493	1,019,631	8,209,706	206,550	9,900,380
1968 ..	795,000	1,972,100	12,616,000	186,800	14,569,900

* Source—District Statistical Handbook, Dhenkanal (1968).

62. Mining

(i) Talcher Coal Field—National Coal Development Corporation

The Talcher coal field occupying the Brahmani valley covers an area of 700 square miles and is named after the town of Talcher. This coal field was first discovered by Lt. Kittoe in 1837.

The earliest geological mapping of this coal field appears to have been conducted in 1855, but more concentrated prospecting for the purpose of opening mines was taken up by M/s. East India Prospecting Syndicate in 1920. An area of approximately 12 square miles in the shape of a limp rectangle was marked as "Talcher Coal Field". These 12 square miles were later taken on lease by M/s. Talcher Coal Field Ltd., Madras, and Southern Marhatta Railway Co. and M/s. B. N. Railway Co.

Three mines were opened by the above Companies in 1930 and since then there has been no further prospecting or mining activities in this Coal field till recent years.

In 1950, following the recommendations of the Railway Collieries Enquiry Committee, proposals were drawn up by the State Collieries for prospecting and mining if possible, a thick coal seam of comparatively inferior quality occurring in the left over strips of the Coal field. This area was known as Balanda area, named after a nearby village.

In 1957 the Indian Bureau of Mines, at the instance of National Coal Development Corporation Ltd., undertook prospecting of these limited areas on regional basis. The prospecting continued till early 1958, but the prospects did not appear bright as the quality of coal was found consistently poor and attempts to locate even workable section in the seam did not meet with success. At this stage, Talcher Coal field was virtually written off from the development plans and it was felt that it would continue to thrive only on the three old mines till better days would come.

A wider view of the Talcher Coal field in general was taken for the first time in the middle of 1958 and the 12 square miles boundary of the Coal field was then ignored. Field observations and interpolated data suggested that the good quality coal worked in these three existing collieries through pits should normally be extended much beyond the rectangular limits of the so called 'Coal field'. Prospecting and drilling operations were, therefore, shifted to the southern limb of the basin and large quarriable reserves of selected grade coal were proved within a short time by the N. C. D. C. Basing on these reserves, the 4th coal mine of the field, named South Balanda Colliery has been opened by N. C. D. C. in October 1960.

It is likely that the outcrop of this seam would continue further westward and if the basin shape is complete to the north, the outcrop would also be available there. The seam now being worked is the basal seam and the younger formations are yet to be explored.

Apart from the extensive deposits of coal in the basin, there is also a substantial deposit of fireclay of commercial quality. But no proper prospecting for this fireclay has yet been carried out so far.

The Talcher seam represents the best quality coal so far proved. Four coal mines are operating in this coal seam, out of which 3 belong to the N. C. D. C. and the fourth one (Handidhua) to a private enterprise. The combined reserve of the 3 coal mines owned by N. C. D. C. Ltd. exceed 100 million tonnes and the new deposits so far proved in this coal seam constitute another 50 million tonnes.

The Gopalprasad or Balanda seam which is of inferior quality has been named as 'Jagannath Colliery'. The reserves attached to this mine is about 30 million tonnes ; but the total reserves so far proved in this seam will exceed 100 million tonnes. It is likely that if drilling and prospecting is continued total reserves of inferior coal will exceed several thousand million tonnes. This coal is suitable for use in stationary boilers specially designed for adoption in modern thermal stations. It is proposed that the Talcher Thermal Station would consume the coal obtained from Jagannath Colliery. The principal consumers of the superior quality coal are the Railways, Textile Mills, Paper Mills, Power Stations, Cement works and miscellaneous consumers like Military Firms etc., in Orissa and Southern India.

(ii) Method in Mining

Out of the 4 mines, 2 are underground mines carrying out mining operations through pits and the rest 2 are open cast mines, heavily mechanised with the latest open cast mining machinery. These machines include 15 cubic yard walking drag lines and 34 tonner carriers for overburden, and coal removed from the open cast mines when the mines operate fully is over 7 million cubic yards per year. The underground mines are also mechanised and have electric locomotive transportation, coal cutters, mechanical loaders and conveyors, etc. The N. C. D. C. also contemplates further mechanisation in the near future.

The capital investment by N. C. D. C. Ltd., in the existing 3 mines when in full operation would be Rs. 7.5 crores.

(iii) Handidhua Colliery

A private colliery at Talcher known as Handidhua Colliery started coal mining in 1921 with a capital investment of about Rs. 20 lakhs. The coal reserve of this mine is expected to be 43.5 million tonnes. After an underground fire accident Government took over the colliery in 1963. Later it was leased out to a private firm. While in operation, the colliery employed 360 persons and the average yearly output was 77,000 tonnes.

(iv) Raising of Coal

Raising and despatch of coal in the district from 1964 to 1968 is given below :

Year		Raising (in tonnes)	Despatch (in tonnes)
1964	..	673,898·200	650,946·208
1965	..	744,771·000	690,974·553
1966	..	688,603·464	646,692·058
1967	..	672,133·000	601,983·495
1968	..	811,195·000	815,551·572

Source—District Statistical Hand Book, Dhenkanal, 1968

(v) Other Mines

A kyanite mine at Magarmuhan, a chromite mine at Maulabhanja and a mica mine at Kulad are in operation in the district. The Maulabhanja chromite mine feeds the Ferro-chrome Plant at Jajpur Road.

Besides, mining leases have been given for mica at Shyamsundarpur and Kangula, chromite at Kathpal, chinaclay at Kaluriapatna, and graphite at Athmallik. The Orissa Mining Corporation Ltd. will operate the Kathpal chromite mine.

63. Large-Scale Industries**Talcher Fertiliser Project**

A fertiliser plant based on Talcher coal is being established under the management of the Fertiliser Corporation of India Ltd. About 10 km. away from Talcher, the factory site is located near the South Balanda Colliery of National Coal Development Corporation. The total land required for the factory site as well as township is about 800 acres.

The plant will produce annually 495,000 tonnes (equivalent to 1,500 tonnes per day) of fertiliser grade urea, which is equivalent to 228,000 tonnes of nitrogen.

Coal, the principal raw material, will be made available from the South Balanda Collieries. The plant will require about one million tonnes of coal for processing and steam generation. The process is based on gasification of coal for production of ammonia. Crushed coal is fed to coal gasifiers along with oxygen. The gases coming out of the gasifier are cooled, purified and further processed to obtain the

required mixture of nitrogen and hydrogen gas for ammonia product. Urea is then manufactured by reacting ammonia with carbon dioxide. Electricity will be supplied from the Talcher Thermal Power Station and water will be available from the river Brahmani.

Preliminary work has started and the project is expected to be completed by the middle of 1974. The estimated cost of the project is about Rs. 94 crores. It will provide employment for about 1,000 persons. In addition, the project will create opportunities for setting up of ancillary industries which will create additional employment opportunities.

64. Small-scale Industries

The types of small scale industries that are found in the district are rice mill and rice huller units, saw mills, flour mills, oil pressing units, tile making units, a sugarcane processing unit, a polythene industry, a tarpaulin manufacturing unit, *gudakhu* (chewing tobacco) factories, manufacturing units of gold and silver jewellery, silverware and brass and bell-metal utensils.

Descriptive accounts of important industries are given below :

(i) Rice and Flour Mills

The only rice mill of the district is located at Dhenkanal. It was established in 1959 with a capital investment of about Rs. 1,20,000. The factory now provides employment for forty persons. Besides, a number of rice hullers have been installed in recent years in many villages and towns. During 1970, there were 130 rice huller units in the district. Generally in electrified areas they are operated by electricity and in the rest they are run by diesel engines. A number of hullers have additional equipments for grinding wheat, although their principal business is husking of paddy.

(ii) Confectionery and Bakery

There are two lozenge manufacturing units at Angul, a lozenge and biscuit factory at Meramandali, and a bakery unit at Talcher. The products are generally marketed within the district. The factories at Angul have invested Rs. 35,000 each. The biscuit factory at Meramandali has invested a capital of Rs. 65,000.

(iii) Saw Mills

There are eight saw mills operating in the district. They are located at Dhenkanal, Angul, Talcher, Kamakhyanagar, Balijhati and Mathkargola. The last named one is managed by a co-operative society and has been established as a Panchayat Samiti Industry. All these units operate by electricity except the saw mill at Balijhati, which is run by

diesel engine. The mill has an investment of about Rs. 50,000 and the products are mainly sized wood. These mills provide employment to about 100 persons.

(iv) **Tile factory**

In recent years, a number of tile making units have been established in the district. They manufacture Mangalore tiles, Raniganj tiles, Cement tiles and ridges. Three such factories are managed by co-operative societies. The Dhenkanal Mangalore Pattern Co-operative Society Tile Factory was started as a Panchayat Samiti Industry unit. It employs 20 persons and its installed capacity is 5 lakhs of tiles per year. It is run by electricity.

(v) **Sugar factory**

The sugar factory at Sankarpur is a Panchayat Samiti Industry unit running by a co-operative society. It was established in 1965. Its annual crushing capacity is 8 tonnes of sugarcane. The society has invested nearly Rs. 70,000 and provides employment to 24 persons.

(vi) **Polythene factory**

M/s. Polytech International has started its factory at the Industrial Estate, Dhenkanal in 1966. The company have invested a capital of Rs. 1,70,000 including plant and machinery. Its annual installed capacity is 48 tonnes of polythene sheets, bags, nets and ropes. The products find good market in and outside the State. The total output amounted to Rs. 1,75,000 in 1970.

(vii) **Tarpaulin factory**

A tarpaulin manufacturing unit has been established by M/s. Onlin Industries at the Industrial Estate, Dhenkanal, at a cost of Rs. 1,00,000. During 1968-69, goods worth Rs. 42,500 were sold by the unit.

(viii) **Bidi industry**

There are 7 Bidi* factories in the district besides a number of small Bidi rolling establishments. These are mainly concentrated at Angul, Talcher, and Dhenkanal. Kendu leaves which are available in the local forests in plenty are purchased from the local traders and tobacco is brought from markets outside the district. The products find a good market throughout the State. A Bidi factory employs 15 persons in an average.

(ix) **Other small-scale Industries**

During 1967-68, there were 5 lime industries and 3 Gudakhu (chewing tobacco) factories in the district. Their products are consumed in the local markets. There was also a small plant manufacturing ice-cream for local consumption.

*Bidi is made by wrapping dry raw tobacco in Kendu leaf. It takes the shape of a cone, the thick end being about half the size of a cigarette.

65. Cottage Industries

Cottage industries play an important role in the rural economy of the district. A large number of persons engaged in agriculture have adopted many household industries as part-time occupation. Moreover, some trades like, cotton weaving, manufacture of brass and bell-metal utensils, smithy, etc., are hereditary occupation of a certain caste or tribe. In recent years steps have been taken by the State Government to improve various types of cottage industries. Many Co-operative Societies have been organised for such industries and they get financial and technical help from Government.

Handloom weaving is the most important cottage industry of the district. Among other cottage industries, mention may be made of oil pressing, carpentry, filigree, hand pounding, bee-keeping, shoe-making, iron implements, brass and bell-metal and soap making, etc.

Some of these industries are discussed below.

(i) Weaving

Generally, cotton weaving is carried on as a family profession by people belonging to Pana or Tanti castes. These people are mostly agriculturists and weaving is their part-time occupation. They usually use the antique type looms and the products though durable are coarse in quality. They manufacture bed sheet, Saree, screen, Gamuchha, Dhoti, etc., of artistic colours and designs. In recent years, a number of Co-operative Societies have been formed to encourage the weavers of the district who had to strive hard to compete with the cheap mill-made cloth. Gradually modern looms are being introduced and financial and technical assistance are given to the weavers through these societies and better marketing facilities are being created for their products by the Co-operative Department.

During 1969-70, there were 31 Weavers' Co-operative Societies in the district consisting of about 25,000 members. The total working capital was nearly Rs. 2,30,000.

(ii) Oil pressing

There were 21 Oil Pressing Co-operative Societies having 500 members during 1969-70. These societies get financial assistance from the Government. More than two lakhs of rupees have been invested in this trade. They produce both edible and non-edible oil and the products are consumed locally.

(iii) Soap factory

A small soap factory had been started at Dhenkanal town in 1956 with the aid of the Co-operative Department. Raw material is available in the locality and the chemicals and other ingredients are brought from outside the State. Both washing and toilet-soaps of cheap quality are produced.

(iv) Bell-metal industry

Bhuban is famous for manufacture of brass and bell-metal utensils known throughout Orissa for the beautiful craftsmanship and fine finish. This industry dates back to pretty old time and quite a large number of persons are engaged in this trade.

On 1st August 1953, a Co-operative Society was started at Bhuban to give the artisans better financial stability and help. Another co-operative society was organised at Indupur in 1962. During 1965 a new co-operative society was started at Bhuban. Thus at present there are 3 co-operative societies in the district having 250 members. During 1967 the Bhuban and Nua-Bhuban societies alone produced goods worth one lakh of rupees.

(v) Iron implements

Jemadeipur Cottage Industries Co-operative Society was started at Angul in 1948. It prepares agricultural and household implements, such as spades, sickles, crowbars, pans, bolts and nuts, etc. The products find a ready market in the locality. The society has invested Rs. 35,000. This industry provides employment to nearly 50 workers.

Angul Smithy Production Co-operative Society, working in the same line, is producing agricultural and household implements. It is a Panchayat Samiti Industry and have invested a capital of nearly Rs. 70,000. It employs 25 persons.

(vi) Other cottage industries

Besides the above, a number of various other cottage industries are operating to a limited scale. They are discussed below.

Wooden furniture are prepared by local carpenters from timber available in the district. There are some establishments which have invested up to Rs. 16,000 in this trade. The carpenters of Chandpur village manufacture musical instruments and attractive wooden toys which find a ready market in the locality.

There were 9 Hand Pounding Co-operative Societies in 1967. Paddy hulling with the help of Dhenkis is carried on at home and provides employment to a number of persons, mostly females. During the same year, there were 12 Bee-keeping Co-operative Societies, 3 Leather Industrial Co-operative Societies, 6 Tal Gur (Palm-Sugar) Industrial Co-operative Societies, and a Gur and Khandasari Co-operative Society.

(vii) Minor industries

Among minor industries, mention may be made of bamboo work, basket making and manufacture of materials from leaves and other allied products. According to 1961 Census, 4,964 establishments were engaged in these trades. The business is carried on in a disorganised manner

and does not pay much to a worker. The products are generally sold in local weekly markets throughout the district and a portion is exported to neighbouring districts.

66. Industrial Potential and Plans for Future Development

The district is known for occurrence of coal, chromite, fireclay, limestone, graphite, iron-ore and manganese. The indicated reserves are 1,300 million tonnes of coal and about 5 million tonnes of chromite in the Sukinda-Dhenkanal belt. The coal obtained from Talcher coal mines being inferior in quality is not suitable for purposes of coke or for putting up chemical industries without beneficiation. At present, it is used for generating power at the Talcher Thermal Station. Besides, a portion is being exported.

There is also scope for development of some forest-based industries, the district being rich in forest products like timber, bamboos, Kendu leaves and other minor forest products. Of the valuable wood species, Sal is the only important wood available for commercial purposes. The Techno-Economic Survey of Orissa, undertaken by the National Council of Applied Economic Research in 1959, has suggested the establishment of a timber sawing and seaming factory and a wood distillation plant in the district.

In the Fourth Five-Year Plan (April, 1969 to March, 1974) for Orissa, a proposal for Talcher Industrial Complex has been included. The project would be the first of its type to produce quality pig iron economically to cater to the demand of various precision fabrication industries in the country. It has been estimated that the annual production potentialities of Talcher Industrial complex would be as follows :

		Tonne	
Main products	..	(i) Pig iron	.. 168,300
		(ii) Urea	.. 138,600
Bye-products	--	(iii) Road Tar	.. 16,000
		(iv) Ammonia Sulphate	.. 11,000
		(v) Fuel oil	.. 10,900
		(vi) Benzol	.. 3,500
		(vii) Telvol	.. 800
		(viii) Solvent Naptha	.. 700

Production of low phosphorous content pig iron will be suitable for malleable castings required for defence and other strategic industries. A part of this particular type of pig iron is being imported. The project will be able to get required raw materials, viz., coal from Talcher Coal Field, limestone from Biramitrapur, manganese ores from Keonjhar and power from 250 Megawatt Thermal Station at Chainpal. The scheme involves an expenditure of about Rs. 46.86 crores.

Further, a Low Temperature Carbonization Plant can also be started at Talcher for annual production of 60,000 tonnes of coke on a commercial scale by utilising one lakh tonne of coal as input. Coke produced in the plant may be utilised for production of pig iron in the ferro-alloy industries of the region. The capital requirement will be Rs. 150 lakhs.

The infrastructure available at Talcher in railways, road communications, thermal power and perennial water resources and the prospects linking Talcher with Paradeep creates immense potentialities of industrial development of the district.

67. State-aid to Industries

The State Government have been giving various aids for establishment and development of both small-scale and cottage industries. Under the State-aid to Industries Act, these industries are being given financial assistance on liberal terms, supply of machinery on hire purchase basis, supply of controlled raw materials and assistance to obtain imported raw materials and free technical advice. An Industrial Estate having 4 factory buildings has been constructed at Dhenkanal of which 2 factory sheds have housed the polythene factory and the tarpaulin factory. A list of industries and the amount of State assistance given to them during 1967-68 are given below :*

Category of industry	Number of industries	Capital investment (in rupees)	Government assistance (in rupees)
(1)	(2)	(3)	(4)
1. Lime ..	5	41,850	19,000
2. Filigree ..	6	7,550	6,000
3. Gurakhu ..	3	8,676	6,000
4. Saw Mill ..	3	70,000	46,500
5. Brick Unit ..	1	2,500	2,000
6. Misri (Sugar Candy)	1	3,000	2,000
7. Cement Tile ..	1	2,000	2,000
8. Tailoring Unit ..	1	2,000	2,000
9. Carpentry Unit ..	1	2,800	2,000
10. Ice-cream Factory ..	1	7,000	7,000
11. Rice Huller ..	14	3,00,000	3,00,000
12. Panchayat S a m i t i Industries.	7	5,72,367	3,02,632
13. Polythene ..	1	2,00,000	The factory has availed Government loan and the m a c h i n e r i e s have been supplied on hire purchase scheme.

* Source—District Statistical Hand Book, Dhenkanal, 1968

68. Labour and Employers' Organisation

Labour Unions

Among the principal employers of the district, mention may be made of the collieries of Talcher, Thermal Station and the Titaghur Paper Mills Co., Ltd. Besides, there are twenty-three registered factories and a number of small industries in the district. These establishments engage some labourers. In a large number of small industrial establishments the owner himself is the worker.

All the industrial labourers are not members of labour unions. Mostly workers of large industrial establishments and mines have formed unions to safeguard their interests. A list of registered factories with the number of workers employed by each of them and a list of Trade Unions of the district are given as Appendices I and II respectively.

69. Welfare of Industrial Labour

The general condition of the workers in small industries is poor. Most of the workers are unskilled. The rising cost of living, not yet been duly compensated by the revised rate of minimum wages for different scheduled industries under the Minimum Wages Act, 1948, is responsible for their low economic standard.

At present, there is no provision for welfare and recreational facilities in small factories and establishments. A Reading Room-cum-Recreation Centre for the working class people is being opened shortly at Angul.

The industrial labourers working in the collieries are in a better position than other labourers of the district. The Payment of Wages Act and Laws relating to old age and sickness insurance are implemented for the employees of the collieries. Different collieries have labour organisations.

There are 4 such Unions at present and they represent the workers of Deulbera, Dera and South Balanda Collieries.

The labourers in the collieries enjoy the facilities of pit-head bath with soap and oil which are provided at nominal price. There are first-aid stations, both under ground and on surface. For children (up to six years of age) of the workers, creche is maintained. Canteens are run for the employees at concessional rates. There are recreation centres and reading rooms, as well as, adult education centres. There are also Primary and Middle English Schools with Bengali, Oriya, Hindi and Tamil as medium of instructions. Adequate health and medical facilities to the workers have been provided with an well equipped hospital. Financial assistance is provided in case of death and accident.

There is a labour organisation of the staff of the Titaghur Paper Mills Co. Ltd., which is exporting bamboos from Angul forests. Its membership consists of office depot clerks, forest supervisors, peons, Moharirs, Dakwallas, truck, Mazdoors, car cleaners and boat men. The object of the association is to secure labour welfare measures enjoined by law.

Besides, there is an Union of the workers employed by Kendu leaf collecting establishments in the district. The Union has 352 members. The employees of the Talcher Thermal Scheme have organised two labour unions to safeguard their interests.

The District Labour Officer, who works under the control of the Labour Commissioner, Orissa, is posted at Angul to look after the welfare of the workers of the district.

APPENDIX I

List of Registered Factories

Name of the factory	Persons employed
1. The United Rice Mill, Dhenkanal ..	7
2. Angul Garage of Titaghur Paper Mills Co. Ltd., Angul	17
3. Swastika Arakaryalaya, Angul ..	10
4. Orissa Valley Saw Mill, Angul ..	10
5. Mahalaxmi Saw Mill, Dhenkanal ..	14
6. B. Samal Bidi Factory, Dhenkanal ..	8
7. B. Samal Bidi Factory, Girang ..	50
8. Pradhan Saw Mill, Talcher ..	16
9. Mahadev Saw Mill, Dhenkanal ..	13
10. New Orissa Bidi Factory, Angul ..	7
11. Jai Bharat Bidi Factory, Angul ..	12
12. Bhajamohan Bidi Factory, Kulad ..	18
13. Mahabir Saw Mill, Dhenkanal ..	12
14. Talcher Carpenters' Industrial Co-operative Society, Ltd., Talcher.	17
15. Dhenkanal Mangalore Tile Making Co-operative Society, Korian, Gengutia.	39
16. The Mathakargola Mangalore Tile Manufacturing Co-operative, Society, Ltd.	6
17. Angul Panchayat Samiti Smithy Production Co-operative Society Ltd., Angul.	20
18. Nuabag Grama Panchayat Oil Pressing Co-operative Society Ltd.	16
19. Mathakargola Saw Mill Co-operative Society Ltd., Mathakargola.	15
20. The Sugarcane Processing and Marketing Co-operative Society Ltd.	152
21. Talcher Thermal Garage ..	11
22. Talcher Thermal Workshop ..	20
23. Iswar Ch. Sahoo, Rice, Chuda and Flour Mills, Dhenkanal.	1

APPENDIX II

List of Trade Unions

Sl. No.	Name of Union	Date of registration
1	2	3
1	Deulbera Colliery Labour Union	.. 9-9-1948
2	Dera Colliery Labour Union	.. 9-9-1948
3	N.C.D.C. Workers Association, Dera Colliery	.. 13-5-1961
4	Talcher Coal Field Workers Association	.. 3-4-1961
5	Talcher Thermal Scheme Employees Union	.. 1-3-1967
6	Talcher Thermal Power Station Workers Union	.. 7-12-1968
7	Kendupatra Karmachari Sangha, Baltikiri	.. 22-9-1964
8	Titaghur Paper Mills Co. Ltd., Forest Transport Sub-ordinate staff Association, Angul.	26-9-1953