CHAPTER – IV

Large Scale Industries
LARGE-SCALE INDUSTRIES

Stonewalls do not prison make – thus goes the popular proverb. Another one can be formed in this style for the field of industries. Small industries do not an industrialized country make. However, a very large number of small-scale industries are a must for the effective functioning and development of large-scale industries at a given region, because several of them manufacture ancillary products for the large-scale industries. The development of small-scale industries as a focal point of industrial development is the evidence of the Government’s awareness to propagate and promote this sector for the ultimate objective of tackling the ever-growing problem of unemployment. Ultimately it is the large-scale industries that make a country qualified into an industrialized one.

The major part of the history of the industrial development of Tamil Nadu is confined to the 15-year period from 1952. It was during these fifteen years that the proverbial sun shone brightly on the state and its government which had been dreaming of industrializing the state made its hay in abundance.

It was during this period of time that the earliest landmark large-scale industries, both public and private sectors, were established in the state. India could boast of only a few textile mills as large-scale industries when it

won its Independence in 1947. Tamil Nadu (Madras State) could rightly feel proud of having a fair share of them in Madras, Thoothukudi, Madurai, Tirunelveli and Coimbatore. But Prime Minister Jawaharlal Nehru had much earlier made up his mind to develop India industrially on the lines of the West European countries and the Soviet Union. Nehru was fascinated by the Soviet Union's Piatiletka (five-year plans). But he believed in the 'mixed economy' of Harold Laski and was influenced by the Fabian Society. He wanted the Indian Economy to be partially capitalist, but with the state playing a large role, especially in the commanding heights of the economy. The industrial policy of his government, as already stated in the first chapter, had been framed on this basis.

By 'industrial development' he meant only large industries. However, his Government could not divert its full attention in setting up industries immediately after the Independence because of certain reasons. First of all, his Government had to carry out the administration on the British style as India was yet to formulate an administration of its own. His Government had to wait for the Constituent Assembly to come up with its new constitution for the country. In the mean time the newly created Pakistan launched an aggression across the border to wrest Kashmir from India and in the process occupied a portion of it. Jawaharlal Nehru's Government had to

repel the aggression. His Government diverted its whole attention to the nation-building mission after the country was made a Sovereign Socialist Secular Democratic Republic on January 26, 1950. Thus the history of development and growth of modern large-scale industries of the country began on January 26, 1950. The Planning Commission with Nehru as its chairman was set up in the following year and the historic first five year plan as per the recommendations of the Planning Commission was launched in the same year, 1951.

Kamaraj, who had been an ardent follower of the Father of the Nation, Mahatma Gandhi, and a great admirer of Jawaharlal Nehru, had been the president of the Madras State unit of Indian National Congress at this time. A man who had been dreaming a well-developed India with a still better developed Tamil Nadu in it was watching the coming up of the Planning Commission and its works and also the formulation of the first five year plan. The period of the first five year plan was essentially one of preparation for large-scale industrial development as a whole. Establishment of heavy industries entails a considerable amount of preparatory work, embracing study of a wide range of problems relating to markets, availability of raw materials and fuels, choice of processes, costs of

production and the building up at different levels of the technical and managerial experience required for running undertakings. It is also necessary to secure foreign technical assistance for the development of a number of industrial projects. Finally, the problems of how best to ensure the large-scale outlay required for these projects are also an important matter to be gone into in these preparatory studies. In regard to a number of major undertakings visualized in the public and private sectors under the second five year plan these preparatory studies had been completed so that substantial development in the industrial sector was achieved during the next five years.¹²

Kamaraj had no dissenting opinion about all these measures. On the other hand he was yearning to see that all the state governments co-operated with the national leader and Prime Minister, Jawaharlal Nehru, in implementing all the schemes formulated under the first five year plan. As far as industries having a bearing on the nation’s security and defence were concerned, the Central Government reserved them to be set up and run by it.¹³ Because of the quirk of fate of Tamil Nadu, the mantle of the Government of Madras State fell on Kamaraj on April 13, 1954, his lack of formal education and the presence of men of high academic colours on the scene notwithstanding.¹⁴

¹³ Divakar. V.D., Planning Process in Indian Polity, Bombay, 1978, p.3.
¹⁴ Kandaswamy.P., op.cit, p.57.
When Mr. Kamaraj took over as the Chief Minister of Madras State, TVS & Sons automobile industry had already set to develop and grow into a large automobile company in the state. As it fell on the second category of the large-scale industries (industries in the private sector), the Kamaraj Government did not have any role to play in it except a role of well-wisher. But when the Central Government formulated the second five year plan, the Kamaraj Government was very keen on getting some of the large-scale public sector industries for the state of Madras. It succeeded to a large extent.\textsuperscript{15}

4-1 Central Government Undertakings:


The readiness of the State Government to make available the required extent of land, electricity and other requisites and the speed in which it made available all these requisites pleased the Central Government much. The interest that Prime Minister Jawaharlal Nehru evinced in establishing

industries in Tamil Nadu stands best revealed in the fact that he personally came down to the sites of the new industries to inaugurate them. He started inaugurating the public sector industrial establishment by inaugurating the first-ever big industrial estate at Guindy in Chennai in 1958.\textsuperscript{18} The State Government also evinced keen interest in setting up its own industrial undertakings.

4-2 Projects of the State Government:

The State Government took initiative to establish its own large industries. The important such undertakings are Casting Re-rolling Mill at Arakonam, Tamil Nadu Cement Plant at Alangulam, three Co-operative Spinning Mills at Pettai in Tirunelveli, Nazareth and Srivilliputhur, Co-operative Sugar Mills in North Arcot, Chingleput and Coimbatore districts, Brick-making units at Tirumazhisai and Poonamalli and Government Rubber Plantation in Kanyakumari District.\textsuperscript{19}

As the Central Government and the State Government set up public sector large industries, the distinguished private industrialists came on the scene with their proposals to set up their own large-scale industries. The Governments, both Central and State, encouraged them by issuing hassle-free licences and supplying them with electricity and other facilities.\textsuperscript{20} As machinery for such large industries had to be imported from West European

\textsuperscript{18} Madras Information, Vol. IXIII, No. 6, June 1959, p.15.


\textsuperscript{20} Ibid., p.82.
countries and Soviet Union, the Central Government helped such industrialists with licences to import the required machinery. Ashok Leyland, Royal Enfield Motorcycle Company, Madras Rubber Factory (MRF) were the private sector large-scale industries set up in Madras State in 1950s and 1960s.\textsuperscript{21}

The second five year plan opened a floodgate to the aspiring entrepreneurs. The industrial estates, credit schemes, institutions offering technical advice and guidance, supply of raw materials, avenues for marketing manufactured goods all of which the State Government made available to them motivated them to move ahead with their plans.\textsuperscript{22} The period of the second five year plan can rightly be described as one of preparation for setting up large modern industries of the public sector in the state. When the third plan period opened, several large industries in the public and private sectors started functioning.\textsuperscript{23}

The private entrepreneurs who had been looking for opportunities to set up their industrial units started their groundwork as soon as the Government of India launched its first five year plan. But they soon found out that they had to wait for some more time, because the schemes that the Government had chalked out for implementing during the first five year plan

\textsuperscript{21} Madras Information., Vol. XVIII, No. 4, April 1963, p.16.
\textsuperscript{22} Ibid., p.17.
period aimed at strengthening the already existing industries and augmenting agricultural production.\textsuperscript{24}

That these modern large industries were set up in Tamil Nadu in 1950s and 1960s does not mean that the state had been without any large industries of the old order during the British rule. Textile mills and sugar mills had already been functioning in the state when the British quit the Indian sub-continent. The earliest textile mill of Tamil Nadu was established in Coimbatore in 1888.\textsuperscript{25}

4-3 Textile Mills:

Though the first textile mill in Tamil Nadu was founded in Coimbatore in 1888, the first spinning mill came up at Vickramasgingapuram in Tirunelveli District three years earlier.\textsuperscript{26} However, the earliest steps for such a mill began a quarter century before when the then Governor of Madras Presidency, Lord Napier, visited the district in 1869. But his efforts to set up a spinning mill using the Tamiraparani water as an energy resource did not succeed.\textsuperscript{27}

It was another Englishman named Frank Harvey who had succeeded in setting up the spinning mill. Frank Harvey had been a cotton trader in the district. He built a spinning mill at Vickramasgingapuram in 1885 and it

\textsuperscript{24} Madras Information., Vol. XVI, No. 10, October 1951, p.41.
\textsuperscript{25} en.wikipedia.org/wiki/tamilnadu, dated 10.3.2006.
\textsuperscript{26} Pate.H.R., Tinneveli District Gazetteer, Tirunelveli, 1993, p.212.
\textsuperscript{27} Ibid., p.211.
began working in the same year with 10,000 spindles. He built a larger mill in 1908. Three years after the establishment of the mill at Vickramasingapuram, another mill named Coral Mill was established in Thoothukudi in 1888 and it was under the management of Messrs. A. and F. Harvey.²⁸

As for textile mills, Coimbatore which is the third largest city in Tamil Nadu is the pioneer. Immediately after the first textile mill was founded there in 1888, more new mills started coming up not only in Coimbatore, but in Chennai and Madurai as well. By the early 1960s, there were 36 cotton spinning and weaving mills within a radius of 11 km from the heart of the Coimbatore city.²⁹ By the turn of the century this number crossed the 100-mark.³⁰

The important textile and cotton mills that had been working in Coimbatore during the period of the Kamaraj Government were Kothari Textile Mills, Lakshmi Mills, Sri Venkatesa Mills, Radhakrishna Mills, Vasantha Mills, C.S.&W. Mills, Sivananda Mills, Coimbatore Pioneer Mills, Panakaja Mills, Combodia Mills, Coimbatore Cotton Mills and Janardhana Mills.³¹

²⁸ Ibid., p.213.
³¹ Baliga. B.S., op.cit, pp.322-323.
Besides the 36 mills located within the limits of Coimbatore city, there were also about ten weaving and spinning mills in the taluks of Erode, Palladam, Pollachi and Udumalpet during the period of the Kamaraj Government. The most well-known among them were Dhanalakshmi Mills at Tirupur and Premier Mills at Udumalpet. All these mills together had been employing about 46,000 workers. These mills had been working on steam power till about 1933 when Pykara Hydro-Electric power was made available to them at cheap rates.

The large number of workers in the textile mills of Coimbatore in the early 1960s had earned the distinction for the town of being one with the highest percentage of industrial workers in its population. Of the town’s population, 47 per cent eked out their livelihood by working in industries, engaging themselves in trade or pursuing other avocations. The corresponding figure for Madurai District was 37 per cent with total of 20,000 workers in the textile industry alone. Besides the textile industry, a very large number of people in Madurai District were employed in industries of transport equipment, rice mills, cotton ginning and pressing factories, handloom weaving factories, iron safe manufacturing units, match factories, tanneries, sugar mills, a knitting mill and tobacco and cigar manufacturing units.

Another distinction of Coimbatore was that it was next only to Chennai in industrial development. The great concentration of a large number of textile mills in the district had led to the establishment of a large industrial unit called Textool Company Limited on the Coimbatore-Sathyamangalam Road to manufacture textile machineries required in the spinning, carding and reeling sections of textile mills.36

The district in the state with the second largest number of textile and spinning mills was Madurai during the rule by the Kamaraj Government. The most well-known cotton spinning and weaving mills in Madurai District were Madurai Mills Limited and Pandyan Mills Limited. These two large spinning mills in Madurai town were owned by one concern. They had branches at Thoothukudi and Ambasamudram. Next to these mills came Meenakshi Mills Limited at Tiruparamkundram in Madurai which was a spinning and weaving mill. Sri Mahalakshmi Mills Limited was at the nearby Pasumalai.37 The next spinning mill in Madurai town was Sri Kothandaramam Spinning Mills Limited. The other notable spinning mills were at Dindigul and they were S.S.N.Lakshmanan Chettiar and Company and Sundararaja Mills Limited. Visalalakshmi Mills and Rajah Mills were located at Mangalapuram.38

Besides these private spinning and weaving mills, 18 spinning mills were established under the co-operative sector during the period of the Kamaraj Government. The first three of these co-operative spinning mills were established during the second five year plan period at Pettai in Tirunelveli, Srivilliputhur in the then Ramanathapuram District and Nazareth in the then Tirunelveli District. The remaining 15 mills under the co-operative sector were established during the third five year plan period. Next to Madurai District, it was Salem District that had the largest number of spinning mills during the reign of the Kamaraj Government.39

The large spinning mills that had been working in Salem District during the periods of the second and third five year plans were Jawahar Mills Limited, Salem Rajendra Mills Limited, both in Salem town, Pullicar Mills Limited in Tiruchengode, Mettur Spinning Mills at Mettur Dam and Sundaram Spinning Mills limited at Kumarapalayam. Of these spinning mills, Pullicar Mills at Tiruchengode had earned a name for itself for cotton yarn manufacture.40

Besides these spinning mills, there was a weaving mill at Mettur named Mettur Industries Limited and it had established for itself a name in the sphere of mull and longcloth production. M-61 and M-81 and M.S. 51

varieties of textiles produced in this mill were household names in South India in those days.41

4-4 Co-operative Sugar Mills:

Sugar Mills under the co-operative sector are a little older than spinning mills of the same sector. The earliest co-operative sugar mill was Madurantakam Co-operative Sugar Mills Limited at Padalam. This mill was registered as a co-operative society on December 4, 1955 with an authorized share capital of Rs. 40 lakh and started functioning on the same date.42

The taluks of Madurantakam, Cheyyar, Chengalpattu and Uthiramerur of Chengalpattu District, the entire Tenneri, Walajapet, Magaral and Kancheepuram firkas, 20 villages of Sirukaveripakkam firka, 18 villages of Chittiampakam firka in Kancheepuram taluk, six villages of Padappai firka of Sriperumbudur taluk, eight villages of Tamaram firka, four villages of Alandur firka, four villages of Pallikaranai firka and two villages of Maduravoyal firka of Saidapet taluk, the entire Olakkur firka and eight villages of Vadasiruvvalur firka of Tindivanam taluk constituted the command area of the mill.43

The mill had 642 members on its rolls with a paid up share capital of Rs. 5.12 lakh on the day of its registration. The membership had gradually increased and by the middle of 1991 there were 15,001 members with a paid

43. Ibid., p.506.
up share capital of Rs. 206.66 lakh which included the share capital of Rs. 36.11-lakh share of the Government of Tamil Nadu.44

Four more sugar mills were established during the period of the second five year plan in the State. They were Namakkal Co-operative Sugar Mill at Namakkal, Kallakurichi Co-operative Sugar Mill at Kallakurichi, National Co-operative Sugar Mill at Madurai and Tiruvannamalai Co-operative Sugar Mill at Tiruvannamalai.45

Besides these, four other Sugar Mills came up at different places in the State under private sector during the same period. They were Kothari Sugar Limited at Lalgudi, Aruna Sugar Limited at Pannadam, South India Sugar Limited at Mundiampakam and Sangameswar Sugar Limited at Gobichettipalayam.46

The North Arcot District Sugar Mills Limited at Ambur in Vellore taluk of North Arcot District started production in January 1958.47 The Central Government had allotted Rs. 64 lakh to Tamil Nadu in order to give assistance to co-operative sugar mills.48

46. Ibid., p.28.
The question of the State Government’s participation in the capital structure of co-operative sugar mills was considered by the Cabinet in 1956 and it was decided that the State’s contribution should be limited to Rs. 10 lakh for each of them.49

The Kamaraj Government of Tamil Nadu was not satisfied with the textile and sugar mills that had been working in the state while the National Planning Commission was chalking out plans for large industries to be set up during the second and third five year plans. The State Government’s role in developing small-scale industries by establishing industrial estates and making available other facilities like availability of electricity and finance to small industrialists had an influence on the Central Government when it took up the task of selecting suitable sites to locate its earliest large industries.50 So it came forward to establish some of the earliest premier large-scale industries in Tamil Nadu. The first step in this direction was taken in the year 1952 when it established Integral Coach Factory at Perambur in Chennai.51 Though the process still continues, the peak of the process was till 1967. The 15-year period from 1952 was one of the silent industrial revolution in Tamil Nadu which transformed the predominantly agrarian economy of the state into an industrial one. The first of such industries

49. MLA Debates, Vol. XX, No. 1-9, Madras, dated 2-3-1959, p.128.
under the public sector was Integral Coach Factory at Perambur in Chennai.\textsuperscript{52}

4-5 \textbf{Integral Coach Factory:} 

The Integral Coach Factory (ICF) at Perambur in Chennai is now one of the largest coach-building units in the world. This project was planned under the first five year plan to make Indian Railways self-sufficient in the supply of passenger coaches.

The Central Government took up the project in collaboration with Swiss Car and Elevator Manufacturing Corporation Limited of Switzerland in 1952.\textsuperscript{53} The factory and the colony were built up on an area of 500 acres. The shell division where the bodies of coaches are manufactured was erected on an area of 50 acres at the cost of Rs. 7.35 crore.\textsuperscript{54} The furnishing division occupies an area of 40 acres and it was built at the cost of Rs. 3.67 crore. This unit is one kilometer away from the shell division.\textsuperscript{55} The construction work of the shell division took about three years, but the furnishing division was completed only in 1962.\textsuperscript{56}

The factory is almost a township in itself. A modern residential colony near the factory has been built for the essential staff. The colony has amenities for recreational and cultural programmes besides a children’s

\begin{footnotesize}
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\item \textsuperscript{52} Ibid., p.283.
\item \textsuperscript{53} Thina Thanthi (Tamil Daily), dated 25.11.2003.
\item \textsuperscript{54} G.O.Ms.No. 801, Home Department, dated 27-3-1958.
\item \textsuperscript{56} Ibid., Vol. XVII, No. 9, September1963, p.35.
\end{itemize}
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park, a library and an open-air theatre. A primary school has also been
established on the campus of the factory.\textsuperscript{57}

The factory is called Integral Coach Factory because the rail coaches
built in this factory are integral coaches, because the various parts of the
coach are integrated together that shocks and strains are divided over the
entire length of the coach. The ends of the coach are designed that in the
event of a collision, they will buckle and the coaches will not telescope into
each other. The body of the coach is made of steel and its various members
are welded together. The weight is about seven tonnes and it means that a
coach made in the factory is lighter than the conventional coach. The
carrying capacity of the coach has also been increased.\textsuperscript{58} The first class AC
coach built in this factory in the early 1960s had seven compartments, four
or five berths and two coupes. These berths and coupes provided sleeping
accommodation to 20 passengers and sitting accommodation to 30 persons.
Later two coaches were built on a trial scheme with six berths with an
attached bathroom in one compartment in each of them. Washbasin was
fitted in each compartment. The coaches had separate luggage rooms.\textsuperscript{59}

It was originally planned that the factory would build 350 shells a
year.\textsuperscript{60} But it could build 600 coaches per annum by the year 1962.\textsuperscript{61}

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\item \textsuperscript{57} Ibid., Vol. III, No. I, January 1964, p.19.
\item \textsuperscript{58} Ibid., p.20.
\item \textsuperscript{59} Ibid., p.21.
\item \textsuperscript{60} Ibid., Vol. XVII, No. 9, September 1963, p.34.
\item \textsuperscript{61} Ibid., p.35.
\end{enumerate}
\end{footnotesize}
At the initial stages, the factory sent the shells immediately after building them to the Railways for furnishing. However, it soon decided to furnish the coaches in the factory itself. By the year 1964, the factory again changed its decision in this regard and started sending all the shells to the Railways for furnishing.62

The factory could reduce the cost of manufacture to a great extent because of its proper planning and control on production. In the case of third class coaches, the factory could cut the cost by more than half. In other cases, the reduction had varied between Rs. 1,86,138 and Rs. 81,027. When the cost of building at the factory was compared with the price of imported coaches, the difference was significant. For instance, the cost of a third class imported coach in 1955 was Rs. 1,87,000. This meant that every coach saved more than one lakh of rupees.63

The employees of the factory belong to the railway service and are entitled to the same facilities and service conditions as are available to other employees of the railways. They and their families enjoy free medical facilities. The factory provides its staff with residential facilities on very low rent.64

As soon as it successfully carried out its part of work in establishing Integral Coach Factory at Perambur in Chennai, the Kamaraj Government

64. Madras Information, Vol. XVII, No. 9, September 1963, p.34.
turned its attention to realize its aim of establishing a thermal electricity project in Neyveli exploiting the huge deposits of lignite in the area.\textsuperscript{65}

4-6 Neyveli Lignite Corporation Limited:

The Kamaraj Government was well aware of the fact that electricity was the most potent catalyst for the speedy socio-economic development of the state. So it wanted to harness the huge deposits of lignite in Neyveli in South Arcot District to generate electricity. When the Central Government evinced interest in setting up a lignite-based electricity project in the second half of the 1950s, the State Government girded up its loins to extend all possible help to the Centre to execute the scheme.

The existence of lignite in the area was first discovered in 1934 when deep drilling was taken up to dig some bore wells. What appeared as ‘black clay’ gushing out from bore wells was later identified as lignite. The then Government of Madras took up regular exploration in 1943 to ascertain the extent of the field having lignite deposits. After the Independence, the exploration was taken up by Geological Survey of India.\textsuperscript{66}

The lignite field lies between 11.24\textdegree north latitude and 11.37\textdegree east longitude. This area is between the Gadilam in the north and the Vellar and the Manimuktanadhi in the south.\textsuperscript{67} Investigation by means of over 200 bore holes proved the occurrence of lignite in an area of about 480 sq. km in and


around Neyveli in Vriddhachalam, Cuddalore and Chidambaram taluks. The bore holes had revealed that the lignite seam was a lenticular bed inter-located in a mixture of tertiary sands and clays with pebble beds, that its thickness varied from zero to 89 feet, and its least recorded depth was 150 feet below the surface. The samples tested had shown that when mined it contained 50 to 60 per cent moisture, that on dry mineral free basis it usually contained 65 to 70 per cent of carbon, from 20 to 25 per cent of oxygen and about 5 per cent of hydrogen. The quantity of ash in the lignite was variable, but it seemed to be between 3 and 10 per cent.  

Lignite has several advantages over coal. It burns free; it does not coke. It has low ash and it gives off rapid and complete combustion; and as the volatile matter in it is usually about 50 per cent, it burns readily.

The State Government was convinced that if the groundwater could be controlled and lignite could be mined economically, it would immensely help develop industries in the state. It was further convinced that the lignite could be used as a fuel and it could be used for generating electricity. It could also be used for production of iron and steel and also for the most of the purposes for which coal was used. As coal was not available in the south, it held out a great promise to supply the industrial and domestic fuel.

As soon as the huge deposits of lignite in and around Neyveli were discovered, the State Government undertook the work of boring. But soon

68. Ibid., pp.232-233.
the Central Government got the situation thoroughly investigated by Archaeological Survey of India and the feasibility of mining the lignite studied and then it got a project report prepared, all these before 1956.  

Then the Central Government constituted a public limited company to administer and manage the integrated lignite project for mining 3.5 million tonnes of lignite, generation of 200 M.W. thermal power using the lignite, manufacture of fertilizers with a nitrogen content of 70,000 tonnes and production of 380,000 tonnes of carbonized briquettes and byproducts per annum. The first mining block of lignite was marked for exploitation in the northern part of the field and mining operations began in May 1957.

Lignite is the younger offspring of the coal family. It is a fossil fuel belonging to the Miocene Age (25 million years). Popularly known as ‘Brown Coal,’ lignite is tan brown in colour, light to handle and brittle in nature. This fuel is born from vegetable matter having undergone biochemical decay to the stage of peat (rotten wood) and then metamorphosed to lignite under the pressure of the soil above through floods, movements of the earth’s crust and dehydration. When the pressure of the lignite, particularly the horizontal thrust is further increased, lignite is made more dense, less volumetric and becomes coal as such.

73. NLC Golden Jubilee Souvenir, op.cit, p.6.
74. Ibid., p.7.
The lignite available at Neyveli varies in colour from brown to dark brown and has a non-bonded granular structure, and so it is fondly called Brown Diamond. Microscopic studies of these sections prepared from bulk samples of lignite indicate that the fuel is composed of a wide variety of plant ingredients, mainly of coniferous nature.\textsuperscript{75}

About 87 per cent of the lignite reserves in the country are in Tamil Nadu. Nineteen lignite blocks have been identified in Tamil Nadu and Pondicherry of which Mine 1, Mine 11 and Mine 1A, all the three in Neyveli, alone are under operation. The other major lignite reserves in Tamil Nadu are at Jayamkondam in Tiruchirapalli District, Mannargudi and Vadaseri in Thiruvarur and Thanjavur Districts and Veeranam in Cuddalore District. Of these reserves, those at Mannargudi and Vadaseri are the largest.\textsuperscript{76}

Only the reserves in Neyveli have been exploited since 1957.\textsuperscript{77} Though the mining operations began in 1957, the lignite seam in the first mine was exposed in August 1961 and regular mining of lignite began in May 1962.\textsuperscript{78} The lignite seam in Mine II was first exposed in September 1984 and excavation of lignite from this mine began in March 1985. The

\textsuperscript{75} Ibid., p.8.


\textsuperscript{77} G.O.No.Ms. 1147, Industries, Labour and Co-operative Department, dated 25.2.1958.

\textsuperscript{78} MLA Debates, Vol. V, No. 1-7, Madras, dated 11-7-1962, p. 798.
third mine christened as Mine IA is adjacent to the Mine I and lignite in this mine was first exposed in March 2003.  

Mine - I:  

Mine I, which is the earliest lignite mine in Neyveli, has been demarcated over an area of 26.69 sq.km. This mine has a reserve of 365 million tonnes of lignite. This mine is situated on the northern part of the field adjacent to the township of Neyveli.  

This mine has a production capacity of 10.5 million tonnes of lignite a year and it feeds lignite to the 600-MW Thermal Power Station and also to the 420-MW Thermal Power Station I Expansion. German excavation technology in open cast mining using Bucket Wheel Excavators and Spreaders are used for mining work in this mine.

The highly consolidated overburdened strata in this mine consist mainly of Cuddalore Sand Stone which is hard and abrasive in nature. The bucket wheel used for handling large volumes of overburden faced problems due to the hard strata and was overcome by carrying out suitable modification in the bucket wheel teeth and by instituting a systematic drilling and shatter blasting programme.  

82. Ibid., p.62.
Mine -II:

This mine with annual production capacity of 10.5 million tonnes is spread over an area of 26 sq.km with 390 million tonnes of reserves. The lignite seam in Mine II was first exposed in September 1984 and the excavation of lignite began in March 1985. The lignite mined out from this mine meets the fuel need of Thermal Power Station – II (1470 MW). The mining method and equipment are similar to those of Mine - I.83

Mine – IA:

Mine- IA is adjacent to the existing Mine-I block on the eastern side. The project was commissioned in 2001. The total reserve in Mine – IA is 120 million tonnes in an area of 11.6 sq.km. The annual capacity of this mine is three million tonnes and this lignite unit was first exposed in March 2003. This mine feeds fuel to Messrs. ST-CMS, an independent power project of 250 MW and NLC’s Thermal Power Stations.84

Tamil Nadu is entitled to 46 per cent of the electricity that the Thermal Power Station I Expansion generates and it gets 30 per cent of the electricity that the Thermal Power Station II generates. The rest of the electricity that the two power stations generate is shared by Karnataka, Kerala, Andhra Pradesh and Pondicherry.85

84. Minmalar., op.cit., p.3.
85. The Hindu (English Daily), dated 1-7-2006.
4-6-1 Research and Development:

Neyveli Lignite Corporation has its own Research and Development unit and it is called Centre for Applied Research and Development (CARD).

This research and development unit has so far carried out research and evolved ways to use fly ash in agriculture in collaboration with CFRI in Dhanbad, reclaim the pond of ash and use industrial waste for developing green cover in collaboration with Annamalai University and to convert lignite into humic acid by bio-technical conversion method in collaboration with CFRI, Dhanbad. It has also taken up studies on use of lignite humic acid and crop response in various agro-climatic conditions in collaboration with Tamil Nadu Agricultural University, Coimbatore.

CARD has also proposals to produce activated carbon from lignite, fly ash-based pesticides and to develop a process of lignite/coal gasification.

4-6-2 Afforestation Activities of NLC:

Right from the beginning, the corporation has been evincing keen interest in taking up afforestation programmes. Its programmes cover the entire township of Neyveli. It has so far planted 17 million trees of various species in 2750 hectares. The dry and hot atmosphere of Neyveli that arose

86. Minmalar., op.cit, p.8.
when mining began has now given way to lush greenery. This programme is aimed at maintaining ecological balance and for the increased stability of soil. The dense tree coverage helps control air pollution, act as a wind barrier, prevent soil erosion and reduce the atmospheric temperature to a certain extent.\textsuperscript{89}

The corporation has over the years successfully converted the spoils into agricultural fields through modern techniques. The dumped soil, after excavation, is improved in stages to match its original fertility and the agricultural operations are carried out by adding nutrients like organic and inorganic manures and bio-fertilizers in sufficient measures to make the soil suitable for cultivation. Now crops and vegetables of various varieties are raised in about 250 hectares.\textsuperscript{90}

Neyveli which had been a torrid undeveloped sprawling landscape with sparse growth of sun-burnt vegetation till the middle of 1950s now presents a different picture. Now it is an affluent township of more than 21,000 houses on a lush green landscape. The people in this growing township enjoy subsidized transport facilities, protected water supply and medicare in the 369-bed hospital. The workers in the corporation have facilities to educate their children in one of the 34 schools on the corporation campus. Besides, one college also is there to cater to the needs of higher

\textsuperscript{89} Personal Interview with Mrs. Subha Latha, NLC employee, aged 33, residing at Neyveli, dated 13-1-2006.

education of their children.\textsuperscript{91} As for the number of workers, it was steadily rising year by year and by the close of the year 1970, there were 18,000 workers on the rolls of the corporation.\textsuperscript{92}

The two other major industries under the Government of India that came up in Tamil Nadu at the beginning of the 1960 were The Hindustan Teleprinters Limited and The Hindustan Photo Films Company.

4-7 The Hindustan Teleprinters Limited:

The chequered 46-year history of The Hindustan Teleprinter Limited in Chennai tells how an industry, if it is manned by resourceful men and women, can weather the vagaries of time and survive the inevitable vicissitudes.

The Central Government, which had been striving hard to catch up with the developed countries in the 1950s, had chalked out plans to establish industries to meet its requirements in all fields. Teleprinter facility in those days was what are FAX and modem facilities today. It was the fastest mode of communication then. This service was under the control of the Department of Telecommunications of the Union Government. Teleprinters were connected with cables and the matter printed in one teleprinter machine could be received and printed by other intended teleprinter simultaneously.

\textsuperscript{91} Personal Interview with Mr. Blessing, NLC employee, aged 35, residing at Vadaloor, dated 14-1-2006.

Besides the Department of Telecommunications, newspapers and news agencies had been using teleprinters for transmission of news from their news bureaus to newsrooms in their editorial offices. They had also been using teleprinters to transmit material from their main centres to the sub centres.\textsuperscript{93}

Hindustan Teleprinter Limited was established by the Department of Telecommunications under the Ministry of Telecommunications on a 50-acre site at Guindy in Chennai in 1960.\textsuperscript{94} It was incorporated under the Indian Companies Act as a public sector industrial unit to produce teleprinters for the national telecom network.\textsuperscript{95}

A pioneer in the field of teleprinter-manufacture, it produced and supplied 1.25 lakh electro-mechanical teleprinters of Olivetti technology till 1987. By the middle of 1980s, the new generation electronic teleprinters had started replacing electro-mechanical teleprinters in advanced countries. The Hindustan Teleprinters Limited also caught up with the world trend and switched over to manufacturing electronic teleprinters based on Sagem’s know-how and continued with it till 1994.\textsuperscript{96}

\textsuperscript{93} Personal Interview with K.P. Rajasekharan Pillai, Chief Sub Editor, The New Indian Express, Thiruvananthapuram, aged 50, residing at Thiruvananthapuram, dated 20-4-2006.

\textsuperscript{94} Madras Information, Vol. XVII, No.9, Madras, September 1963, p.16.

\textsuperscript{95} Personal Interview with A. Chidambaram, Chief Operating Officer, HTL, aged 50, residing at Chennai, dated 4-7-2006.

\textsuperscript{96} http://www.htlchennai.com/ dated 13.3.2006.
Now the company is called HTL as it no longer manufactures teleprinters for the simple reason that teleprinter, as a mode of communication, is now an outmoded one because of the computer and electronic-oriented communication systems.

With the changes in technology, sea changes in market and customer preferences, the company had to embark on an aggressive diversification plan to become a multi-product company by the middle of 1990s. Through a saga of perseverance and persuasion, diligence and dedication to survive, it has become a leader in the field of telecom systems.97

HTL today manufactures digital switching, transmission, data and access products and its products are sold in Russia, France, Vietnam, Sri Lanka, Nepal and Ethiopia.98

The unit is now equipped with automatic SMT assembly line, in-circuit testers, automatic component preparation, component insertion and wave soldering machines for through hole technology-based assembly line, modern automatic component testing facilities for inward-goods quality inspection, sophisticated tool room consisting of current generation CNC wire-cut, spark-erosion and optical profile grinding machines, modernized machine shop comprising CNC turret puch, machining and milling centre,

turning centre, multi-spindle turning machine, high speed presses, modern heat treatment shop, painting shop and automatic plating centre.\textsuperscript{99}

4-8 The Hindustan Photo Films Company:

When the Government of India thought of meeting the Telecommunication Department’s requirements of teleprinters, it took into consideration the difficulties that hospitals had been experiencing to procure X-ray films and motion picture industry to obtain cine films. The professional and amateur photographers had also been exposed to the difficulty of getting film. So the Government established a film producing unit, The Hindustan Photo Film Manufacturing Company Limited (HPF) at Udhagamandalam (Ootty) in 1960.\textsuperscript{100}

The plant was built at Indunagar in Udhagamandalam. The photographic field of India then had been dominated by Lodak, Fuji, Ilford, Orwo and Agfa. When the public-sector plant started producing photo film most of the film-using industries turned to it to meet their needs. Incidentally, this plant turned out to be the largest in Asia.\textsuperscript{101}

\footnotesize{99. Ibid.}
\footnotesize{100. G.O. No. Ms. 643, Industries, Labour and Co-operative Department, dated 4-6-1960.}
The company has achieved a production of 14,418 m sq. m. of film and paper valued at Rs. 159 crore at the turnover of Rs. 148 crore till 1994. Thus it had earned a profit of Rs. 7.6 crore during these years.\(^\text{102}\)

Most of the raw materials are procured indigenously except for a few dyes and chemicals which are imported. One of the raw materials, gelatine, is available locally. The factory consists of four major production departments. The first of these is the film base department in which cellulose tri-acetate safety base for films is produced on six continuous solvent machines.\(^\text{103}\) The photo sensitive silver helide emulsion is separately prepared in the emulsion department.

Another major department of the plant is the control laboratory which checks the quality of all the raw materials used. The plant carries out stringent quality tests on all finished products. Another aspect of the work of the laboratory is the study in substitutes for imports.

Water for the plant is drawn from the nearby Kamaraj Sagar. It is treated in a plant which is of the latest prototypes in order to make available water of the required standard by photographic industry.\(^\text{104}\)

Since its inception the plant had registered a constant growth rate and by the beginning of 1990s a new plant was set up under its expansion programme to manufacture audio-video M.S.R. films and computer tapes at


\(^{104}\) Gopalakrishnan. M., *op. cit.*
an investment of Rs. 9.25 crore. By this time its work force had also grown to 3440 people.\textsuperscript{105}

4-9 \textbf{Avadi Tank Project:}

The Ordnance Factory in Chennai, commonly called Avadi Tank Factory, was the fifth Central Government industrial undertaking in Tamil Nadu during the Kamaraj Government's reign. The foundation stone for this Central Government's defence undertaking was laid in December 1961,\textsuperscript{106} and it is called Avadi Tank Factory as it has been located at Avadi in Chennai. It is also called the Heavy Vehicles Factory. This is one of the biggest industrial establishments in the country with an initial employment of 3000 people.\textsuperscript{107}

The Ministry of Defence in collaboration with the British firm, Vickers Armstrongs (Engineers) Limited, set up this venture at an estimated cost of Rs.16 crore. The factory was designed to make all types of armoured fighting and tracking vehicles and other items of heavy engineering equipment required by the Defence Services. By the turn of the century it could manufacture all the major parts of the armoured tank including the engine, gear-box and the suspension.\textsuperscript{108}

\textsuperscript{105} Ibid., p.531.


\textsuperscript{107} Ibid., p.503.

\textsuperscript{108} Madras Information, Vol. IX, No.1, Madras, January 1965, p.11.
Medium tanks were the major items of production of the factory at the beginning. Medium tanks, as distinct from light tanks, which weigh 13 to 20 tonnes and heavy tanks above 45 tonnes, range in weight from 25 to 45 tonnes. The special steel required for the manufacture of the tank is produced at Rourkela and supplied. Each medium tank cost about Rs. 10 lakh at the rates that prevailed in 2000.109

At the initial stages, the factory made use of indigenous materials up to 30 per cent and the percentage increased considerably in the long run. Training and instruction were given to the Indian workers by the English experts at the factory at various stages of production of the tank. The total room of the factory began production in November 1964.110

An Artisan School attached to the factory is also functioning to train workmen. The school was opened in November 1964.111 Trainees are recruited on All-India basis after detailed psychological and aptitude tests.

The factory and the residential colony are located on a 1400-acre site of which the Government of Tamil Nadu gave 770 acres free of cost. In fact, the way in which State Government had made available this large tract of land was an act of magnanimity and sacrifice. Under its agreement with the Central Government, it had to supply water also to the factory. But it had no source of water to comply with the agreement. So it struck upon an idea. The lands that it acquired were wetlands and these lands were irrigated by

110. Ibid., p.502.
111. Ibid., p.503.
Sholavaram and Redhill reservoirs. If these reservoirs were not expected to supply water for irrigation, the State Government could spare the same water to the factory. So it acquired the wetlands and turned them over to the factory and made available to it the saved water in this way.\textsuperscript{112} The State Government has also made arrangements for permanent power supply to the factory. The factory has a floor area of nearly 12.5 acres. This tank factory has also given rise to a number of ancillary and feeder industries.\textsuperscript{113}

4-10 Madras Refineries Limited:

The Government of India established this giant petroleum refining factory in 1965 at Manali in Chennai as a joint venture taking AMOCO and National Iranian Oil Company as partners under the name, The Madras Refineries Limited. But later it was incorporated into a new organization called Chennai Petroleum Corporation Limited. The Government of India had 74 per cent of shares in the company and the rest of the 26 per cent of shares were equally owned by its partners.\textsuperscript{114}

The factory was commissioned in a record time of 27 months at the cost of Rs. 43 crore. Its installed capacity at the time of its commissioning was 2.5 million tonnes per annum. This capacity was later raised to

\textsuperscript{112} Ibid., p.504.

\textsuperscript{113} Personal Interview with Thampiraj. R., Chief Mechanical, aged 32, residing at Avadi, dated 13.7.2005.

\textsuperscript{114} www.mrmadras.com, dated 14.3.2006.
9.5 million tonnes. This is one of the most complex refineries in the country with facilities to produce fuel, lube, wax and petrochemical feedstocks.  

This has set up its second refinery on the Cauvery basin at Nagapattinam. When it was commissioned in 1993, it had a production capacity of just 0.5 million tonnes per annum, but soon it was increased to one million tonnes. Again its production capacity was raised to three million tonnes by the end of the 1990s.^116

The main products of the company are liquefied petroleum gas, motor spirit, superior kerosene, aviation turbine fuel, high speed diesel, naphtha, bitumen, lube base stocks, paraffin wax, fuel oil, hexane and petrochemical feed stocks.^117

4-11 The Surgical Instruments Factory at Nandambakkam:

The Surgical Instruments Factory at Nandambakkam in Chennai is one of the three projects undertaken by the Indian Drugs and Pharmaceuticals Limited, a Government of India undertaking. The Government had set up this company in technical collaboration with Messrs Techo Export of the USSR.^118

The unit at Nandambakkam in Chennai was commissioned on September 1, 1965. Its capital investment was just Rs. 5.25 crore, but its

118. Gopalakrishnan, M., op.cit, p.595.
employment potential was very great and it had 1,300 employees by the close of the last century.\textsuperscript{119}

This plant at Nandambakkam is the first major project in the country devoted to the manufacture of surgical instruments. About 200 types of instruments are manufactured by this plant to cater to the needs of various surgical disciplines such as general surgery, ophthalmology, gynaecology, E.N.T., etc. The plant, by way of its diversification programme, added the following production facilities during the second half of the 1990s: (1) manufacture of paramedical equipment, hospital furniture and items of healthcare programme and mobility aids such as calipers, crutches etc. (2) Production of drug formulations such as powder vials, ampoules, liquid orals, capsules and tablets etc. and (3) Fabrication of chemical process equipment. As a welfare measure, the plant has provided residential quarters to about 500 employees in its colony.\textsuperscript{120}

4-12 Atomic Energy Programme at Kalpakkam:

The preliminary steps to set up an atomic power plant at Kalpakkam, 40 km south of Chennai, began in 1962,\textsuperscript{121} two years before Kamaraj quit as the state’s Chief Minister to take up the presidency of his party. In fact, the Government of Tamil Nadu started urging the Central Government to establish an atomic power station in the state as soon as the Central

\textsuperscript{119} Ibid.


Government decided to go in for nuclear power plants in the 1950s. However, the Government of India could set up the country’s first atomic power station near Ahmedabad only in 1960. The second plant was established in Rajasthan. As the state of Tamil Nadu had been pressing the Central Government for a nuclear plant all along, the latter decided to set up its third nuclear power plant in Tamil Nadu and hence the choice of Kalpakkam for it.

The Central Government wanted to go in for atomic power plants on seeing the success of Britain and the United States of America in that field in the 1950s. The Government of Britain set up the world’s first full-scale nuclear power station at Calder Hall in 1950 and the United States of America set up its first nuclear power plant in 1958. However, these two advanced countries had been doing research in the field in the previous decade. The Government of India headed by the visionary, Jawaharlal Nehru, had been watching the progress that the two countries had been making in generating power from atom.

Emulating Britain and the USA, the Government of India also ventured into setting up atomic power plants immediately after the Independence. With this end in view, it constituted an organization called

123. Ibid., No.12, Madras, December 1960, p.6.
124. Ibid., p.2.
Atomic Energy Commission in 1948. Formal research in atomic energy started in 1954.\textsuperscript{125}

The method of generating electricity from atom is more or less the same that is employed to generate power from the conventional sources. In a conventional power station, coal or oil is burnt to boil water, which produces steam. The steam turns the blades of a turbine as the wind turns the sails of a wind-mill. The turbine drives large dynamos, which in turn produce electricity.\textsuperscript{126} In an atomic power station, the same work takes place except that instead of boiling water by burning coal or oil, water is boiled by using some of the energy locked in the atom. This is the only difference. Instead of the conventional furnace in which coal is burnt, an atomic furnace called a reactor is used. The reactor generates enormous amount of heat by splitting atoms.\textsuperscript{127}

The atomic reactor is the furnace of the atomic age. It burns fissionable fuels to release tremendous amount of heat. This heat can be used to make steam which in turn can produce either motive power or electricity. Reactors are also used for research and for the production of radioactive materials.\textsuperscript{128}


\textsuperscript{126} Nagpal. G.R., op.cit, p.369.

\textsuperscript{127} Atomic Energy in India., op.cit, p.5.

\textsuperscript{128} Madras Information, Vol. XIII, No.6, Madras, June 1959, p.5.
Favourable Factors at Kalpakkam:

Kalpakkam, a coastal village 6 km south of Mamallapuram, could provide fresh water as well as sea water to the plant. The plant requires sea water for condenser cooling. The Palar river supplies fresh water to it. As the village is with rocky soil it is able to provide the plant with a strong foundation and the low density of population in the immediate vicinity in those days was an added advantage. The State Government had readily acquired 900 hectares of land and turned over it to the Central Government after rehabilitating about 500 affected families well before the stipulated time. The Central Government started constructing the diaphragm wall and foundation work for the first unit of Madras Atomic Power Station in 1967. The construction of the main building of the plant began in 1970. The plant design had many unique features. They included a 470-metre tunnel under the seabed designed and built with indigenous knowhow, a containment building of prestressed concrete design, the first in the country, and an indoor switchyard. The tunnel obviated the need for frequent dredging operations associated with open channel type structures for seawater intake.

The plant’s reactors built at a cost of about Rs. 400 crore are indigenous with only about 12 per cent foreign exchange content. The first

130. Ibid., p.8.
unit of the power station was completed in 1983 and it was declared open by
the then Prime Minister, late Indira Gandhi, in July that year. The second
unit was inaugurated by the next Prime Minister, late Rajiv Gandhi in
December 1985. These two reactors together have been feeding on average
about two billion units annually into Tamil Nadu grid.\(^{132}\)

R&D works at Kalpakkam is well documented through scientific
papers. The Kalpakkam Centre with its unique composition of a power
station, a major R&D Centre, a test reactor and a reprocessing plant, all at
the same site, stands out from the other sites of the Department of Atomic
Energy. The location of all these facilities at the same site has enabled
specialists with different orientations namely plant design, R&D and plant
operation to work together for a common purpose.\(^{133}\)

Consistent with the approach adopted by the Department of Atomic
Energy, which underlines the need to preserve the original state of the
environment around nuclear power stations, an Environmental Survey
Laboratory (ESL) was set up at Kalpakkam in 1974. This has made it
possible to build up a wealth of base line data on radiation levels arising
from naturally present radiation materials.\(^{134}\)

Installations of various types and kinds are many at Kalpakkam and
the Central Government has invested several hundred crores of rupees in the


\(^{134}\) Report of L.V.Krishnan, SR & H.P.Programme, Atomic Research Centre,
establishment. All these installations together have opened up job opportunities for the local population in construction, fabrication and service activities.\textsuperscript{135}

\textbf{4-13 Bharat Heavy Electricals Limited:}

Bharat Heavy Electricals Limited (BHEL), an engineering enterprise of the Government of India, is the largest of its kind in Asia, and its first unit was started in Bhopal in 1956.\textsuperscript{136} This large-scale public sector undertaking has been based at three locations in South India - Hardwar, Hyderabad and Tiruchirapalli. The preliminary steps for establishing Bharat Heavy Electricals Limited at Tiruchirapalli were taken by the Kamaraj Government at the beginning of 1960s. When the Central Government okayed the proposal of the State Government to set up BHEL at Tiruchirapalli, the latter, without losing any time further, acquired the required land in the suburbs of Tiruchirapalli.\textsuperscript{137}

BHEL is involved in producing 180 products required in manufacturing power, transmission, turbine, industry, transportation, oil and gas, telecommunication and non-conventional energy equipment. Among its products are wind electric generators, solar heating systems, solar photovoltaic systems, solar lanterns and battery powered road vehicles.\textsuperscript{138}

\begin{flushright}
\textsuperscript{135} Ibid.
\textsuperscript{138} http://www.bhel.com/, dated 25.4.2006.
\end{flushright}
It has a separate unit to manufacture boiler and it is called Bharat Heavy Electricals High Pressure Boiler Plant. This plant was established in 1965 with a rated output of 13,000 tonnes of finished boiler components equal to a power generating capacity of 750 MW per annum. However, in view of the ever-rising power needs in the country, BHEL was permitted to expand its capacity to 2,500 MW by the turn of the century. Its output in the year 1966-1967 was 3,230 tonnes.

The Boiler Plant of BHEL is the biggest boiler factory in Asia and this plant has earned for Tamil Nadu the credit of being a pioneer in the field of boiler manufacture including power boilers.

This subsidiary unit has given rise to a chain of ancillary units at Mathur in Kulathur taluk in the neighbouring Pudukottai district. All these ancillary units have been located in an industrial estate of 20 acres. The important ancillary units are foundries, forge shops, tube and pipe manufacturing units and units manufacturing boiler components and products such as valves, bends and pipe fittings.

Right from the beginning, BHEL has been paying great attention to remain competitive and meet its customers’ expectations and so it has great

emphasis on the continuous upgradation of products and related
technologies and development of new products. BHEL’s commitment to
advancement of technology is reflected in its involvement in the
development of futuristic technologies like fuel cells and superconducting
generators. Its investment in R&D is amongst the largest in the corporate
sector in India.144

4-14 Iron and Steel Plant in Salem:

The steel plant in Salem, which has been named Salem Steel Plant,
has been established and run by the Steel Authority of India Limited (SAIL),
the Government of India-owned company. Of the various types of steel
plants that SAIL owns, Salem Steel Plants belongs to the class of Special
Steel Plants.145

Though the Government of Tamil Nadu started evincing keen interest
in the early 1950s in setting up a steel plant in the state using the bauxite
reserves in Yercaud and Kolli Hills, it succeeded in the efforts only 30 years
later. When Kamaraj took over as the Chief Minister of Tamil Nadu in
1954, the public demand for a steel plant in Salem was in a high pitch. In
fact, the issue was raised in the State Assembly on 28 February 1955.146 The
then State Agriculture Minister, M.Bhaktavatsalam, told the Assembly on
February 28, 1955 that the tests carried out by some foreign experts in Salem
and South Arcot Districts had confirmed the presence of huge reserves of

146. Ibid., dated 1-3-1955.
bauxites in some regions of Salem District and lignite in some regions in South Arcot District. The Minister said that the findings of the experts had revealed the possibility of setting up an iron and steel plant in the state using the iron ore found in Salem District.147

Subsequently, the State Government of Congress Party took some steps in the direction of establishing the Steel Plant. It carried out investigation in places like Attur, Tiruchengode, Hosur and Krishnagiri and it gave encouraging results.148 It was estimated that the reserves of bauxite would be about 304 million tonnes.149

However, Salem Steel Plant was established only in 1981 when the Dravida Munntera Kazhagam Government was in power. But its foundation stone had been laid more than a decade earlier in 1970 by the then Prime Minister Indira Gandhi.150 Now the plant has a capacity to roll 1, 86,000 tonnes of hot rolled carbon and stainless steel flat products and 7000 tonnes of cold rolled stainless steel sheets and coils per annum. The plant has gone beyond its designed capacity and successfully cold rolled value added 0.13 mm thick stainless steel. Its products have become a household name, Salem Stainless, in the domestic market and are widely exported.151

150. Ibid.
4-15 Private Sector Large-Scale Industries:

Chennai can rightly claim the credit of fostering a few large-scale private sector industries even a decade before the Central and State Governments ventured to establish their own big industries. Hindustan Motors Limited, The Standard Motors, Ashok Leyland, Royal Enfield Motorcycles Limited, Western India Match Company Limited, K.C.P.Limited, Madras Aluminium Company and EID Parry (India ) Limited are important of them.

4-15-1 Hindustan Motors Limited:

Hindustan Motors Limited has been the pioneer in automobile industry in India and this company was founded in 1942. It is this automobile giant of the country that had embarked upon manufacturing earthmovers in 1969 in technical collaboration with General Motors of the USA, and for this purpose it set up its Earthmoving Equipment Division at Melnallathur, 46 km from Chennai. After successfully absorbing technology from General Motors, the company had entered into an agreement with Caterpillar Inc., U.S.A. By 2000, the product line of the company’s Earthmoving Equipment Division included Dumpers, Loaders and Crawler Tractors of various capacities.

155. Ibid., p.5.
The Standard Motors:

The Standard Motors was the pioneer car-maker in India and the popular car that this company had been making was Standard Harold. The specialty of this car was that it was a cute small car and it had only two doors. It could be rightly described as the precursor of the present Maruti 800. Professionals like doctors and lawyers were among those who had patronized it.\textsuperscript{156}

The car-making company had collaboration with Standard Motor Company of Coventry in the United Kingdom and it started functioning in Chennai in 1948.\textsuperscript{157} The Indian company started working first in an Aero-hangar at Chrompet belonging to the Government of Tamil Nadu and the first ‘Vanguard’ came off the lines in July 1950.\textsuperscript{158}

The company took up production of Ferguson tractors also by the end of 1950. Simultaneously it had acquired 59 acres of land for it at Vandalur on the Grand Trunk Road, 28 km from Chennai. The foundation stone for the factory building on this land was laid in January 1952.\textsuperscript{159}

\textsuperscript{156} Personal Interview with M. Benny Singh, a retired teacher and a car enthusiast, aged 61, residing at Thuckalai, dated 15-4-2006.

\textsuperscript{157} Gopalakrishnan.M., \textit{op.cit.}, pp.518-519.

\textsuperscript{158} Madras Information, Vol. XV, No. 10, Madras, October 1960, p.29.

\textsuperscript{159} Ibid., p.30.
The company had a fixed capital of Rs. 41 lakh in 1950 and it rose to Rs. 99 lakh in 1958.\textsuperscript{160} There were 200 employees in the company in 1950 and this number of labour force rose to 1200 by 1959.\textsuperscript{161}

With the shift in government policy, the company had to confine production to small cars and consequently had to give up the Standard Vanguard. In view of the progress achieved in the indigenisation of Vanguards it was felt that this could be utilized to manufacture light commercial vehicles. But it was the crisis in 1973 which changed the course of the company. What had threatened to bring about the disaster of the company served to set the pace for further advancement. Seasoned officials of the company engineered a shrewd shift in product policy at this point which resulted in the production of Standard –20 with a diesel engine. This was a major turning point to the company. The company has never looked back after this success. By early 1990s there were more than 40,000 Standard-20 diesel vehicles on the road, plying as delivery vans, pick-up trucks, ambulances, mini—buses and micro lorries built to suit customers’ requirements.\textsuperscript{162} As the Standard Motors was gaining in strength, another automobile giant, Ashok Leyland also entered the field.

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\textsuperscript{160} MLA Debates, Vol. XLIX, No. 1-7, Madras, dated 14-12-1961, p. 775.


\textsuperscript{162} Gopalakrishnan. M., \textit{op.cit}, p. 519.
4-15-3 Ashok Leyland Limited:

Like the Standard Motors, this company also began working in Chennai in 1950 as a collaborative venture. It had struck an agreement of collaboration with Leyland Motors Limited of the United Kingdom.

Ashok Leyland Limited had a paid-up capital of Rs. 32,45,480 in December 1950 when it entered into an agreement of collaboration with Messrs. Leyland Motors Limited of the U.K. By this agreement, Ashok Leyland acquired the rights to manufacture and sell in India the world renowned Leyland Comet commercial vehicles. Since then it had been assembling Leyland Comet chassis imported from Leyland Motors Limited of the U.K. When it started manufacturing Leyland Comet vehicles in 1955, its paid up capital had risen to Rs. 54,56,500. The paid up capital further rose to Rs. 1,87,10,000 by the end of December 1958.

The company was able to manufacture components representing approximately 15 per cent of the cost, insurance, freight value of complete chassis at its own factory at Ennore by 1956 and by the next year it could raise this to 36 per cent. At the end of 1959, it was able to achieve nearly 60 percentage. Subsequently, the company got licence to manufacture heavier Leyland Tiger Titan Vehicles. The engines were the famous Leyland ‘600’ and ‘680’ diesel types developing maximum torques of 410lb. feet at

9000 R.P.M. and 450 lb. feet at 1100 R.P.M. respectively, the corresponding H.P. being 125 at 1800 R.P.M. and 150 at 2000 R.P.M. These two engines were standard fittings in the complete range of Leyland heavy duty goods vehicles and the Leyland Tiger and Titan chassis in categories heavier than the Comet.\textsuperscript{167}

The company’s ownership changed into the present custodians, The Hinduja Group, the non-resident Indian transnational group and IVECO Fiat SPA, part of the Fiat Group and Europe’s leading truck manufacturer, in 1987.\textsuperscript{168} The Company’s growth rate has been spectacular during the last half a century. It has over the years built up a reputation for reliability and ruggedness. The 375,000 vehicles that the company has put on the road have considerably eased the additional pressure placed on the road transport in the Independent India.\textsuperscript{169}

Keeping the tempo of its growth, the company signed a ‘framework agreement’ in July 2006 to acquire the truck business unit of AVIA of Prague (Czechoslovakia). By signing this agreement, Ashok Leyland Limited became the first Indian truck company to gain a foothold in the European truck market.\textsuperscript{170}

The company’s factory buildings stand on a site of 134 acres at Ennore, a suburb of Chennai on the Chennai-Kolkatha railway line. Its

\begin{itemize}
  \item \textsuperscript{167} Ibid., p.37.
  \item \textsuperscript{168} http://www.ashokleylandchennai.com/, dated 27.4.2006.
  \item \textsuperscript{169} Ibid.
  \item \textsuperscript{170} The Hindu (English Daily), dated 20.7.2006.
\end{itemize}
buildings in the beginning of 1960 covered about 3,63,600 square feet. Plant and machinery were worth for Rs. 2 crore.\textsuperscript{171}

\textbf{Training Programme:}

The company had also been offering training programmes with a view to getting suitable persons trained for job in its factory. There were three main classes of apprentices in training at the company’s factory. They were graduate apprentices whose period of apprenticeship was three years, engineering apprentices who had also to undergo three-year training and trade apprentices whose training period extended to five years.\textsuperscript{172} In addition to these training programmes, there were trade trainees specializing in particular trades, and apprentices sponsored by various governments. The company had been a provider of employment to a large number of people. It was employing 1000 people in 1958 and during the next two years it could offer employment to 500 people more.\textsuperscript{173}

\textbf{4-15-4 Tube Investments Industrial Establishments:}

The founder of the present the Rs. 4500-crore giant industrial conglomerate, the Murugappa Group, is the late A.M. Murugappa Chettiar. Tube Investments of India Limited is the post-Independence foray of the Murugappa Group in manufacturing. It is called Tube Investments of India

\begin{flushleft}
\textsuperscript{171} G.O.No.Ms. 1239, Home Department, dated 25-4-1960.
\textsuperscript{172} MLC Debates, Vol. XLVII, No. 1-10, Madras, dated 30-6-1962, p.483.
\textsuperscript{173} Madras Information, Vol. XV, No. 6, Madras, June 1961, p.10.
\end{flushleft}
Limited because of the company’s collaboration with Tube Investments Limited, UK.\footnote{http://www.tiindia.com/, dated 29.4.2006.}

The Murugappa Group having its headquarters in Chennai has now interests in engineering, abrasives, sanitaryware, fertilizers, finance, bio-products and plantations. It has 29 companies under its umbrella, of which eight are listed and actively traded on the National Stock Exchange and Bombay Stock Exchange. All these companies together have a workforce of 28,000 people.\footnote{Ibid.}

Murugappa Chettiar’s rise to the status of a visionary industrialist is a story of rags to riches. He established money-lending and banking business in a small way in Myanmar (Burma) in 1900. He then slowly diversified his activities to Malaysia, Sri Lanka, Indonesia and Vietnam. During the twentieth century, his establishments withstood enormous vicissitudes and just before the second world war broke out, he had strategically moved his assets to India and restarted his business from the scratch. Soon his companies started growing and now his group is one of the country’s biggest industrial houses.\footnote{Ibid.}

Tube Investments of India Limited of the Murugappa Group discovered in the late 1950s Ambattur as an industrial area of vast potentialities, and without wasting time any further it established a chain of industrial units. The chief among these units now are TI Cycles of India,
Tube Products of India, T.I. Metal Sections, Wright Saddles of India, T.I.Miller and T.I. Diamond Chain Limited. The well-known brands like BSA, Philips and Hercules in bicycles are the products of TI Cycles of the Group.

Another subsidiary of the group, TI Metal Forming, is a pioneer in cold forming. It manufactures and supplies value-added metal-formed components like car door frames, sash/division channels, door guide rails, window frames, side impact beams, rail and bar assembly. It has plants in Chennai and Bawal (near Gurgaon). Both plants are QS 9000 certified. The Chennai plant is ISO 14001 certified. A third plant has been set up near Baroda (in Gujarat state, western India) to manufacture and supply doorframes, impact beam, bar and rail assembly for General Motors, India. Its client list includes Maruti Udyog Limited and Hyundai.

The Group has set up most of the units coming under its subsidiary, Tube Investments of India Limited, at Ambattur in Chennai. Of these, the unit manufacturing bicycles has been made a separate company, TI Cycles of India Limited.

**TI Cycles of India Limited:**

This bicycle manufacturing unit has been located at Ambattur. Its factory consists of two units namely Plant -I and Plant - II. Plant -I was formally commissioned on 26 September 1951 and the second unit was

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declared open on 29 January 1954.\textsuperscript{179} The factory stands on a site of 55 acres of land. The manufacture of bicycles in the factory is closely associated with one of the world’s renowned bicycle manufacturers – Hercules Cycles and Motor Company Limited, Birmingham, UK.\textsuperscript{180}

The factory employed 283 workers in 1952 and this workforce rose to 905 in 1955 and to 1682 in 1959. The bicycle production has been steadily rising since its inception. The factory produced 36,790 bicycles in 1952 and the production rose to 1,29,922 in 1956 and 200,676 in 1959 and 13,00,000 in 1991. The company exports its products to Myanmar, West Asian Countries and to some African countries.\textsuperscript{181}

**Tube Products of India:**

Tube Products of India was set up at Avadi in 1955 and it manufactures TRU-WEL electric resistance welded tubes and cold drawn welded tubes. The company has at its disposal all the specialized knowledge, the latest researches and the vast experience of Tube Products Limited, Oldbury, U.K. (a member of the TI Group in U.K.) who are pioneers in the manufacture of electric resistance welded steel tubes in Europe. TRU-WELL tubes provide the framework for bicycles. More than 80 per cent of the bicycles made in India are built with them.\textsuperscript{182}

\begin{itemize}
  \item \textsuperscript{179} Madras Information, Vol. X, No.2, Madras, February 1956, p.23.
  \item \textsuperscript{180} Report of Tube Investments of India Limited, Chennai dated 25.8.1992, p.3.
  \item \textsuperscript{181} Gopalakrishnan M., \textit{op.cit}, p.516.
  \item \textsuperscript{182} \textit{Ibid}, p.517.
\end{itemize}
crore and it had risen to Rs. 3 crore in 1992. The factory provides employment to 150 people.186

**TI Diamond Chain Limited:**

TI Diamond Chain Limited, another subsidiary of Tube Investments of India Limited, is also located at Ambattur. It was established in 1960. This unit is the largest producer of roller chains. It manufactures automotive and bicycle chains both for original equipment and for replacements and has been successfully catering to the needs of the bicycle and automotive industry. It also produces industrial chains. Bicycle chains are exported to England, Australia, Newzeland, Norway, West Germany and the USA. Industrial Chains are exported to Sri Lanka, Italy, Syria, Australia and the United Kingdom.187

4-15-5 Madras Rubber Factory

Madras Rubber Factory (MRF) is one of the major private sector tyre manufacturing companies in the country. This is the only tyre company having giant manufacturing facilities at several places. It has its production facilities at Chennai, Arkonam, Kottayam, Goa, Medak and Pondicherry.188

The moving spirit behind the founding of this manufacturing unit in the forties of the last century was late K. M. Mammen Mappilai, a Syrian


Christian from central Kerala. He moved to Tiruvottiyur in Chennai in 1946 and established Madras Rubber Factory to produce toy balloons. His workplace was a simple shed and his product required no machines.\(^\text{189}\) 

He enlarged the range of his products three years later. The new additions were latex cast squeaking toys, industrial gloves and contraceptives. He had a penchant for producing any products that could be made of rubber without machines.

Mammen Mappilai’s MRF ventured into manufacturing tread rubber by the early 1950s and with that the first machine, a rubber mill, was installed at the factory which by this time had grown into an asbestos shed measuring 100’ X 30’.\(^\text{190}\) Since then the company has never looked back.

MRF soon became the only Indian-owned unit to manufacture the superior extruded non-blooming and cushion-backed tread rubber. This enabled the firm to compete with foreign companies operating in India at that time. By the year 1956, the company became the market leader with a 50 per cent share of the tread rubber market in India. The foreign companies had no other option but to withdraw from the tread rubber business in the country.\(^\text{191}\) With the success achieved in tread rubber, MRF entered the field of tyre manufacture.


\(^{191}\) Ibid., p.13.
It established a technical collaboration with Masefield Tyre & Rubber Company of the USA in 1961. By this time, MRF became a public limited company and was all set to cross further milestones. A pilot plant to manufacture tyre was also established at Tiruvottiyur.

With the commissioning of the main plant in 1964, MRF made strides in the export of tyres. Slowly it widened its overseas market and now it exports tyres to 65 countries. It has set up 55 sales offices all over the country and has appointed more than 2500 dealers. Now the company produces five very popular brands of tyres namely Superlug, Legend, Zigma, Nylogrip and Shakthi.

At home, MRF produces tyres for all brands of Maruti Udyog Limited, Cielo, Ford, Opel, Fiat Uno and almost all brands of two-wheelers. National Institution of Quality Assurance selected MRF for its most prestigious award in 1986.

**4-15-6 TVS Group:**

TVS Group is now one of India’s largest industrial conglomerates. TVS & Sons stands for T.V. Sundaram Iyengar and Sons. Late Sundaram

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194. Ibid., p.17.
195. Personal Interview with Mr. Shibu, MRF Technician of Marthandam office, aged 41, residing at Marthandam, dated 14.3.2006.
Iyengar founded the business venture in 1911 and slowly he developed the business into the largest automobile distribution concern in India.  

As new automobile manufacturing companies sprang up in different parts of the country, TVS & Sons Limited procured their dealership and became their distributors. Thus it distributes now heavy duty commercial vehicles, jeeps and cars. It represents premier automotive companies like Ashok Leyland, Mahindra & Mahindra Limited, Fiat and Honda.  

However, by the turn of the sixth decade of the last century, TVS & Sons Limited entered the manufacturing field. It established two companies in the early 1960s in Chennai – one to manufacture wheels of motor vehicles and the other was to produce brake system of motor vehicles.  

**Wheels India Limited:**  

Wheels India Limited promoted by TVS Group is located at Padi in Chennai. This company was established in 1960 to manufacture wheels of commercial vehicles, tractors and defence vehicles and wire wheels.  

The industrial unit began functioning with an installed capacity of 3,20,000 wheels and this increased to 22,00,000 in 1992 and the actual production for the year 1990 was 23,51,918 wheels. The total investment

197. Ibid.  
198. Ibid.  
200. Ibid
at the end of 1962 was Rs. 161.66 lakh and this investment increased to Rs. 6909 lakh in 1972.

The industry has now been in collaboration with Dunlop Limited, U.K., which holds an equity share of 35.91 per cent. The industry provides employment to 1291 people. \(^{201}\)

The company procures its raw materials from Steel Authority of India limited, Tata Iron and Steel Company Limited, Partap Steel Rolling Mills Limited, Amristsar, Decan Profiles Limited, Hyderabad, and Picktab Engineers, Madras. \(^{202}\)

**Brakes India Limited:**

Strictly speaking, this manufacturing unit, like Wheels India Limited, does not fall into the category of a large-scale industry. It is only a medium size industry. TVS & Sons Limited founded this unit with name Brakes India Limited at Padi in the suburbs of Chennai in 1962 as a joint venture between TVS Group and Lucas Industries Plc., UK. \(^{203}\) From the beginning itself, this industrial unit started growing into a big brake system supplier to the automobile industry in the country. It had achieved a production capacity of 2,40,000 sets and Casting MT 6250 by the year 1990-1991 as

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against its licensed capacity of 2,69,000 braking sets and casting MT 5000 for the year.\textsuperscript{204}

Major raw materials used in the production are steel sheets, steel bars, ferrous castings, aluminium castings, aluminium bars, steel forgings, brake linings, brass stampings, rubber components, plastics and other hardwares. Raw materials are supplied by the Steel Authority of India, Tube Products of India, Chase Bright, GKW, Bhartia Commercial, India Tube Mills, Rane Brake Linings, Sundaram Abex, Hindustan Ferodo, Eltex Super Castings, Crown Castings, Business Combines Limited, Hindalco, Chandur Forgings, Sundaram Industries, Standard Springs, Sundaram Fasteners and Hindustan Springs. The industrial unit provided employment to 143 people in 1964 and the strength of workforce rose to 2210 in 1990-1991.\textsuperscript{205}

With design, development and manufacturing capability that match global standards in quality and safety, the company has been supplying full brake system to the industry. The company began exporting brake components in 1968. Products are now exported to more than 35 countries around the world. Its major markets include Africa, Australia, Europe, Mexico, West Asia, Newzeland, South East Asia, Sri Lanka and USA.

Its products include drum brakes for commercial vehicles, trailer brakes for the Australian trailer industry, tractor brakes, master cylinder and

\textsuperscript{204} Report of the Executive Director (Finance), Brakes India Limited, Madras, dated 16.12.1991.

\textsuperscript{205} Gopalakrishnan. M., op.cit, p.526.
booster assemblies and wheel cylinder assemblies. It is also major exporter
of Grey Iron and SG (Ductile) Iron castings to TRW, Meritor and Bosch.206

4-15-7 The Motorcycle Industry:

As this country is now in an automobile boom, the members of the
younger generation may find it difficult to take note of the fact that there
had been hardly 30,000 motorcycles in use in the whole of the country in the
1950s. One need not say that this figure is negligible when one takes into
account the country's size. Even in England there had been more than
700,000 motorcycles on the road during this period.207

However, though there were only a few motorcycles in India at that
time, almost all popular brands of two wheelers were among them. This
heterogeneous factor also had a deleterious effect on the motorcycle owners
in those days. The motorcycle companies, which had manufactured the
motorcycles, could not afford to provide the motorcycle owners in this
country with after sales-service in view of the very small number of two
wheelers that they had sold here.208 It was when two-wheeler use stood in
this style that the big motorcycle manufacturing industry, Enfield India
Limited, was established at Tiruvottiyur in the northern suburb of Chennai in
November 1955.209

208. Ibid, p.5.
Enfield India Limited:

Enfield India Limited in Chennai, in addition to meeting the ever-increasing demand for motorcycles, added a new page to the history of industrial development in the whole of the country.

Enfield India Limited is the name that Madras Motors Private Limited had given to its subsidiary unit. The parent company, Madras Motors Private Limited, had been the only organization in the country devoted to the selling and servicing motorcycles and specializing in these twin jobs. With their experience in cycle, motorcycle and engineering trades extending to several years, all that they needed was technical know how to enter the field of motorcycle manufacture. They entered into an agreement with the well-known and long-standing Enfield Cycle Company Limited in the United Kingdom for technical collaboration and thereby laid the sure foundation for the successful manufacture of Royal Enfield motorcycles and three wheelers in India.

The industry was started with an initial labour force of 250 men. With the expansion of the industry, the number of workers had also increased. The workforce rose to 600 men in 1957 and to 750 people in 1958. By the year 1960, the number of workers rose to 950. Besides, a large number of people

were employed by the dealers of the two wheelers and three wheelers that
the company manufactured.  

The new motorcycle company put on the road 1100 two wheelers in
1956. This figure increased to 1900 in the next year and to 2800 by 1958.
More than 2000 components went into a motorcycle. Initially more than 70
per cent of these components were made in the industry itself. Two brands
of motorcycles were produced in 1960. One was known as Ensign with 1.5
horse power engine which could run nearly 40 km on a litre of petrol. The
other is the popular motorcycle called Bullet with a 3.5 horse power engine.
This motorcycle could run nearly 30 km on a litre of petrol in those days.

4-15-8 K.C.P.Limited:

K.C.P.Limited, a private concern, set up a major industry at
Thiruvottiyur in Chennai in 1952 to manufacture machinery and equipment
for complete sugar plant, chemical and steel mineral processing industries,
gears, pinions etc. Like most of the private concerns in the state, this
company has also kept up a consistent step towards progress over the years
and now it manufactures a wide range of machinery. It has several divisions
and the most important of them are heavy engineering division, cement
producing division and hydel power division. Its engineering division offers

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214. Ibid., p.148.
215. Report of the Assistant Manager of K.C.P. Limited, Tiruvottiyur, Madras,
integrated manufacturing facilities for casting, fabrication and machining under one roof.\textsuperscript{216}

Its capital investment in 1960 was Rs. 89.01 lakh and it rose to Rs. 452.96 lakh in 1970. The plant produces about 5000 tonnes of machinery and equipment for complete sugar plant, cement plant, chemical, steel, mineral processing industries, gears, pinions etc. per annum. Raw materials are procured from Steel Authority of India and also from open market. When the plant was first set up in 1952, it could give employment to 170 people. The workforce rose to 720 by the year 1991.\textsuperscript{217}

4-15-9 The Mettur Chemical And Industrial Corporation:

The Mettur Chemical And Industrial Corporation Limited is an Indian enterprise of the British period. A Calcutta-based company namely Dayaram and Sons had the foresight as early as 1936 to exploit the potential of the industrial climate available at Mettur.\textsuperscript{218} Mettur Hydro-Electric Project was commissioned in 1936, and taking this into consideration, the Calcutta company approached the then Madras Provincial Government for facilities to establish an alkali plant at Mettur Dam. The Government offered certain concessions to the company such as supply of electricity at a cheap rate and

\begin{itemize}
  \item \textsuperscript{216} http://www.kompass.com/, dated 9.5.2006.
  \item \textsuperscript{218} Journal of Indian History and Culture, Impact on Industrial Development of Salem District, Chennai, September 2002, p. 102.
\end{itemize}
75 acres of land, as it had taken into account the importance of chemical industries.\textsuperscript{219}

The company went into commercial production in 1941. At the initial stage, its installed capacity of production of caustic soda was only five tonnes a day. This went up to 14 tonnes a day in 1951 and to 20 tonnes in 1959. In 1962, this capacity was doubled and in 1964, it was further increased to 60 tonnes a day.\textsuperscript{220}

The company has its own salt pans at Adiramapatnam and Vedaranyam in Thanjavur district and limestone quarries in Sakaridurg and Tiruchengode in Salem district. Salt and limestone are the basic raw materials for production of caustic soda.

Though the company produced only caustic soda and not-stable bleaching powder in the beginning, later it took of production of chlorine and hydroelectric acid. Now it produces vegetable oil products like vanaspathi, refined vegetable oil and soap also.\textsuperscript{221}

\textbf{4-15-10 Mettur Aluminium Plant:}

Mettur Aluminium Plant was set up at Mettur Dam in Salem District by Madras Aluminium Company Ltd. (MALCO) during the reign of the Kamaraj Government. Madras Aluminium Company is part of Vedanta

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\textsuperscript{219} Ibid, p.103.
\textsuperscript{220} Kalaimagal., (Tamil Journal), March 1980, p.2.
\textsuperscript{221} Journal of Indian History and Culture, \textit{op.cit.}, p.103.
\end{flushright}
Resources, a London-listed metals and mining major with aluminium, copper and zinc operations in UK, India and Australia.\textsuperscript{222}

MALCO is a primary aluminium producer in South India with operations encompassing mining, refining, smelting and power generation.\textsuperscript{223}

As early as 1954, industrialists had realized the need to develop aluminium industry in Tamil Nadu considering the availability of aluminium ore bauxite in Shevroy Hills in Salem district. The Government of India set up a committee in 1955 to specifically advise it on the possible sites for the location of aluminium manufacturing plants in the country. The committee had recommended setting up a plant at Mettur for exploiting the aluminium bauxite ore reserves in Shevroy Hills.\textsuperscript{224}

The then well-known industrialist of Coimbatore, R. Venkatasamy Naidu, came forward to set up the gigantic project. It was he who had founded Madras Aluminium Company and he did so after having acquired the lease right of the mine area from Shevroy Bauxite Products Company. The new company came into being in January 1961. This was a Rs. 14-crore project in the private sector, the biggest in the state then.\textsuperscript{225}

\textsuperscript{222} www.mako-india.com, dated 10.5.2006.

\textsuperscript{223} Ibid.

\textsuperscript{224} Journal of Indian History and Culture, \textit{op.cit}, pp.104-105.

\textsuperscript{225} MALCONEWS Magazine, Publication of Madras Aluminium Company Limited, dated 2.7.1965, p.9.
MALCO has now its own bauxite mines in Yercaud and Kolli Hills in Tamil Nadu. Mettur Aluminium Plant produces aluminium ingots (both slabs and alloys). When it was commissioned in 1963, it had an installed capacity to manufacture 10,000 tonnes of aluminium ingots per annum. Nearly one third of its manufacture was of electrolytic type suitable for making conductors.\(^{226}\)

Many favourable factors played a part in launching the enterprise. The active interest and encouragement of the Kamaraj Government was a big initial advantage. The suitability of the ore had been confirmed beyond all doubts. The mining of the deposits offered little or no problems. The deposits lay on six hills, some six kilometres from Yercaud, on the top and as it was only opencast mining, little difficulty was faced. The labour was quite adequate for the purpose. Electricity, another major requisite, was available from the Mettur power house in sufficient measure for the immediate and future needs. The State Government supplied electricity to the company at an economic rate. Labour was quite adequate for the purpose. Caustic soda, the third requisite, was produced at the next door by Mettur Chemicals and there was thus an assured supply at hand. There was also copious supply of water for the industry.\(^{227}\)


\(^{227}\) Journal of Indian History and Culture., op.cit., p. 106.
The State Government had made available to it 600 acres of land and as this land was very close to the Mettur railway station, the company stood to a great benefit.

The foundation stone for the factory was laid on June 10, 1961 by the then Union Minister of Commerce and Industry, Lalbahadur Shastri at a function at Mettur which was presided over by the then Chief Minister of the State, Kamaraj. The vastness and size of the factory could be understood better if the length of cables, pipelines and drainage pipes laid is taken into account. Pipelines measuring more than 10,000 metres for carrying drinking water and pipelines of about 5,000 metres for carrying industrial water were laid. The drainage requirements claimed 4,500 metres of pipes. Hundred thousand metres of power cables were laid underground. The entire complex costing more than Rs. 2.5 crore is a beautiful with its special pattern, design and architecture. Rail line of 2.7 km in length has also been laid inside the factory for quick movement of raw materials. The factory was inaugurated on July 2, 1965 by the then President of the country, S. Radhakrishnan.

The period of study witnessed considerable changes in the development and administration of the industries in the state. The special attention is given by the state for the development of Large Scale Industries are highlighted the full information. The support of the union government to the state for its mission towards industrialization. The working of various Large Scale Industries and mills both in public and private sector are discussed elaborate with suitable illustration in this chapter.

229. Journal of Indian History and Culture, op.cit, p.106.