

## CHAPTER V

### INDUSTRIES

Comprising three taluks, viz. Anekal, Bangalore North and Bangalore South, the Bangalore district is industrially the most advanced district in Karnataka. The district is endowed with almost all primary requirements such as accessibility to raw materials, machinery, power, technicians, labourers, transport and communications, climatic conditions, marketing opportunities and financial facilities for the growth and development of industries. Minerals such as gneissic rocks, clay, quartz, feldspar, etc. are abundant in the district. Gneissic rock is extensively quarried for building purposes. Materials for glazed pottery are procurable around Bangalore. The clay at Whitefield area has attracted special attention. Various oil seeds, vegetables and fruits are also raised to a considerable extent. Mulberry cultivation for the support of silk-worms is an important branch of industry in the district.

The turn of the twentieth century brought brighter prospects for industry with the State Government setting up hydro-electric power station at Shivasamudram in 1902-3 and Bangalore was the first city in India to be electrified. Bangalore is the centre of railway and air traffic in the state. It is connected with National and State Highways, joined by a good network of country roads. Communication facilities such as posts and telegraphs, financial facilities such as nationalised banks and other financial institutions are abundant in Bangalore. These have encouraged the growth of industries in the district. Besides natural advantages for the development of industries, the Government of Karnataka has contributed a lot for their progress. The government has established some of its industries in the city of Bangalore. Sometimes, it pioneered certain industries, where private enterprise was not forthcoming. It encourages private industrialists to invest capital over large scale industrial concerns on a joint basis either by the government subscribing to the share capital or by affording facilities such as land, water, electric power, etc. free of charge or at concession rates. The Government extends financial assistance

in the form of loans repayable in easy instalments for the purchase and erection of machinery. The government renders necessary technical advice and assistance to private industrialists in connection with erection of, and repairs to industrial plants and machinery. It also opened technical institutes in which specialised training is imparted.

### Old time industries

Of the old time industries of the district, production of textile goods is the most notable. Some inscriptions from the district, ranging at least from the days of the Hoysalas, indicate the area being an active centre for textile weaving. Nakkur village in 1110 A.D. (NI 3) contributed a considerable sum as tax on looms. Two records of Ballala III dated 1301 (from Gunjur, Bn 51 and Madivala, Bn 65) indicate that tax on looms was a considerable amount in this area, thus helping us to conclude that weaving was a flourishing industry. Sarjapura was also a well known textile centre as testified by an inscription of the place which speaks of the Kodandaramaswamy and Prasanna Anjaneya temple of the place in 1801 and the Pamasale (Padmasali?) and Padasale people who were its devotees. Buchanan, while speaking of Mysore State during his visit, says that 'the weavers of Bangalore seem to me to be a very ingenious class of men and with due encouragement, were capable of making very rich fine elegant cloths of many kinds that may be in demand'. He speaks of the Pattegars (silk weavers) and the 'Cuttery', (Kshatriyas, people from southern parts of Gujarat) in Bangalore who prepared very strong and rich cloths. They dyed much of their silk in red, orange and yellow colours, and were more wealthy than other weavers, he adds. He speaks of groups of weavers called the Bilimaggas who included the Shayanagararu, Padmasali and the Samayashale who wove white Muslin and the Thogataru who manufactured coarse white cloth (rumal or handkerchief). The 'Whalliar' (Holeyaru) produced "white coarse strong cloth". The Neelagararu were another section of dyers. Buchanan also testifies that women of all castes (except the Brahmins) spun yarn in Bangalore and sold the thread at the weekly markets. The yarn produced at Bangalore was of a finer quality than from Bellary and the Krishna valley, according to him. He also speaks of lime kilns near Kadugodi, present Whitefield, run by the Sunagars. Anekal was also famous for handlooms. The traditional weaving groups like the Devangas and the Padmasalis are found scattered in Bangalore city and other parts of the district. Under Chikkadevaraya of Mysore, Bangalore had 12,000 families of weavers. Under Tipu many weavers from the Baramahals in Tamilnadu settled down in Bangalore and surrounding places.

Bangalore carpets were wellknown for their durability and for the peculiarity of having the same pattern on both sides. The Central Jail of Bangalore during the 19th century had a reputation for production of carpets of good weave and attractive soft colouring. The pile carpets made in the Central Jail, later from Persian and Turkish designs were probably superior to any other in India. In connection with Bangalore carpets, the following interesting remarks and

testimony by Sir George Birdwood may be quoted from his work (entitled the Termless Antiquity of the Oriental Manufacture of Sumptuary Carpets) prepared for the Austro-Hungarian Government. The decoration of textile fabrics was at first extremely ritualistic and it seems to have originated in the practice of tattooing from which the rich symbolical vestments worn by kings and priests have in great part of the world been obviously derived. "The wonderful carpets of Bangalore probably approach in their bold scale and design and archaic force of colouring nearest to their Euphratean prototypes". The carpets of Bangalore, on account of the marvellously balanced arrangement of their colossal proportions and the Titanic power of their colouring, satisfied the feeling for breadth, and space, and impressiveness in State furniture, as if they were indeed made for the palaces of kings and temples of the Gods. "The Bangalore carpets without a trace of the saracenic or any other modern influence or both, relatively to their special applications, the noblest designed of any denominations of carpets now made". The Bangalore carpets were unapproachable by the commercial carpets of any time and place.

Under Tipu, industry was woven around textiles. The production of textiles was cottage-like, with weavers working on individual looms at their residences and was totally in private hands. Orders were received directly from customers in some cases. But they were mainly commissioned by merchants who provided the raw material and sold the finished products. Tipu's enthusiasm for new technologies and trades resulted in emissaries being sent to different parts of the world in search of silk-worm eggs and the perfect race was produced from South China. "The silk manufacture seems especially favourable for a country far from the sea....." says Buchanan speaking of the favourable situation of Bangalore for sericulture and adds: "Tippoo had commenced a trial, but his arbitrary measures were little calculated to ensure success". Goni or gunny weaving undertaken by the Gonigaru by using Janupa fibre (*Crotalaria juncea*), tanning practised by the Madigaru, pressing oil from sesamum, castor, safflower, copra, *ippe* and *honge* by the Jyothiphanada Ganigaru are also mentioned by Buchanan, while speaking of Bangalore.

But soon, within a decade or two, Industrial Revolution in England proved ruinous to textile and silk weaving. The long neglected silk industry was pushed into a corner with the import of foreign silk and while no import duty on silk entering the state was charged, silk products exported to England carried a heavy duty according to colonial tariff. The Commissioner's Rule (1831-81) helped enforcement of many other tariff measures helping the English goods to have an upper hand while competing with local products. Industry in the district stagnated and only signs of industrial enterprise in 1869 was the government initiated jail manufacture. Indigenous industries slowly declined, and modern industries could be slowly founded during the second half of the 19th century.

Extraction of oil, tanning, basket-making, pot manufacture, weaving, etc. were some of the traditional crafts flourishing from good old days and the various caste

names such as the Ganigas, Panchalas, Kumbaras, Devangas, Pattegars, Medars, etc. indicate the craft or industry which they followed. Production of salt and lime were two other notable industries. Lime is produced from lime stone mined. Buchanan describes the kilns at Kadugodi (near Whitefield), and a community called Sunagars engaged in this industry. But salt monopoly regulations of the British Government ruined salt manufacture, and many Uppars took to masonry and lime making as a result. But the smiths' work of all kinds and carpentry in all its branches including coach building and furniture making were pursued, and continued in some form or the other. Manufacture of baskets, mats and coir ropes were common especially in Koracharapalya and Bamboo Bazar where most of the people were engaged in this work and mainly depended upon this industry. Metal works in gold, silver, brass and copper were carried on throughout the district, mostly in the urban centres. But Birmingham items crippled blacksmithy.

### **Beginning of Modern Industries**

Several large and medium scale industries in the mechanised sector came up after the 1850's in the district. The government press was one among them. It traces its origin to a bold venture and untiring efforts of Rev. J. Garrett in 1840. He was efficiently managing a small printing press for the Wesleyan Mission Society within the premises of the Wesleyan Mission High School in Bangalore. Rev. Garrett persuaded the Chief Commissioner of Mysore, Sir Mark Cubbon to establish a government press for doing the government printing work and government press was for the first time opened at Bangalore in 1866 with Rev. J. Garrett as its Superintendent. But it was then operated by manual labour.

The cotton boom of the 1860's (result of the American Civil War) helped the establishment of many ginning and spinning units in Bangalore. After the Rendition (1881), the Dewans were very keen on developing industries, especially modern industries. "No country can prosper unless its agricultural and manufacturing were equally fostered.....The development of the various industries on which the prosperity of the country is dependent equally demands our consideration", was the first Dewan, Rangacharlu's views on the subject, but he did not survive long to implement his ideas. Sheshadri Iyer also inherited this spirit and took special steps to develop infrastructure, especially railways and power production

In 1884, the Bangalore Mill Ltd., one of the oldest modern steam mills of Bangalore, was established. Prior to this, it was started as the Wollen Factory by S. Lee (Principal, School of Engineering) in 1875 for manufacture of carpets. By 1879, the receipts had grown to Rs. 4,624 which sufficed to instal wollen machinery powered by 12 HP steam engine. The unit began to compete with the products of the Central Jail which were naturally cheap. The State Government purchased some of its shares and also products. It became the Bangalore Wollen, Cotton and Silk Mills Company Limited in 1884 and was finally taken over by Binny and Company in 1886. The manufacture of cotton yarn, wollen and piece goods, and

wool, cotton and silk fabrics were undertaken in 1888 by this unit. In 1888 its paid-up capital was Rs. 10 lakhs. The Government of Mysore purchased the shares worth Rs. 15,000. The great plague of 1898-99 which swept up a substantial part of the populace worsened the situation, the company brought 800 labourers from North Arcot. In 1921, its paid up capital totalled Rs. 26.25 lakhs and it provided employment to 3,307 persons.

The Mysore Spinning and Manufacturing Company Limited, was established in 1884 for manufacture of cotton fabrics including shirtings, suitings, dhothies, sarrees, towels, long-cloth, drill, grey yarn, etc. The share capital of it was Rs. 4.50 lakhs. Its management was changed in 1890. It employed 630 persons in 1891. The company took voluntary liquidation in 1901 and the same year Sirur and Company took over the management. The Government of Mysore allotted site and provided other facilities to it. In 1921, the capital investment on it totalled Rs. 15 lakhs and it provided employment to 1,092 persons.

In 1897, the Government Central Industrial Workshop was established for supplying of equipment and plant to several major and minor industries in and outside the state, for undertaking repairs and supplying of spare parts to PWD, Sanitary and Electrical Department. It was manufacturing general engineering equipments including structural works such as trusses, tanks and castings of both ferrous and non-ferrous metal and manufacture of equipment required for paper, sugar and oil industries. The Aryan Hosiery was started in 1907 with a capital of Rs. 38,000, of which, Rs. 20,000 was from the Maharaja of Mysore. In 1920, it produced goods valued at Rs. 11,000 and sold it for Rs. 20,000. The Swadeshi movement and the Swadeshi spirit that followed had its own impact on Mysore too. Sir M. Visveshwaraya who became the Chief Engineer of Mysore and later its Dewan had given the slogan 'Produce or Perish' and the idea of planned economy. Mysore Economic Conference started in 1911 with its three main committees for Agriculture, Industries and Commerce, helped the initiation of surveys and collection of statistical data. It resulted in the founding of the Department of Industries and Commerce.

In 1908, the Mysore Chrome Tanning Company was started as a joint stock company with a capital of Rs. 4.94 lakhs and it provided employment to 125 persons. Originally it was started for the manufacture of box and willow sides and subsequently it manufactured suedes, glace kids and chamois leather. The company specialised in the manufacture of kid hides for export to European, American and African countries. In addition to these, the company produces textile, leather goods, railway requisites, fancy leather goods, boots, shoes and chappals. During the year 1987-88, its total capital investment was Rs. 85.94 lakhs and it provided employment to 144 persons.

In 1910, Maanay Roller Flour Mills (P) Ltd. was established, providing employment to 41 with a capital investment of Rs. 25.64 lakhs. In 1912, the Imperial Tobacco Company of India Ltd. was established in Frazer Town, Bangalore for manufacture of cigarettes. During 1987-88, its total capital investment was Rs. 255

crores and provided employment to 2,279 persons. In 1915, United Breweries Ltd. was established. Bangalore Printing and Publishing Company Ltd. was started in 1916 for publishing and printing work. During the year 1987-88, it has provided employment to 80 persons with a block capital investment of Rs. 27.59 lakhs. In 1916, the Sandal Oil Factory was started. It was amalgamated with the Mysore Sandal Oil Factory, Mysore in 1920. Subsequently it was closed and retained as the sandal wood depot.

The Government Soap Factory was started in 1918. Prior to this, a series of experiments were carried out at the Indian Institute of Science and S.G. Shastri was sent to England to gain experience in the line. A modern plant with a modest output of soap by the boiling process was imported from John Scot and Sons, England, and was installed in a small building in 1918. In the beginning, only one variety of a pure household soap, equal in every way to a popular imported variety, was manufactured. Afterwards, experiments were conducted to manufacture better quality toilet soaps and in November 1918 the first Mysore Toilet Soap was placed in the market. The sandal soap found wider markets in London and New York for its excellent quality. In addition to soaps, cosmetics and other products are produced.

In 1919, the Minerva Mills was established for manufacture of cotton fabrics. It was started by Sirur and Co. and the paid up capital on it was about Rs. 29.81 lakhs. It employed 800 people in 1926. During 1987-88, with a total capital investment of Rs. 684.14 lakhs, it provided employment to 2,267 persons. The Kaiser-I-Hind Woolen Mills, Ltd. was established in 1922 for manufacture of wollen blankets. The Annapurna Cooker Co., Bangalore, was started in Bombay in 1914 and shifted to Bangalore in 1925. The present workshop was built in 1930. It is manufacturing domestic labour saving devices such as cookers and hospital equipments, besides small machines and tools.

The Steel Construction Company (P) Ltd., was started in 1924 as a proprietary concern and was converted as a partnership concern in 1936 and a private limited company in 1939. It manufactures oil expellers and spare parts, over-head travelling cranes, industrial machineries, structural steel works, ferrous and non-ferrous castings, etc. In 1930, the Elgin Flour Mill was opened. The Industrial and Testing Laboratory (later MITL) was started in 1931 with a capital of Rs. 1.34 lakhs and had 200 persons in its employment. It manufactured medicinal products including tincture, spirits, ointments and disinfectants. It was serving as a test house for Government Store Purchase Committee and for private industrialists.

In 1932, the Government Porcelain Factory was established at Malleshwaram for manufacture of high and low tension insulators, domestic crockery and art ware products. It was working in collaboration with Messrs Nippon Gaishi Kaisha Ltd., of Nagoya, Japan. It is manufacturing high and low tension insulators, transformer bushing etc. Later it became a part of the BHEL. In 1934, the Government Electric Factory was founded for manufacture of electric appliances and transformers,

rotary machinery such as motor generators, electric switch gears, telephone components and industrial essentials, plastic covered wires and cables, etc. The capital investment on it was Rs. 5.50 lakhs initially. In 1934, the AMCO Ltd., was started with a capital of Rs. 9.50 lakhs. It manufactures batteries for motor cars, farm lighting, telegraphic apparatus, radios, etc.

In 1935, Sri Balakrishna Flour Mills was started in Bangalore on the Old Madras Road. The KAR Mobiles Ltd. was also established in 1936 for manufacture of valves for intra-combustion engines. During 1987-88, the total capital investment on it was Rs. 532.24 lakhs and it provided employment to 580 persons. The Mysore Lamp Works was started in 1936 with a capital of Rs. 5 lakhs in Yeshwantapur. It manufactures electric incandescent lamps ranging from 10 W to 300 W. During 1987-88, it provided employment to 1,650 persons with a block capital investment of Rs. 1,209.64 lakhs. The Mysore Tobacco Company was started with a capital of Rs. 10 lakhs. It exports dried tobacco to foreign countries. The Fire-bricks and Potteries limited was also started at Yeshwantpur in 1937 for manufacture of tiles, ridges, ceilings of the Mangalore pattern fire bricks and porcelain-ware. The Mysore Stone-ware Pipes and Potteries Ltd., was started in 1937 at Chikbanavar. It manufactures stone-ware pipes, refractories, acid resisting chemical-ware jars, etc. The Mysore Hosiery Limited began functioning during the same year, manufacturing hosiery goods.

The Mysore Vegetable Oil Products was started in 1938 on the Platform Road, Bangalore for the manufacture of *vanaspathi* and refined oil. The Mysore Chemical Manufacturing Limited, founded in 1938 at Chikbanavar manufactures chemicals. In 1939, the Mysore Glass and Enamel Works Ltd., was established at Malleswaram. It manufactures tumblers, lampwares, bottles and jars for packing pharmaceuticals and toilet preparations.

In 1940, the Hindustan Aircraft Ltd., was founded with an authorised capital of Rs. 4 crores and established its factory on the east side of Bangalore. It was originally mooted by Sir M. Visvesvaraya in 1936 as an automobile factory in collaboration with the Chrysler Corporation of U.S.A. It was in 1940, Seth, Walchand Hirachand took the first step towards setting up of a company called Hindustan Aircraft Limited as the British industrial interests thwarted the automobile manufacture project. The Government of Mysore granted 700 acres of land free of cost and purchased Rs. 20-lakhs worth shares. During the World War II, bomber and transport aircraft and their engines were overhauled and repaired at the Hindustan Aircraft. After the war, it recommenced the manufacture of aircraft, both under licence and of indigenous design. In 1961, the flight of India's first transonic aircraft, the HF 24 was designed, developed and produced in India. In 1964, the company was nationalised and became Hindustan Aeronautics Ltd., a Central Government's undertaking. Now it has 11 divisions with manufacturing units at Bangalore, Hyderabad, Kanpur, Koraput, Korwa, Lucknow and Nasik. It has produced several types of aircraft. It has extensive manufacturing and assembly

facilities at Bangalore, Kanpur and Nasik. These include aircraft made under licence, such as the Prentice, Vampire, Gnat and MIG 21 series, as well as aircraft of its own design. Among the latter are piston engine trainers such as the HT-2 and Pushpak, a jet trainer and counter insurgency aircraft, the Kiran MK-1 and a transonic interceptor and ground attack aircraft, the HF 24 Marut. In addition, it has developed and produced Ajeet, an improved version of the Gnat. At present, it manufactures aero- engines under licence from the USSR, Rolls Royce (UK) and Turbomeca (France). It has produced HPT-32, the HTT-34, the HS- 748, the DO-228, the Chetak, the Cheetah, the Kiran MK-11, the Ajeet Trainer, the MIG-21 Bis, the Jaguar, the Dart, the R-25, the Adour, the Artouste, etc. at its various centres, besides overhaul. During the year 1987-88, its total capital investment at Bangalore was Rs. 19,988.19 lakhs; it provided employment to 18,551 persons at Bangalore.

In 1943, the Mysore Commercial Union was started at Yeshwantpur a unit to manufacture of plywood for tea-chests, commercial plywood for use in the production of furniture and high quality plywood for aircraft and decorative plywood. Later it was taken over by a private company and it is now named Mafatlal Plywood Industris Ltd. During 1987-88, its capital investment totalled Rs. 225.04 lakhs and it provided employment to 523 persons. In 1945, the Mysore Electrical Industries Limited was established for production of HT and LT switch gears. During the year 1987- 88, its capital investment totalled Rs. 367.01 lakhs and it provided employment to 1,222 persons. The Mysore Machinery Manufacturers Ltd., was started on the Mysore Road in 1946 to manufacture ploughs, sugarcane crushers, rotary oil mills, flour mills, plain cotton power looms and reeling machines.

In 1946, Indian Telephone Industries Ltd. a Central Government undertaking was established to manufacture all kinds of tele-communication items, the C.B. telephone (Desk type), Magneto telephone, Intercommunication telephone (two way and ten way), Switching telephone, Main and extension (Internal and external), Railway control telephone for way-side stations, portable railway control telephone, Auto telephone with 24 C dial, Speech plus Duplex Equipment, Single, three, four, eight, twelve channel telephone carrier, group modulating equipment, transmission measuring set, bypass filters, private automatic exchange, private automatic branch exchange railway control telephone, Selective calling equipment, teleprinter exchanges, Die-castings automatic road traffic signalling equipments, etc.

The Kirloskar Electric Company was established in 1946 at the industrial suburb, Rajajinagar, Bangalore, for manufacture of all electric machinery and equipment. The products manufactured in this are electric motors of varying H.P., *transformers*, alternators, control gear, etc. required for generating transmission and distribution of electrical energy. It has taken up the new lines of manufacture such as switch and control gears. During the year 1987-88, its total capital investment was Rs. 4,971.63 lakhs and it provided employment to 3,999 persons.



The Indian Tin Industries (P) Ltd. was established in 1946 at Dooravaninagar for manufacture of plain and printed tin containers and closures. During 1987-88, its capital investment totalled Rs. 181.00 lakhs and it provided employment to 145 persons. The UB-MEC Batteries Ltd. was also started in the same year for manufacture of Lead Acid Storage Batteries, etc. During 1987-88, it has provided employment to 460 persons with a total capital investment of Rs. 703.65 lakhs. In 1946, the Radio and Electrical Manufacturing Company Limited (REMCO) was established to manufacture radios and its components, electricity and water meters, PVC wires and cables. Now it has three divisions viz. Radio Division, Plastic Division and Metal Division. It has been taken over as a subsidiary unit of Bharat Heavy Electricals Limited in 1976. In 1947, the Suedue and Leatheretts Limited was established on the Domlur road, Bangalore for manufacture of leather cloth and allied products. The capital investment on it was Rs. 22.78 lakhs and it provided employment to 52 persons.

### Industries after 1947

The availability of electric power for industrial consumption, comparatively cheap labour and transport facilities resulted in the establishment of many public sector industries after the Second World War and many factories of the private sector combined to make Bangalore district an industrially developed district. After Independence, the industrial policy resolution enunciated by the Government of India in 1948 further accelerated the phase of industrial expansion. The atmosphere created by the era of planned development and the facilities provided by both the State and the centre helped the coming up of many industrial enterprises. The most notable among the industrial units of this period are: The Margarine and Refined Oils (P) Ltd., established in 1948, for extract of *vanaspathi* and edible oils. In the same year, Sri Jayalakshmi Steel Industries was registered to carry on the business of all kinds of steel articles and agricultural equipments. The Doric Pen Company was started in 1949 to manufacture fountain pens. The Cine Supplies was also registered for manufacturing and importing cinema projectors. The Mysore Boys Industries was also started in the same year on a small scale for manufacturing baby cradles, crafts, etc. The factory is now manufacturing all types of steel furniture including steel almirahs and machinery parts.

In 1950, ASEA Limited was established for manufacture of LT & HT switch gears, cubicles, protective relays and relay protection, etc. The capital investment on this firm was Rs. 695 lakhs and it provided employment to 740 persons during the year 1984-85.

In 1951, the Motor Industries Company (MICO), was established with the purpose of manufacturing spark plugs and fuel injection equipment. In the beginning, it was a company trading in fuel engine parts imported from Robert Bosch Gmbh Company of West Germany. It owes its success to a very large extent to its collaborators, Robert Bosch, Stuttgart, Germany. It had opened its laboratory in

1953 and began assembling spark plugs. The fuel injection equipment of MICO is extensively used in diesel engines made in India. It provided employment to about 8,975 persons with a capital investment of Rs. 14,836.65 lakhs during the year 1987-88. It also accommodates several ancillaries.

In 1953, the Hindustan Machine Tools Ltd., a Central Government undertaking was established for manufacture of high precision machine tools and machines that can build all other machines for India's industrial programme. Products manufacturing are 74 types of machines including seven types of H 22 High Speed precision lathe and seven types of H 26 High Speed precision lathes, etc. During the year 1987-88, its total capital investment was Rs. 4,116 lakhs and it has provided employment to 4,436 persons.

During the Plan period, the noticeable developments were the expansion of the Government Soap Factory, the Government Porcelain Factory, the New Government Electric Factory (NGEF) besides establishment of Wheel and Axle Factory at Yelahanka. Several State level institutes emerged during the plan period. The Mysore Small Industries Limited (1960) became the Karnataka Small Industries Development Corporation and it is implementing the programmes of industrial estates, supply of raw materials and market facilities for small scale industries. In 1963, a State Industrial Co-operative Bank was formed. The State Government set up the Karnataka Industrial Investment and Development Corporation under the Companies Act in 1964. This Corporation supplemented the Karnataka State Financial Corporation (1959) whose assistance was limited to small and medium scale industries, while the K.S.I.I.D.C. extended its assistance to large scale industries. Most of the large and medium scale industries of the district came up during the Plan period, important among them are the John Fowler (India) Ltd. (1953), Amrut Distilleries (1953), T.R. Mills Ltd. (1954), B.E.L. (1954), International Instruments Ltd. (1958), Gopalakrishna Textile Mills (P) Ltd. (1958), Guest Keen Willaims Ltd. (1959), Stumpp Schuele and Somappa Ltd. (1960), and Sri Krishna Spinning and Weaving Mills (P) Ltd. (1960). In 1961, the New Government Electric Factory (NGEF) was established in technical collaboration with A.E.G. Telefunken of West Germany. It was converted to a Joint Stock Company in 1965. The HMT Watch Division (1961), Rao Insulating Co. (P) Ltd. (1962), Kirloskar Systems Ltd. (1962), Karnataka Consumer Products Ltd. (1962), B.P.L. India Ltd. (1963), Subhadra Textile (P) Ltd. (1963), Kwality Biscuits (P) Ltd. (1963), BEML Rail Coach Division (1964), Deepak Insulated Cable Corporation Ltd. (1964), Rukmini Steel Industries Ltd. (1965), Mysore Feeds (P) Ltd. (1965), Joy Ice Creams (Bangalore (P) Ltd., 1966), Bangalore Soft Drinks (P) Ltd. (1966), VST Tillers Tractors Ltd. (1967), Best and Crompton Ltd. (1968), Electric Research (P) Ltd. (1968), J.L. Morrison and Jones (India) Ltd. (1968), J.B. Mangharam and Sons (1969), Jindal Aluminium Ltd. (1970), G.R. Steels and Alloys (1970), NGEF-AEG Engineering Ltd. (1970), Gemini Distilleries (P) Ltd. (1970), Mysore Breweries Ltd. (1970), Shivmoni Steel Tubes Ltd. (1971), Bengal

Lamps (1971) Sikka and Sikka Engineers (P) Ltd. (1971), Andhra Steel Corporation Ltd. (1972), Welcast Steels Ltd. (1972), San Engineering and Locomotive Co., Ltd. (1972), G.R. Engineering Works (P) Ltd. (1973), Karnataka State Agro-Corn Products Ltd. (1973), Triveni Engineering Works (1973), KAP Steel Ltd. (1974), Sipani Automobiles Ltd. (1974), Electrocarbonium (P) Ltd. (1975), Mittal Steel Ltd. (1975), Bangalore Wire Rod Mill (1976), BHEL Central Equipment Division (1976), W.S. Insulators of (India) Ltd. (1976), Wipro Ltd. (1976), Uken India Ltd. (1976), Karnataka Implements and Machineries Co. Ltd. (1976), Krishna Flour Mills (Bangalore) Ltd. (1977), Madhura Coats (P) Ltd. (1977), Ingersoll Rand India Ltd. (1977), Panyam Cements and Minerals (1977), Escorts Ltd. (1977), Karnataka Jewels (P) Ltd. (1978), Gokuldas Images (1979), Astra IDL Ltd. (1981), S & S Engineering Co. Ltd. (1981), HMT Electronic Watch Project (1981), H.G. Resisters (P) Ltd. (1982), Asiatic Industrial Gasses Ltd. (1982), Rewdale Precision Tools (P) Ltd. (1982), Vioryl (India) Ltd. (1983), Ittina Printers (P) Ltd. (1983), Panchavarna Textile Processing (P) Ltd. (1983), Nav Bharath Flange and Allied Industries (1983), Raghunandan Electronics, Ltd. (1984), Prameela Plastic (P) Ltd. (1984), Shetron Metals Ltd. (1984), and Chamundi Granite (P) Ltd. (1985).

*The Wheel and Axle Plant*, a Government of India undertaking was opened on 15th September 1984 at Yelahanka. The estimated cost of the project is Rs. 146 crores. The actual expenditure on it upto end of March 1989 was Rs. 143.59 crores. It received World Bank assistance to the extent of 56.5 million U.S. *dollars* and it was utilised mainly for import of sophisticated plant and equipment from abroad. Out of a total outlay of Rs. 102.75 crores for mechanical and electrical plant, as much as Rs. 63.12 crores (62 per cent) was spent on indigenous equipment and balance of Rs. 39.63 crores was spent for imported equipment. The plant has provided employment to 1,672 persons and paid about Rs. 3.16 crores as wages during the year 1987-88. The production capacity of the plant is 56,700 railway wheel equipments which are assembled into 23,000 wheelsets and the balance are supplied as loose wheels and axles. The actual production during the year 1987-88 was wheelsets 23,007, wheels 4,585 and axles 5,005. The main raw materials *viz.* steel scrap is received from railways all over the country; blooms are supplied by Alloy Steel Plant, Durgapur, TISCO at Jamshedpur and Mahindra Ugin Steel Company, Bombay. Some other raw materials like graphite blanks, chemicals, etc. are imported from abroad, mainly from United States, France, Austria, Germany, Sweden, etc. The tooling items, graphite, electrodes, etc. are obtained from within the country. The manufactured items are supplied to Indian railways and wagon builders.

In 1983, the State Government enunciated a new industrial policy for Karnataka, basically to correct the imbalance in industrial growth. To counter the heavy *concentration* of industries in Bangalore, the policy illustrated the need for dispersal of industries especially to backward areas. There would be no further

investment as far as possible in new companies in the State Government Sector. It was stated that all new applications for establishment of large and medium scale power intensive industries throwing the power out of gear would be subject to a critical scrutiny.

### **Electronic Industry**

An interesting development in electronic field is the concept of an "Electronic City", covering about 330 acres of land at Konnapana Agrahara, about 18 km from Bangalore on the Hosur Road, as a specialised industrial estate for about 50 large medium scale and 500 small scale electronic units. This is envisaged to provide all the necessary infra-structural facilities including common facilities for testing, tooling, research, etc. At the end of March 1989, there were 382 electronic units providing employment to 5,667 persons in the district. The capital investment on them was Rs. 2,912.44 lakhs.

*The Karnataka State Electronics Development Corporation Ltd (KEONICS)* was incorporated on 22-9-1976 in Bangalore, as a company with a view to plan, organise and promote electronic industries in Karnataka. The Company is wholly owned by the Government of Karnataka. Its management is vested with the Board of Directors consisting 15 members and the day-to-day affairs are vested with the Managing Director assisted by 52 executives and 262 non-executives as on 31st March 1989. As an electronics development agency, it has taken up the promotion of joint ventures, establishment of own manufacturing units, arranging package assistance to entrepreneurs in the establishment of new industry, assistance to industries in the procurement of raw materials and marketing of end products. It promotes joint venture companies like the Ultrasonic Instrumentations Private Ltd., Dr. Shet Magnetics Private Ltd., G.K. Electromed Private Ltd., and the Filcon Electronics Private Ltd., etc., by participating equity investment. It mobilises the funds from the private sector and link with the financial assistance of the Central Financial Institutions. The Mini Circuit Ltd, has been incorporated as a joint venture with the KEONICS in 1984 for manufacture of Hybrid circuits with Canadian technical collaboration. The Raseltronics Ltd. was incorporated in 1984 as joint venture with the KEONICS to manufacture printed circuit boards. The SWEDE (India) Teltronics Ltd., has been formed as a joint venture with 11 percent participation by the KEONICS in 1985 for manufacture of electronic push button telephones in technical collaboration with Ericsson Information Systems Ltd., Sweden. The Karnataka Telecom Ltd. has been formed as joint venture with KEONICS-NGEF in 1985 to manufacture pulse code modulation equipments and power line carrier communication equipments. The Yokogawa Keonics Ltd. has been formed in 1987 as joint venture to manufacture control instrumentation systems. This project is implemented in technical/financial collaboration with Yokogawa Electric Corporation, Japan. The Krone Communications Ltd., is being incorporated for manufacture of telephone connectors with the technical/financial

collaboration of the KRONE AG of West Germany. The KEONICS Penta Semi Conductors Ltd., is being incorporated for manufacture of small signal devices with the technical collaboration of Bharat Electronics Ltd., Bangalore.

The KEONICS Video Systems division was opened in 1983-84 for manufacture of colour and black-and-white TVs. The production of high-voltage resistors and two-way communication equipments were commenced during the year 1984-85 and 1985-86 respectively. The KEONICS Magnavision Computers Ltd., is incorporated by the KEONICS to manufacture mini computer systems in 1986. The Kalyan Keonics Ltd., has been incorporated at Bidar for manufacture monochrome T.V. picture tubes. Apart from this, the corporation has taken up marketing of office equipments such as Keonics microcom, Mini exchange computers, etc. It has taken up the NORAD project with Norwegian aid, setting up two training centres at Madikeri and Sirsi. It has also taken up the Bio-Medical project. It has opened electronic units for women and imparting training for them for assembly of electronic goods.

#### **Incentives and concessions**

The Bangalore district has been recognised as an industrially forward district by Government of India and the entrepreneurs are not eligible for Central investment subsidy on fixed investment. But, the State Government has selected Anekal taluk under Zone II to provide assistance to the industries set up in the taluk with effect from 1.4.1988.

The investment subsidy of 15 per cent of the value of fixed assets subject to a maximum of Rs. 15 lakhs for tiny, small scale and medium and large scale industries shall be available for new industrial units coming up in the taluk. Regarding Sales Tax concession, the new tiny and small scale industries coming up in Zone II are eligible for Sales Tax exemption for a period of five years. New large and medium industries are eligible for deferment of Sales Tax for a period of five years.

*Special concessions:* An additional five per cent investment subsidy subject to a maximum of Rs. one lakh shall be available for the new tiny and small scale units set up exclusively by SC/ST and physically handicapped entrepreneurs in Zone II. The tiny and small scale units set up by women entrepreneurs either individually or collectively and employing more than 51 per cent women in such units are eligible for additional 5 per cent investment subsidy subject to a maximum of Rs. one lakh and exemption of Sales Tax. Women entrepreneurs shall be given priority in allotment of scarce raw materials, allotment of sheds/lands preference in government purchases. Electronics, tele-communications, food processing and bio-technology industries set up in notified industrial areas or industrial estates are eligible for concessions.

The new tiny and small scale industries shall be eligible for exemption of stamp duty and concessional registration charges in respect of loan and credit documents

to be executed for availing financial assistance from State Government, and or recognised financial institutions and also lease/sale deeds executed by the new industrial units in the tiny and small scale category for sheds/plots taken on lease-cum-sale basis from K.S.S.I.D.C., K.I.A.D.B., KEONICS or from any other government agencies.

These incentives and concessions shall be applicable only for new industries whose investment has taken place on or after 1.4.1988 and subject to the condition that they have availed on such concessions in part or full as per the package of incentive scheme available before 31.3.1988. All new industrial units shall provide minimum employment of 80% to local people and this shall be monitored during disbursement of incentives/concessions. The quantum of investment subsidy shall be limited to the original cost of the project as approved by the financial institutions or the actual investment, whichever is less. Wherever the Central investment subsidy is available, State subsidy should not be granted except to the extent of the difference in the rate of Central subsidy and State subsidy, where the State subsidy applicable is higher. The total investment subsidy available for special categories of entrepreneurs including additional subsidy shall not exceed 25% of the value of fixed assets.

These incentives and concessions shall not be available for investments made for expansion/diversification and modernisation of existing industries. It shall not be available for the 29 industries viz. 1) Roller Flour Mills, 2) Photo Studios and Colour Processing Centres, 3) Photo-copying and Xerox machines, 4) Power laundries, 5) Pop-corn, ice cream and ice candy making units, 6) Coffee roasting and grinding, 7) Cosmetics including talcum powder, snows, hair-dyes, lipsticks, nail polish, eye brow pencils and creams, 8) Fertilizer mixing, 9) Repacking of drugs, medicines/chemicals without any processing, excluding formulation units, 10) Clocks and watch repair shops, 11) Cassette recording, 12) Jaggery making units, 13) Khandasari units, 14) Scrap processing units including bundling of scrap and ship breaking, 15) Iron and Steel Foundry having power more than 500 KVA, 16) Mini steel plants, 17) Rolling and rerolling mills (ferrous and non-ferrous), 18) Wire drawing units excluding units using drawn wires as raw materials, 19) All types of saw mills, 20) Industry based on wood as main raw materials excluding tiny units, 21) Breweries and distilleries of all types, 22) Chemical units using molasses/rectified spirit/denatured spirit as main raw material including industrial alcohol units, 23) Cement plants excluding mini-cement plant with VSK technology upto a capacity of 200 T.P.D., 24) Minig industry, 25) State and Central Public Sector Undertakings, 26) Power intensive projects requiring more than 2,500 KVA power, 27) Co-operative Sector industries with State Government participation of more than 51% in the share capital, 28) Biscuit, bakery and confectionery industries other than SSI/and (29) Any industry with an investment in fixed assets of more than Rs. 20 crores.

Statement showing the Large Industrial Establishments in Bangalore District as in 1945

| Sl. no.            | Name of Establishment                            | Class or description of industry    | Average no. of persons employed daily | Whether Worked by mechanical power or not |
|--------------------|--|-------------------------------------|---------------------------------------|---|
| 1                  | 2  | 3                                   | 4                                     | 5   |
| <b>I. Textiles</b> |  |                                     |                                       |   |
| 1                  | Bangalore Woollen, Cotton & Silk Mills Co., Ltd. | Woollen & Cotton Spinning & Weaving | 7,141                                 | Electric Power                            |
| 2.                 | -do- (Branch)                                    | -do-                                | 514                                   | -do-                                      |
| 3.                 | Bangalore Spinning & Manufacturing Co., Ltd.     | Cotton Spinning & Weaving           | 2,359                                 | -do-                                      |
| 4.                 | Minerva Mills Ltd                                | -do-                                | 2,256                                 | -do-                                      |
| 5.                 | T.R. Mills                                       | -do-                                | 250                                   | -do-                                      |
| 6.                 | Prabhakar Weaving Factory                        | Cotton Weaving                      | 35                                    | -do-                                      |
| 7.                 | Sri Banasankari Weaving Factory                  | -do-                                | 16                                    | -do-                                      |
| 8.                 | Bangalore Weaving Factory                        | -do-                                | 26                                    | Mechanical                                |
| 9.                 | Sri Krishnanda Weaving Factory                   | -do-                                | 25                                    | Electrical                                |
| 10.                | Kumara Mills                                     | -do-                                | 25                                    | Manual Labour                             |
| 11.                | Sri Ganesh Waving Factory                        | Cotton Weaving                      | 25                                    | Electrical                                |
| 12.                | Sri Rama Weaving Shed                            | Silk Weaving                        | 100                                   | -do-                                      |
| 13.                | Srinivasa Weaving Factory                        | -do-                                | 26                                    | -do-                                      |
| 14.                | Hanumanthappa Silk Weaving Factory               | -do-                                | 50                                    | -do-                                      |

| 1   | 2   | 3  | 4   | 5             |
|-----|---|--|-----|---------------|
| 15. | Bangalore Silk Weaving Factory                        | -do-   | 15  | -do-          |
| 16. | Sri Anjaneya Silk Weaving Factory                     | Silk Throwing & Weaving                          | 50  | -do-          |
| 17. | Muddaliah & Sons                                      | Silk Winding & Twisting                          | 54  | -do-          |
| 18. | Sri Rama Silk Mills Ltd.                              | Silk Throwing Factory                            | 215 | -do-          |
| 19. | K. Doddahonnappa & Sons                               | -do-   | 16  | -do-          |
| 20. | Khoday Eswarasa Silk Throwing Factory                 | Silk Winding & Twisting                          | 130 | -do-          |
| 21. | M. Srinivasa & Co.                                    | -do-   | 36  | -do-          |
| 22. | Lakshmivenkateswara<br>Silk Throwing Factory          | -do-   | 15  | -do-          |
| 23. | Kabadi Chicknagusa Silk Throwing<br>& Lametta Factory | Silk Throwing & Lametta                          | 15  | -do-          |
| 24. | Kabadi Shankarasa & Brothers                          | Silk Winding, Twisting<br>& Lametta making       | 25  | Electrical    |
| 25. | Sri Narayana Silk Throwing Factory                    | Silk Twisting                                    | 12  | -do-          |
| 26. | D.P. Krishnasa & Sons                                 | -do-   | 18  | -do-          |
| 27. | S. Seetharama Setti & Rama Setti                      | Silk Weaving & Twisting                          | 25  | -do-          |
| 28. | S.M. Dhaktappa & Sons                                 | Manufacture of Gold &<br>Silver Thread & Lametta | 44  | -do-          |
| 29. | Anantharamaiah's woollen and<br>Cotton Works          | Carpet Manufacture                               | 46  | -do-          |
| 30. | Bangalore Industrials                                 | -do-   | 55  | Manual Labour |
| 31. | B.K. Subbiah & Sons (Seshadripuram)                   | -do-   | 200 | -do-          |
| 32. | B.K. Subbiah & Sons (Sourashtrapet)                   | -do-   | 50  | -do-          |
| 33. | S. Narasimhaiya & Sons                                | -do-   | 30  | -do-          |



| 1   | 2   | 3                        | 4   | 5             |
|-----|---|--------------------------|-----|---------------|
| 34. | The Mysore Hosieries, Ltd.                | Hosiery & Knitting       | 50  | Electrical    |
| 35. | Bangalore Silk Filatures                  | Reeling of Silk Yarn     | 40  | -do-          |
| 36. | Bard Muniswamis's Silk Twisting Factory   | Silk Twisting            | 33  | -do-          |
| 37. | Jaya Weaving Factory                      | Cotton Weaving           | 12  | -do-          |
| 38. | Sri Suryodaya Mills                       | Cotton Weaving           | 120 | Electrical    |
| 39. | Sri Mahalakshmi Woollen & Silk Mills Ltd. | Woollen and Silk Weaving | 147 | -do-          |
| 40. | D.R.A. Weaving Factory                    | Cotton Weaving           | 30  | -do-          |
| 41. | Wazid Weaving Factory                     | -do-                     | 12  | -do-          |
| 42. | Anantharamaiah's Carpet Weaving Factory   | Carpet Manufacture       | 46  | -do-          |
| 43. | Sri Krishna Weaving Mills                 | Cotton Weaving & Dyeing  | 420 | -do-          |
| 44. | Chinnappa Naidu Weaving Factory           | Cotton Weaving           | 15  | -do-          |
| 45. | Shanmuga Weaving Factory                  | Cotton Weaving & Dyeing  | 36  | -do-          |
| 46. | S.Narasimhaiya's Carpet Factory           | Carpet Manufacture       | 49  | Manual Labour |
| 47. | M. Anantharamaiah's Carpet Factory        | -do-                     | 49  | -do-          |
| 48. | Vellum Parachute Silk Co.                 | Parachute Silk           | 710 | Electrical    |
| 49. | Sri Krishna Silk Throwing Factory         | Silk Throwing & Winding  | 25  | -do-          |

## II. Engineering

|    |                             |                   |     |            |
|----|-----------------------------|-------------------|-----|------------|
| 1. | Steel Construction Co. Ltd. | Engineering Works | 200 | Electrical |
|----|-----------------------------|-------------------|-----|------------|

| 1                                    | 2                                      | 3                                 | 4      | 5             |
|--------------------------------------|--|-----------------------------------|--------|---------------|
| 2.                                   | Bangalore Power & Light Establishment  | Supply of Electric Power          | 980    | -do-          |
| 3.                                   | The Bangalore Transport Co. Ltd.       | Motor Transport                   | 450    | —             |
| 4.                                   | Sri Krishna Engineering Works (Branch) | Iron Foundry & Engineering Works  | 70     | -do-          |
| 5.                                   | The Hindustan Aircraft                 | Aeroplanes                        | 12,113 | -do-          |
| <b>III. Minerals &amp; Metals</b>    |  |                                   |        |               |
| 1.                                   | The Globe Iron Foundry                 | Iron Foundry & Engineering Works  | 25     | Electrical    |
| 2.                                   | P.M. Madhurai Mudaliar & Sons          | -do-                              | 118    | -do-          |
| 3.                                   | ORR & EMM Engineering                  | -do-                              | 24     | -do-          |
| 4.                                   | Central Industrial Workshop            | -do-                              | 132    | -do-          |
| 5.                                   | Sri Krishna Engineering Works          | -do-                              | 50     | -do-          |
| 6.                                   | The Mysore Metal Industries Ltd.       | Iron Safes                        | 15     | -do-          |
| 7.                                   | Annapurna Cooker Co.                   | Brass & Other Articles            | 70     | -do-          |
| 8.                                   | Sri Venkateswara Power Rolling Mills   | Steel & Wire Drawing              | 15     | -do-          |
| 9.                                   | Metro Metal Factory                    | Metal-ware in Brass, Copper, etc. | 275    | -do-          |
| 10.                                  | Srinivasa Metal Works                  | Casting & Turning Iron & Brass    | 14     | -do-          |
| <b>IV. Food, Drink &amp; Tobacco</b> |  |                                   |        |               |
| 1.                                   | Srinivasa Roller Flour Mills           | Flour                             | 10     | Manual Labour |

| 1   | 2  | 3                                    | 4   | 5             |
|-----|--|--------------------------------------|-----|---------------|
| 2.  | Sakamma's Coffee Works                   | Coffee Works                         | 30  | -do-          |
| 3.  | Chamarajasagar Water Works               | Filter Works                         | 20  | -do-          |
| 4.  | V.H.F. Abdul Sattar & Co.                | Beedi                                | 55  | -do-          |
| 5.  | SalarBeedi Factory                       | -do-                                 | 30  | -do-          |
| 6.  | The Mysore Vegetable Oil Products Ltd.   | Vegetable Oils                       | 114 | Electrical    |
| 7.  | Ramakrishna Oil Mills                    | Oil                                  | 68  | -do-          |
| 8.  | The Mysore Tobacco Co. Ltd. (Whitefield) | Curing of Virginia Cigarette Tobacco | 20  | Manual Labour |
| 9.  | -do- (Anekal)                            | -do-                                 | 20  | -do-          |
| 10. | -do- (Gottigere)                         | -do-                                 | 20  | -do-          |

#### V. Chemicals, Dyes, etc:

|    |  |                 |     |               |
|----|--|-----------------|-----|---------------|
| 1. | Government Industrial & Testing Laboratory | Pharmaceuticals | 204 | Electrical    |
| 2. | Government Soap Factory                    | Soap            | 81  | -do-          |
| 3. | Hindu Soap Factory                         | Soap            | 44  | Electrical    |
| 4. | Radio Soap Institute                       | -do-            | 55  | -do-          |
| 5. | Mysore Chemical Manufacturing Co. Ltd.     | Chemicals       | 50  | Steam Power   |
| 6. | Bangalore Soap Factory                     | Soap            | 30  | Electrical    |
| 7. | Srinivasa Soap Factory                     | -do-            | 40  | Manual Labour |
| 8. | Krishna Products                           | -do-            | 12  | -do-          |

| 1   | 2   | 3                              | 4   | 5                   |
|-----|---|--------------------------------|-----|---------------------|
| 9.  | Mysore Pharmaceuticals  | Pharmaceuticals                | 18  | -do-                |
| 10. | New India Pharmaceuticals Industries Ltd.                           | -do-                           | 13  | -do-                |
| 11. | Bitumen Emulsion Plant at the Govt. Industrial & Testing Laboratory | Bitumen Emulsion               | 22  | Electrical          |
| 12. | Bangalore Chemicals & Manufacturing Co. Ltd.                        | Incandescent Gas Mantles       | 20  | Mechanical & Manual |
| 13. | Engineering Mineral Industrial Manufacturing Research Laboratory    | Abrasive and adhesive products | 270 | Electrical          |

#### VI. Paper and Printing

|     |   |                                  |     |            |
|-----|---|----------------------------------|-----|------------|
| 1.  | The Government Central Press                  | Printing, binding & Allied Works | 382 | Electrical |
| 2.  | Bangalore Printing & Publishing Co. Ltd.      | -do-                             | 70  | -do-       |
| 3.  | B. Srinivasaiengar's Printing & Binding Works | -do-                             | 20  | -do-       |
| 4.  | Modi Power Printing Press                     | -do-                             | 54  | -do-       |
| 5.  | Rajagopal Photo Zinco Printing Works          | -do-                             | 15  | -do-       |
| 6.  | Tainadu Press                                 | -do-                             | 24  | -do-       |
| 7.  | V.B. Subbaiah & Sons                          | -do-                             | 17  | -do-       |
| 8.  | Visva Karnataka Press                         | -do-                             | 26  | -do-       |
| 9.  | Alkalam Press                                 | -do-                             | 15  | -do-       |
| 10. | Prajamata Power Press                         | Printing                         | 25  | -do-       |
| 11. | Deshabandu Press                              | -do-                             | 60  | -do-       |

| 1   | 2                               | 3    | 4  | 5    |
|-----|---------------------------------|------|----|------|
| 12. | Swatantra Karnataka Power Press | -do- | 12 | -do- |
| 13. | B.B.D. Power Press              | -do- | 10 | -do- |

#### VII. Processes/Relating to Wood, Stone & Glass

|     |   |                            |     |                     |
|-----|---|----------------------------|-----|---------------------|
| 1.  | Bangalore Fire Bricks and Tile Works                      | Bricks & Tiles             | 70  | Electrical          |
| 2.  | Sri Rama Ceramic Industries                               | Wire cut bricks            | 25  | -do-                |
| 3.  | Satyanarayana Furniture Hall                              | Furniture                  | 20  | Manual Labour       |
| 4.  | Jubilee Saw Mills   | -do-                       | 40  | Electrical          |
| 5.  | Government Saw Mills, Sandalkoti                          | -do-                       | 22  | -do-                |
| 6.  | City Saw Mills  | Timber sawing              | 20  | -do-                |
| 7.  | Maruthi Cement Concerete Works                            | R.C.C. Works               | 40  | Manual Labour       |
| 8.  | Government Porecelain Factory                             | Porcelain Insulators, etc. | 437 | Electrical          |
| 9.  | R. Jayamuni & Sons  | Tile Works                 | 24  | -do-                |
| 10. | Plywood Factory   | Plywood                    | 620 | -do-                |
| 11. | N. Krishna Body Works                                     | Motor body building        | 25  | Manual Labour       |
| 12. | Mysore Arts & Wood Works Ltd.                             | Furniture                  | 80  | Mechanical          |
| 13. | Mysore Glass & Enamel Work Ltd.                           | Glass                      | 364 | Electrical          |
| 14. | Standard Tile & Brick Co., Yelahanka                      | Terracotta & cement tile   | 250 | Manual & Electrical |
| 15. | Permanent Brick & Tile Works, Whitefield                  | Tiles                      | 12  | Electrical          |
| 16. | National Brick & Tile Works, Varthur                      | -do-                       | 10  | -do-                |
| 17. | Mysore Stone-ware Pipes & Potteries Ltd. (Soldevanahalli) | Stone-ware pipes, etc.     | 252 | -do-                |

| 1   | 2   | 3   | 4   | 5    |
|-----|---|---|-----|------|
| 18. | Fire Brick & Potteries Ltd.<br>Yeshavantpur | Porcelain goods &<br>fire bricks            | 140 | -do- |
| 19. | Dewar Industries (Yeshvantpur)              | Wood-ware materials,<br>body building, etc. | 225 | -do- |
| 20. | Narayanaswamy & Sons                        | Stone polishing                             | 12  | -do- |

#### VIII. Processing Hides & Skins

|     |  |                          |     |               |
|-----|--|--------------------------|-----|---------------|
| 1.  | Mysore Chrome Tanning Co. Ltd.         | Chrome Tanning           | 170 | -do-          |
| 2.  | Hajee Zainulabuddin & Co.              | Tanning of hides & skins | 10  | Manual Labour |
| 3.  | Pallimeera Haji Abdullah Sahib         | -do-                     | 60  | -do-          |
| 4.  | Chuna Abdul Samad Sahib                | -do-                     | 85  | -do-          |
| 5.  | Muttu Sadulla Desa Bros.               | Tanning of hides & skins | 45  | Manual Labour |
| 6.  | P. Hajee Basha Sahib & Co.             | -do-                     | 110 | -do-          |
| 7.  | Hanumanthappa & Co.                    | -do-                     | 55  | -do-          |
| 8.  | P.H. Chamaraja & Co.                   | -do-                     | 60  | -do-          |
| 9.  | Marenth Mohammed Ismail<br>Sahib & Co. | -do-                     | 112 | -do-          |
| 10. | L. Abdul Rahim Sahib & Co.             | -do-                     | 45  | -do-          |
| 11. | S. Abdul Salam Sahib & Co.             | -do-                     | 65  | -do-          |
| 12. | C.H. Zainulabuddin Sahib & Co.         | -do-                     | 30  | -do-          |
| 13. | Chitney Abdul Hey Sahib & Co.          | -do-                     | 150 | -do-          |
| 14. | Chuna Abdul Razack Sahib & Co.         | -do-                     | 50  | -do-          |
| 15. | The Bangalore Chrome Tanning Co.       | Leather industry         | 10  | -do-          |

| 1                        | 2  | 3                  | 4     | 5             |
|--------------------------|--|--------------------|-------|---------------|
| <b>IX. Miscellaneous</b> |  |                    |       |               |
| 1.                       | Dhondusa Gold Thread Factory                   | gold laces         | 100   | Electrical    |
| 2.                       | Mysore Lamp Works Ltd.                         | Electric bulbs     | 92    | -do-          |
| 3.                       | Government Electric Factory                    | Electric goods     | 1,050 | Electrical    |
| 4.                       | Hindustan Electric Accumulator Co. Ltd. (AMCO) | Electric betteries | 150   | -do-          |
| 5.                       | K.H. Shama Rao & Sons                          | Dress              | 160   | -do-          |
| 6.                       | Khoday Ribbon, Carbon & Allied Industry        | Typewriter ribbons | 70    | -do-          |
| 7.                       | Vishnu Brand Fire Works                        | Fancy fire works   | 30    | -do-          |
| 8.                       | Mysore Arts, Brass & Wood Industries Ltd.      | picture frames     | 18    | Manual Labour |
| 9.                       | Novelty Dress Manufacturing Co.                | Dress              | 12    | -do-          |
| 10.                      | City Dress Manufacturing Co.                   | -do-               | 25    | -do-          |
| 11.                      | M.P. Narayana & Co.                            | -do-               | 10    | -do-          |
| 12.                      | The Bangalore Dress Manufacturing Co.          | -do-               | 12    | -do-          |

Sources: Statistical Abstract of Mysore from 1923-24 to 1947-48.

### POWER

Energy is the basic need for all aspects of life. Hydro-electric power which was generated at Shivasamudram and Shimsha generating stations was supplied to all the services of the district. Bangalore has the distinction of being the first city in the country to be electrified. When it was inaugurated in August 1905, there were just 310 street lights that were switched on and the bulb in each goose-necked fitting was only of 15 watts. Another step was taken three years later when the Cantonment was electrified with 250 street lights. Two decades after electricity came to the city, there were still only 2,955 street lights in Bangalore city and the Cantonment. At the end of the year 1924-25, there were 197 service stations and 6,480 number of lighting installations in Bangalore including the Military Station. For Bangalore lighting, motor generator sets were installed at first. The Mahatma Gandhi Hydro-Electric Station at Jog commissioned in 1948 is also supplying power to the district.

The demand for power increased both directly from increasing industrial units as well as indirectly through the expansion of the city. The estimated peak demand in Bangalore district doubled from 25 MW in 1951 to 50 MW in 1961 and it is further increased to 200 MW in 1971 and 450 MW in 1986 and it is estimated to reach 900 MW in 1995. There have been recent attempts to set up projects close to the city to meet the demands of industries in the district. The innovatively financed power project in Yelahanka is an example for it. At the end of March 1989, all the towns and 99 per cent of the villages including hamlets of the district were electrified.

Statement showing the taluk-wise transmission lines and places including hamlets electrified in Bangalore District as on 31st March, 1989

| Sl. no. | Taluk           | KV Lines in km 11 KV overhead and underground | LT Lines in km 440/220 volts overhead & underground | Places electrified |         |        |
|---------|-----------------|---|---|--------------------|---------|--------|
|         |                 |   |   | Town               | Village | Hamlet |
| 1.      | Anekal          | N.A.  | N.A.  | 2                  | 203     | 45     |
| 2.      | Bangalore North | 384.00  | 1,119.00  | 7                  | 130     | 46     |
| 3.      | Bangalore South | 536.00  | 2,147.00  | 3                  | 161     | 87     |
| 4.      | Bangalore City  | 1,255.00                                      | 6,562.00  |                    |         |        |
| Total   |                 | 2,175.00                                      | 9,828.00  | 12                 | 494     | 178    |

Source: Chief Engineer, Electricity (General), K.E.B., Bangalore.



Statement showing the Division-wise and category-wise total number of installations in Bangalore district as on 31st March 1989

| Sl. No. | Division          | Categorywise installations |          |                     |             |            |            |           |               | Total excluding streetlights |
|---------|-------------------|----------------------------|----------|---------------------|-------------|------------|------------|-----------|---------------|------------------------------|
|         |                   | Domestic lighting          | A.E.H.   | Commercial lighting | Water works | L.T. power | H.T. power | I.P. sets | Street lights |                              |
| 1.      | Bangalore East    | 74,779                     | 56,934   | 24,441              | 45          | 8,042      | 146        | 2,323     | 6,662         | 1,66,710                     |
| 2.      | Bangalore West    | 52,278                     | 58,110   | 48,208              | 35          | 14,901     | 77         | 1         | 13,641        | 1,73,610                     |
| 3.      | Bangalore South   | 70,006                     | 65,499   | 17,498              | 46          | 8,621      | 94         | 1,375     | 10,008        | 1,63,139                     |
| 4.      | Bangalore North   | 44,750                     | 53,661   | 12,122              | 36          | 7,599      | 147        | 1,152     | 4,822         | 1,19,467                     |
| 5.      | Bangalore Central | 73,151                     | 58,455   | 17,893              | 3           | 7,933      | 48         | 546       | 3,855         | 1,58,029                     |
| 6.      | Anekal (Sub Dn.)  | 16,486                     | 1,475    | 1,616               | 32          | 2,284      | 65         | 2,804     | 272           | 24,762                       |
|         | Total             | 3,31,450                   | 2,94,134 | 1,21,778            | 197         | 49,380     | 577        | 8,201     | 39,260        | 8,05,717                     |

BANGALORE DISTRICT

Source: Chief Engineer, Electricity (General), K.E.B., Bangalore.

## LARGE AND MEDIUM SCALE INDUSTRIES

The existing industries in the district can be studied under five groups, viz., Large and Medium Scale Industries, Small Scale Industries, Khadi and Village Industries, Handloom and Powerlooms and Handicrafts. There were 155 large and medium scale industries in the district providing employment for about 1,65,126 persons during the year 1984-85. The capital investment in plants and machinery of them was about Rs. 1,220.22 crores. They produced goods valued about Rs. 2,027.72 crores during the year 1984-85. (In this total figure of 155, Wheel & Axle factory is included. But investment in it-Rs. 143.59 crores and employment 1,672 as on 1988-89 is not included). The category-wise existing large and medium scale industries in the district together with investment and employment in each category in the district as on 31st March, 1989, is given hereunder.

I. There were 16 large and medium scale Metallurgical industrial units manufacturing steel and nihard castings, wire rods, mild high carbon, M.S. Rounds, M.S. Billets and rolled products, flats, angles, M.S. Ingots, bars, structural and alloy steel, battery cell components, steel tubes, pipes, tin containers, etc. The total capital investment on them was Rs. 66.68 crores during the year 1984-85. They provided employment to 3,778 persons.

II. Electrical Units such as AMCO Batteries Ltd., ASEA Ltd., Bengal Lamps, Bharat Electronics Ltd., Bharat Heavy Electricals Ltd., etc. are engaged in manufacturing the items like storage batteries, automotive batteries, LT and HT switch gear cubicles, flourescent tubes and GLS lamps, Solar devices, electronic control equipment, Carbon film resistors, etc. During the year 1984-85, there were 29 electrical units having provided employment to about 38,510 persons. The total capital investment on them was about Rs. 250.80 crores.

III. There were 10 large and medium scale industrial units engaging in manufacture of Transport and Communication items such as earth moving equipments, aircraft, helicopters, spark plugs, filters, diesel locomotive gears, gear boxes, passenger cars, indicating and measuring equipments, T.V. sets, telephone instruments of various types, broadcasting, television receiving, etc. During the year 1984-85, they provided employment to 74,713 persons. The total capital investment on them was Rs. 559.57 crores.

IV. Machinery and Tools manufacturing units such as Hindustan Machine Tools Ltd., Karnataka Implements and Machines Company Ltd. Larson and Toubro Ltd., Fouress Engineering India Ltd., Karnataka Jewels (P) Ltd., Monotype India Ltd., etc., are engaged in manufacture of abrassive materials, vacuum pumps, tobacco processing machinery, LPG cylinders, industrial machinery, cranes, metallic springs, milling machines, machine tools and accessories, rotary volves, watch jewels, cameras, monocomp photo-type setters, etc. During the year 1984-85, there were 30 large and medium scale units providing employment to 16,039 persons. The total capital investment on them was Rs. 143.61 crores.

V. During the year 1984-85, there were six large and medium scale Mechanical and Engineering industrial units viz., F. Fibre Bangalore (P) Ltd., Jairamdas Udyog Ltd., Prameela Plastics (P) Ltd., Suman Sugiyama Plastics & Electronics (P) Ltd., T.T. (P) Ltd. and Widia (India) Ltd. manufacturing items like metal cutting tools, drills, square tools, pressure cookers, kitchenware, etc. They provided employment to 1,762 persons in 1984-85, and the total capital investment on them was about Rs. 22.8 crores.

VI. There were seven large and medium scale chemical industrial units viz., Agromore Ltd., Asiatic Industrial Gasses Ltd., Svictor Multicore Solder (P) Ltd., the Swadeshi Chemicals (P) Ltd., United Oxygen Company (P) Ltd., Vioryle (India) (Pvt) Ltd. and Karnataka Oxygen Ltd., engaging in manufacture of agricultural and industrial chemicals, industrial gases, Oxygen, Nitrogen in liquid/gaseous, Hydrogen, Acetylene gas, etc. The total capital investment on them was Rs. 10.63 crores in 1984-85 and they provided employment to 642 persons.

VII. During the year 1984-85, there were four large and medium scale Drugs and Pharmaceuticals industrial units viz., Astra Idl Ltd., J.L. Morrison & Jones (India) Ltd., Eskayef Ltd. and Magnesium Products (P) Ltd. engaging in manufacture of Bricanyl, Be Taloc, Dytide, Mebryl, local anaesthetics, surgical structures, etc. The total capital investment in them was Rs. 7.62 crores and they provided employment to 1,827 persons.

VIII. There were 14 large and medium scale Textile industrial units, engaging in manufacture of cotton shirtings and suitings, cotton yarn, ready-made garments, silk yarn and fabrics, woollen fabrics, etc. during the year 1984-85. Among them, Binny Ltd., Gopalakrishna Textile Mills (P) Ltd., Minerva Mills, Mysore Spinning and Manufacturing Mills, Ramkumar Mills (P) Ltd., Sri Krishna Spinning and Weaving Mills (P) Ltd. are important. These 14 units were providing employment to 16,092 persons. The total capital investment on them was Rs. 40.03 crores.

IX. During the year 1984-85, there were 23 major and medium scale industrial units in the district engaging in production of Food Products and Breweries such as bread and biscuits, fry snack food, wheat products like *maida*, *soji*, *atta*, bran, animal feeds, ice cream, chewing gum, bubble gum, aerated water, liquor, etc. The total capital investment on them was about Rs. 37 crores and they together provided employment to 4,351 persons.

X. There were 14 large and medium scale Miscellaneous industries which provided employment to 7,412 persons during the year 1984-85. The total capital investment on them was about Rs. 81.47 crores. Of the 14 industrial units one each in the sectors of soaps and cosmetics, coir products, leather products, timber and prime movers other than generators, three ceramics and six others. They are manufacturing the items such as steam turbines turbo-generators, non-edible oils, de-oiled cakes, toilet and washing soaps, detergents, coir products leather products, porcelain insulators, disc insulators, bushings, salt-glazed stone-ware pipes, roofing tiles, flat tiles, cigarettes, publishing and printing etc.

**Statement showing the list and other particulars of Large and Medium Scale Industries in Bangalore District as on  
31st March 1989.**

| Sl. No. | Name and address of the unit.                                     | Year of establishment | Item of manufacture.                                  | Investment during 1984-85. (Rs. in lakhs) | Employment during 1984-85 (in No.) | Investment during 1988-89 (Rs. in lakhs) | Employment during 1989-90 (in No.) |
|---------|---|-----------------------|---|---|------------------------------------|--|------------------------------------|
| 1       | 2   | 3                     | 4   | 5   | 6                                  | 7  | 8                                  |
| 1.      | Andhra Steel Corporation Ltd. Mahadevapura P.O.                   | 1972                  | Mild High Carbon<br>M.S. Rounds, Tor Steel, etc.      | 343.78                                    | 276                                | NA                                       | NA                                 |
| 2.      | Bangalore Wire Rod Mill, Whitefield Road, Mahadevapura Post       | 1976                  | Wire Rods   | 769.57                                    | 167                                | 837.56                                   | 167                                |
| 3.      | Best and Crompton Engineering Ltd., Kanakapura Road               | 1968                  | Steel and Nihard Castings.                            | 128.35                                    | 242                                | NA                                       | NA                                 |
| 4.      | Bhoruka Steel Ltd., White Field Road, Mahadevapura Post,          | 1969                  | High Carbon Mild Steel Billet                         | 1040.00                                   | 320                                | 1028.20                                  | 320                                |
| 5.      | Brindavan Alloys Ltd., Phase IV. Peenya Industrial Area           | 1973                  | M.S. Billets & Rolled Products                        | 1004.00                                   | 450                                | 1142.00                                  | 224                                |
| 6.      | G.R. Steels and Alloys (P) Ltd., Krishnarajapuram Whitefield Road | 1970                  | M.S. Rounds. Flats Angles, etc.                       | 61.63                                     | 126                                | NA                                       | NA                                 |
| 7.      | Jindal Aluminium Ltd., 16, K M, Tumkur Road                       | 1970                  | Aluminium Extrusions Sprinkler Irrigation Equipments. | 315.82                                    | 273                                | 489.00                                   | 326                                |

| 1   | 2  | 3    | 4   | 5      | 6    | 7       | 8   |
|-----|--|------|---|--------|------|---------|-----|
| 8.  | K.M.A. Limited,<br>Mahadevapura Post                               | 1972 | Cold Rolled Steel strips.   | 250.84 | 204  | NA      | NA  |
| 9.  | KAP Steel Limited,<br>Mahadevapura Post,                           | 1974 | M.S. Ingots/Billets<br>Bars, Tor Steel  | 722.30 | 255  | 1648.93 | 240 |
| 10. | Mittal Steel Ltd., Mahadevapura,                                   | 1975 | Steel rounds, Bars, Rods, Tor Steel etc   | 298.19 | 185  | NA      | NA  |
| 11. | Panyam Cements and Mineral<br>Industries Ltd., Bommanahalli,       | 1977 | High Quality Steel<br>Wires.  | 722.00 | 376  | 815.56  | 344 |
| 12. | Rukmini Steel Industries<br>Ltd., Kadugodi Post,                   | 1965 | M.S. Rounds, Tor Steel,<br>M.S. Angles, M.S. Flat.  | 134.00 | 102  | 134.00  | 102 |
| 13. | Shetron Metals Ltd.,<br>Bommasandra Industrial Area<br>(Anekal Tq) | 1980 | Battery Cell Jackets<br>Battery Cell Components<br>printed Tin Streets.                       | 260.00 | 75   | 471.70  | 100 |
| 14. | Shivmoni Steel Tubes Ltd.,<br>16 Km Whitefield Road.               | 1971 | Steel Tubes/Pipes   | 180.40 | 331  | NA      | NA  |
| 15. | India Tin Industries (P) Ltd<br>Dooravananagar,                    | 1946 | Plain and Printed<br>Tin Containers & Closures.   | 147.00 | 246  | 181.00  | 145 |
| 16. | Infrastructural  | 1972 | Cast Alloy Steel grading media, Alloy<br>Steel castings and Ingots.                           | 289.84 | 150  | 412.21  | 238 |
| 17. | Triveni Engineering Works Ltd.,<br>Peenya Industrial Area          | 1973 | Steam Turbines,<br>Turbo-generators.  | 136.99 | 346  | NA      | NA  |
| 18. | AMCO Batteries Ltd., Plant-1-<br>Mysore Road,<br>Plant-2: Hebbal,  | 1955 | Storage Batteries<br>Automotive Batteries<br>Train Lighting Cells<br>Traction Batteries, etc. | 690.85 | 1310 | NA      | NA  |

BANGALORE DISTRICT

| 1   | 2   | 3    | 4  | 5       | 6      | 7         | 8      |
|-----|---|------|--|---------|--------|-----------|--------|
| 19. | Asea Limited, II Phase, Peenya Industrial Area  | 1950 | LT & HT. Switchgear cubicles. Protective relays & Relay protection, Mini Computers etc.,   | 695.00  | 740    | 1606.28   | 847.   |
| 20. | Bengal Lamps Ltd., Old Madras Road  | 1971 | Flourescent Tubes & GLs. Lamps.  | 875.93  | 564    | 393.92    | 568    |
| 21. | Bharat Electronics Limited, Jalahalli,  | 1954 | Communication equipments Solar devices, Radars, crystals Transmitting Tubes X-ray Tubes etc.   | 9118.00 | 13,829 | 36,033.00 | 19,780 |
| 22. | Bharat Heavy Electricals Ltd., Mysore Road  | 1976 | Energy Meters, Water Meters, Power Devices Solar Cells, Electronic Control Equipment etc.  | 1348.50 | 2639   | 2706.00   | 2887   |
| 23. | Deepak Insulated Cable Corporation Ltd.,Nagasandra.   | 1964 | Enamelled Copper and Aluminium Wires. Aluminium & Fibre Glass Conductors etc.,   | 1353.73 | 767    | NA        | NA     |
| 24. | Electrocarbonium Private Ltd. Unit1: Bommasandra industrial Area Unit:2: Jaibharat Industrial Estate, Yeshwantpur | 1975 | Carbon Blocks,Carbon bushes, Industrial and Moulding commutators, etc.,  | 109.82  | 144    | 150.00    | 92     |
| 25. | Electronic Research (P) Ltd. Koramangala Layout   | 1968 | Colour TV Components, B & W TV Components- Professional grade switches, Polarised Telegraph Relays, Hermetically sealed panel Meters etc., | 119.18  | 175    | 750.00    | 421    |

| 1   | 2   | 3    | 4  | 5       | 6    | 7       | 8    |
|-----|---|------|--|---------|------|---------|------|
| 26. | Ferrite India Limited,<br>Visvesvaraya Industrial Estate,<br>Whitefield Road                          | 1972 | Soft and Hard Ferrites   | 51.08   | 59   | NA      | NA   |
| 27. | Guest Keen Williams Ltd<br>Rajajinagar  | 1959 | Fan, Motor & Generator,<br>Stampings, Transformer<br>Laminations, etc.,  | 607.11  | 1245 | NA      | NA   |
| 28. | H.G. Resistors (P) Ltd.,<br>Bommasandra Industries Area   | 1982 | Carbon Film Resistors  | 52.06   | 70   | NA      | NA   |
| 29. | Hindustan Machine Tools<br>Limited (Electronic Watch<br>Project), Bangalore.                          | 1981 | Quartz Analogue watches.   | NA      | 73   | NA      | NA   |
| 30. | Karnataka Vidyuth Karkhane<br>Limited, Mysore Road,<br>(Converted as Public Ltd.,<br>Company in 1976) | 1933 | 1) Power and distribution<br>transformers completely self<br>protected transformers.<br>2)CSP Circuit breakers,<br>Metering cubicles,etc., | 355.66  | 557  | 252.54  | 472  |
| 31. | Kirloskar Electric Company<br>Ltd.,Malleswaram West   | 1946 | Electric Motor of various<br>types & sizes, D.C.<br>Generators and Motors,<br>Transformers etc.  | 2843.86 | 3953 | 4971.63 | 3999 |
| 32. | Kirloskar Systems Ltd., Hebbal  | 1962 | Switchgear & control gear and<br>Circuit Breakers.   | 91.00   | 228  | 123.95  | 263  |
| 33. | Metal Lamp Caps (India) Ltd.,<br>Kodihalli Village  | 1964 | Electric Lamp Components,<br>Lamp caps, lead-in-wires,<br>Lead glass tubing etc.,  | 650.00  | 772  | 686     | 525  |

BANGALORE DISTRICT

| 1   | 2  | 3    | 4   | 5       | 6     | 7       | 8    |
|-----|--|------|---|---------|-------|---------|------|
| 34. | Mini Circuits Limited, Jigani Industrial Area, Anekal tq.        | 1982 | Hybrid Micro Circuits   | N.A.    | N.A.  | 149.68  | 85   |
| 35. | Micropack Limited, Jigani Industrial Area                        | 1982 | Printed Circuit Boards  | 135.09  | 160   | 505.32  | 240  |
| 36. | Mohan Aluminium (P) Ltd., Virgonagar Post                        | 1966 | AAC, ACSR and AAAC-Conductors.  | 43.65   | 51    | 65.50   | 53   |
| 37. | NGEF Limited, Old Madras Road,                                   | 1965 | Transformers, Electric Motors, Switchgears etc.,  | 3107.00 | 6505  | 6407.16 | 6360 |
| 38. | AEG-NGEF Limited, Varthur Road                                   | 1963 | LT & HT Motor Control Centres, Power Control Centres, Switch Board etc.                       | 202.52  | 519   | 272.8   | 663  |
| 39. | Rao Insulating Co.,Private Ltd., Whitefield                      | 1962 | Electric Steel Stampings Printed Circuit Boards Lamp Caps etc.                                | 238.99  | 235   | 577.47  | 245  |
| 40. | S & S Bushings Ltd., 27th KM Bellary Road                        | 1977 | OIP Condenser Bushings ARC Chamber Tubes etc.   | 310.16  | 74    | 495.69  | 99   |
| 41. | Stumpp Schuele and Somappa Ltd., Hosur Road                      | 1960 | All types of metallic Springs, film capacitors for electrical and Telecommunication purposes. | 138.21  | 317   | 948.08  | 668  |
| 42. | Mysore Electrical Industries Limited, Tumkur Road, Yeshwanthapur | 1945 | HT & LT Switchgear Motor Controlgear & Electric Devices                                       | 308.12  | 1,368 | 367.01  | 1222 |
| 43. | Mysore Lamp Works Ltd., Old Tumkur Road                          | 1936 | Incandescent Lamps, Fluorescent Tubes etc   | 1137.45 | 1426  | 1209.64 | 1650 |
| 44. | Trident Electronics (P) Ltd.,II Stage, Peenya Industrial Estate  | 1981 | Carbon Film Resistors, Metal Film Resistors Metal Oxide Film Resistors.                       | 29.88   | 15    | NA      | NA   |



| 1   | 2   | 3    | 4  | 5        | 6      | 7         | 8      |
|-----|---|------|--|----------|--------|-----------|--------|
| 45. | UB-MEC Batteries Ltd.,<br>MEC Factory Road,<br>Yeshwanthapur                                  | 1946 | Lead Acid Storage Batteries.   | 234.13   | 428    | 703.65    | 460    |
| 46. | W.S. Industries (India)<br>Limited, Bellary Road  | 1976 | Coupling Capacitors,<br>Line Traps, etc.   | 259.15   | 295    | 340.00    | 303    |
| 47. | British Physical Laboratories India Ltd.,<br>(BPL) Hoskote Road                               | 1963 | Indicating & Measuring<br>Instruments, TV Sets etc.                                      | 684.20   | 1,000  | 2,329.66  | 1,250  |
| 48. | Indian Telephone Industries<br>Ltd. Dooravaninagar  | 1946 | Telephone Instruments of<br>various types, Automatic<br>Exchange equipments etc.         | 6,606    | 16,448 | NA        | NA     |
| 49. | Raghunandan Electronics Ltd.,<br>Opp: to CMTI, Tumkur Road                                    | 1984 | Broadcasting Television<br>Receiving, Eiko Colour TV.                                    | 26.62    | 80     | NA        | NA     |
| 50. | Bharat Earth Movers Ltd.,<br>(BEML) (Railcoach Division)                                      | 1964 | Railcoaches, Earth Moving<br>equipments like excavators,<br>Bulldozers and graders etc., | 2051.00  | 5712   | 21,968.00 | 15,693 |
| 51. | Escorts Ltd., Yelahanka   | 1977 | Pistons, Gudgeon Pins  | 1710.11  | 1,443  | 2,160.34  | 1,538  |
| 52. | Hindustan Aeronautics Ltd.,<br>Vimanapura.  | 1964 | Aircraft, Helicopter<br>Engines, etc.,   | NA       | NA     | 19,988.19 | 18,551 |
| 53. | KAR Mobiles Ltd.<br>Peenya Industrial Area,   | 1936 | Valves for Internal<br>Combustion engines  | 485.20   | 460    | 532.24    | 580    |
| 54. | Motor Industries Company<br>Limited (MICO), Hosur Road,<br>Adugodi                            | 1951 | Spark Plugs, Multi-<br>cylinder pumps, Filters,<br>Filter insorts, Elements, etc.,       | 8,448.01 | 6,344  | 14,836.65 | 8975   |
| 55. | SAN Engineering & Locomtive<br>Co. Ltd., (1) White Field<br>Road, (2) Hebbal Industrial Area. | 1972 | Diesel and Electric Loco-<br>motives, Transmission<br>equipment and spares               | 408.49   | 511    | 545.61    | 511    |

BANGALORE DISTRICT

| 1   | 2  | 3    | 4  | 5      | 6   | 7       | 8   |
|-----|--|------|--|--------|-----|---------|-----|
| 56. | Sipani Automobiles Ltd.,<br>Industrial Suburb II Stage,<br>Tumkur Road                 | 1974 | 'Dolphin'<br>Passenger Cars.   | 244.00 | 330 | NA      | NA  |
| 57. | G.R. Engineering Works<br>Private Limited, Whitefield<br>Road                          | 1973 | Fabrication of pressure<br>vessels, Heat exchanges,<br>Horton Spheres, calendars etc., | 412.00 | 257 | NA      | NA  |
| 58. | Grindwell Norton Limited<br>Devanahalli Road   | 1972 | Abrasive Materials   | 961.00 | 218 | 153.95  | 222 |
| 59. | Hind High Vacuum Co.<br>Private Ltd., Peenya Industrial<br>Area, Phase I               | 1964 | Vacuum pumps, vacuum<br>-coating units, Vacuum<br>pumping systems etc.                 | 63.14  | 172 | 141.00  | 96  |
| 60. | Ingersoll Rand (India) Ltd.,<br>Peenya Industrial Area                                 | 1977 | Down to Hole Hammer<br>Drills, Small and medium<br>Drilling rigs etc.                  | 850.00 | 225 | 1906.00 | 292 |
| 61. | John Fowler (India) Ltd.,<br>Sarjapur Road   | 1953 | Tobacco Processing machinery<br>Industrial Oil Filters etc.                            | 126.14 | 417 | 464.61  | 399 |
| 62. | Madhura Coats Private Limited,<br>Peenya Industrial<br>Area, Phase II                  | 1977 | Stainless Steel Dye-<br>sparings, Textile<br>Machine Accessory.                        | 20.00  | 20  | NA      | NA  |
| 63. | Nav Bharath Flange & Allied<br>Industries Private Ltd.,<br>Bommasandra Industrial Area |      | Drum Closures &<br>Industrial Valves   | 70.53  | 25  | NA      | NA  |
| 64. | Prashanth Cylinders Pvt. Ltd.,<br>Veerasandra Industrial Area                          | 1981 | LPG Cylinders  | 78.52  | 56  | 95.64   | 87  |

| 1   | 2   | 3    | 4   | 5       | 6    | 7       | 8    |
|-----|---|------|---|---------|------|---------|------|
| 65. | Sikka and Sikka Engineers Private Ltd. Bommasandra Industrial Area              | 1971 | Industrial Machinery, Sugar Machinery equipment and Spares, Cranes, Hoists, Penstocks etc., | 50.15   | 109  | NA      | NA   |
| 66. | S.S.S. Engineering Co., Ltd., Bommasandra Industrial Area                       | 1981 | Rotary and Snap Spares Steel checks pinion Gearbox, Rotation Gears etc.,                    | 209.57  | NA   | NA      | NA   |
| 67. | Stump schuele & Somappa Ltd., Hosur Road  | 1960 | All types of metallic springs and spring formations.  | 694.93  | 794  | NA      | NA   |
| 68. | Usha martin Industries Ltd., 58, Main Road, White Field                         | 1974 | Wire Drawing & Allied Machines.   | 162.33  | 193  | 207.15  | 210  |
| 69. | Alfred Herbert (India) Ltd., whitefield Road                                    | 1973 | Rubber processing, Machine Tools, Atritors.   | 473.31  | 302  | 924.17  | 266  |
| 70. | Bharat Fritz Werner Private Ltd., Peenya  | 1961 | Milling Machines, N.C. Machines etc.,   | 679.46  | 809  | NA      | NA   |
| 71. | Dynatomic Hydraulics Ltd., Peeny Industrial Estate                              | 1973 | Hidraulic gear pumps Plain Paper Copiers etc.   | 200.00  | 250  | 214.00  | 261  |
| 72. | Hindustan Machine Tools Ltd., (Horological Machinery Division) HMT P.O          | 1974 | Machines Tools  | 290.00  | 384  | 400.00  | 450  |
| 73. | Hindustan Machine Tools Ltd., (Machine Tools & Die Casting Division), Jalahalli | 1953 | Machine Tools and Acc-<br>aessories<br>Die Casting & Plastic<br>Injection moulding, etc     | 3330.00 | 4947 | 4116.00 | 4436 |
| 74. | Hindustan Machine Tools Ltd., (Specialised Watch case Division) HMT P.O.        | 1983 | Cases for Electronic watches.   | 208.52  | 143  | 286.77  | 171  |

BANGALORE DISTRICT

| 1   | 2   | 3    | 4   | 5       | 6    | 7                                       | 8    |
|-----|---|------|---|---------|------|---|------|
| 75. | Hindustan Machine Tools Ltd.,<br>(Watch Factory I and II) HMT P.O       | 1961 | Mechanical, Hand wound<br>& Automatic day-date wrist<br>watches etc.,                           | 2864.15 | 2831 | 4153.83                                 | 2725 |
| 76. | Rewdale precision Tools Pvt.<br>Ltd., Peenya Industrial Area            | 1982 | Machine Collets.  | N.A.    | 45   | 240.00                                  | 102  |
| 77. | Wipro Ltd., Peenya Industrial<br>Area                                   | 1976 | Hydraulic and Pneumatic<br>cylinders.   | 200.50  | 140  | 560.00                                  | 200  |
| 78. | Yuken India Ltd., Whitefield<br>Road.                                   | 1976 | Oil Hydraulic equipment   | 82.03   | 155  | 123.32                                  | 160  |
| 79. | Karnataka Implements and<br>Machineries Co., Ltd (KIMCO)<br>Mysore Road | 1975 | Trailers, Insulator<br>pins etc.  | 90.01   | 387  | 91.82<br>(inclusive B'lore<br>& Hassan) | 559  |
| 80. | Vicon Ltd., Krishnarajapuram,<br>Whitefield Road                        | 1968 | Agricultural equipments<br>and Machinery.   | 78.44   | 205  | NA                                      | NA   |
| 81. | V.S.T. Tillers Tractors Ltd.,<br>Whitefield Road                        | 1967 | Power tillers, Diesel<br>Engine, Tractors, etc.   | 207.49  | 409  | 624.80                                  | 479  |
| 82. | Larsen and Toubro Ltd.,<br>Byatarayanapura, Bellary Road                | 1975 | Multipurpose Hydraulic<br>excavator leaders, High Pressure<br>Hydraulic system components, etc. | 1763.00 | 652  | 3320.00                                 | 780  |
| 83. | F.Fibre Bangalore (P) Ltd.,<br>Industrial Estate, Rajajinagar           | 1971 | HDP Woven Fabric<br>and Sacks.  | 15.63   | 64   | 15.00                                   | 30   |
| 84. | Jairamdas Udyog Ltd.,<br>Mysore Road                                    | 1961 | Metal Cutting Tools<br>viz., Drills, Taps<br>Square tool Bits etc.,                             | 135.80  | 271  | NA                                      | NA   |

| 1   | 2   | 3    | 4   | 5       | 6    | 7      | 8   |
|-----|---|------|---|---------|------|--------|-----|
| 85. | Prameela Plastic (P) Ltd.,<br>Bommasandra Industrial Area                           | 1984 | LDPE.Co-extended<br>printed film for<br>packing milk, arrack etc.<br>Multi-colour flexo printed<br>polythenecarrier bags. | 67.68   | 25   | NA     | NA  |
| 86. | Suman Sugiyama Plastics &<br>Electronics (P) Ltd., Peenya<br>Industrial Area.       | 1972 | Plastic Radio Cabinets,<br>Plastic Mixie components etc.  | 12.74   | 26   | 60.00  | 35  |
| 87. | T.T. (Private) Limited,<br>Old Madras Road, Dooravaninagar                          | 1955 | Pressure Cookers,<br>Kitchenware etc.   | 563.72  | 410  | NA     | NA  |
| 88. | WIDIA (India) Limited,<br>Tumkur Roads  | NA   | Special purpose machines<br>jigs & fixtures,<br>Tungsten Carbide<br>(Hara Metal) Tips<br>Blanks, Pellets etc.,            | 1552.32 | 966  | NA     | NA  |
| 89. | Fouress Engineering (India)<br>Private Limited, Peenya<br>Industrial Area, II Phase | 1974 | Butterfly valves,<br>Rotary Valves, Needle<br>Valves etc.,  | 250.00  | 387  | 284.00 | 483 |
| 90. | International Instruments Ltd.,<br>Bommasandra Industrial Area                      | 1958 | Dash-board Instruments,<br>Flexible Driveshaft Cables,<br>Automotive Switches, etc.,                                      | 595.31  | 1330 | NA     | NA  |
| 91. | Karnataka jewels (P) Ltd.,<br>Bommasandra Industrial Area                           | 1978 | Watch Jewels  | 147.99  | 87   | 322.38 | 145 |
| 92. | Monotype India Limited,<br>Banashankari II Stage                                    | 1976 | Cameras, Monocomp Photo-<br>type setters, etc.,   | 52.68   | 97   | 148.03 | 195 |
| 93. | Agromore Limited, Mysore Road   | 1962 | Agricultural Chemicals,<br>Industrial Chemicals, etc.   | 27.75   | 93   | 39.79  | 87  |

BANGALORE DISTRICT

| 1    | 2  | 3    | 4  | 5       | 6    | 7       | 8    |
|------|--|------|--|---------|------|---------|------|
| 94.  | Asiatic Industrial Gases Ltd.,<br>Avalahalli, Old Madras Road                                    | 1982 | Industrial Gases and<br>Accessories.   | 138.13  | 250  | 271.17  | 230  |
| 95.  | Karnataka Oxygen Limited<br>Mahadevapura.  | 1974 | Oxygen, Nitrogen in liquid/<br>gaseous, Hydrogen etc.,                                       | 444.63  | 159  | NA      | NA   |
| 96.  | Svictor Multicore Solder (P)<br>Ltd.Bommasandra Industrial Area                                  | 1988 | Solder materials   | 45.27   | 17   | NA      | NA   |
| 97.  | Swadeshi Chemicals (P) Ltd.,<br>Bellary Road   | 1973 | Phosfume, Tablet/Pillets<br>etc.,  | 58.30   | 39   | NA      | NA   |
| 98.  | United Oxygen Co.,(P) Ltd.,<br>Whitefield Road   | 1974 | Oxygen & Acetylene Gas   | 184.84  | 63   | 69.09   | 60   |
| 99.  | Vioryl (India) Private Ltd.,<br>Bommasandra Industrial Area                                      | 1983 | Anethol 21-22<br>Heliotropine.   | 118.90  | 10   | NA      | NA   |
| 100. | Astra-IDL Limited,<br>Kattigehalli Village, Yelahanka  | 1979 | Drugs and Pharmaceuticals.   | 295.56  | 464  | 524.00  | 617  |
| 101. | Eskayef Limited,<br>Old Madras Road  | 1971 | Dytide, Mebryl, Drugs and<br>Pharmaceuticals Tablets etc.,                                   | 415.00  | 1015 | 1138.00 | 1276 |
| 102. | J.L. Morrison & Jones<br>(India) Ltd., Tumkur Road   | 1968 | Local Anaesthetics, Surgical<br>Sutures, Cream & Ointments etc.                              | 51.11   | 273  | NA      | NA   |
| 103. | Magnesium Products (P)<br>Ltd.,Virgonagar  | 1970 | Light Magnesium Carbonate<br>IP Light Magnesium Oxide<br>I.P. Burnt Lime.                    | 119.67  | 75   | NA      | NA   |
| 104. | Binny Limited (Bangalore,<br>Woollen, Cotton & Silk<br>Mills)<br>1) Agraharam Road,<br>2) Hebbal | 1884 | Cotton Shirting & Suiting<br>Cotswal, Angola,<br>Terene/Wool suiting,<br>Silk Fabrics, etc., | 1407.51 | 4691 | NA      | NA   |

| 1    | 2  | 3    | 4  | 5      | 6    | 7      | 8    |
|------|--|------|--|--------|------|--------|------|
| 105. | Chandra Spinning and Weaving Mills (P) Ltd., V Main, Chamarajapet    | 1954 | Cotton Yarn  | 29.71  | 163  | NA     | NA   |
| 106. | Gokaldas Images, No.123 Chord Road                                   | 1979 | Readymade Garments   | 47.99  | 1500 | NA     | NA   |
| 107. | Gopalakrishna Textile Mills (Private) Ltd., Subramanyapura           | 1958 | Yarn and Fabrics   | 248.00 | 506  | NA     | NA   |
| 108. | Minerva Mills, Magadi Road   | 1919 | Cotton and Blended Yarn cloth.                                 | 455.45 | 3474 | 684.14 | 2267 |
| 109. | Mysore Spinning & Manufacturing Mills, Malleswaram                   | 1884 | Cotton Textiles  | 564.55 | 3887 | NA     | NA   |
| 110. | Panchavarna Textile Processing (P) Ltd., Bommasandra Industrial Area | 1983 | Textile Post-woven Processing- such as Bleaching- Dyeing etc., | 127.00 | 50   | NA     | NA   |
| 111. | Ramachandra Rexins (P) Ltd., Bommasandra Industrial Area,            | 1983 | P.V.C. Foam Leather Cloth                                      | 110.00 | 28   | 140    | 42   |
| 112. | Ramkumar Mills (P) Ltd., Rajajinagar                                 | 1947 | Manufacture of Textile Products.                               | 464.00 | 712  | 513.65 | 632  |
| 113. | Sree Sreenivasa Textile Processing Ltd., Dasanapura                  | 1970 | Textile processing   | 109.24 | 226  | NA     | NA   |
| 114. | Sri Krishna Spinning and Weaving Mills (P) Limited, Subramanyapura   | 1960 | Textile processing   | 149.00 | 296  | 231.75 | 213  |
| 115. | Sri Suryodaya Industries Ltd., Yeswanthapur                          | 1951 | Cotton Fabrics and Coated Cotton Fabrics.                      | 77.60  | 258  | NA     | NA   |

BANGALORE DISTRICT

| 1    | 2  | 3    | 4   | 5      | 6   | 7      | 8   |
|------|--|------|---|--------|-----|--------|-----|
| 116. | Subadra Textile (P) Ltd.,<br>Dasarahalli                           | 1963 | Textile Yarn  | 165.83 | 209 | 271.99 | 215 |
| 117. | T.R. Mills (P) Ltd.,<br>V Main, Chamarajapet                       | 1954 | Cotton Textiles Yarn etc.                               | 46.14  | 92  | 47.03  | 79  |
| 118. | Amrut Distilleries (P) Ltd.,<br>Sampangi Tank Road                 | 1953 | Brandy, Rum, Gin,<br>Whisky etc.,                       | 46.00  | 175 | 85.00  | 283 |
| 119. | Gemini Distilleries (P) Ltd.,<br>Tumkur road                       | 1970 | Liquor  | 319.65 | 41  | 433.16 | 90  |
| 120. | Khoday Brewing and Distilling<br>Industries Ltd., Kanakapura Road  | 1972 | Beer under various<br>brand name.                       | 275.00 | 449 | 720.00 | 500 |
| 121. | Mysore Breweries Limited,<br>Jalahalli Camp Town,<br>Yeshwanthapur | 1970 | Beer  | 262.16 | 230 | 312.28 | 229 |
| 122. | United Breweries Limited, 24,<br>Vitthal Mallya Road               | 1915 | Beer  | 769.96 | 236 | NA     | NA  |
| 123. | Bangalore Soft Drinks (P) Ltd.,<br>Mysore Road                     | 1966 | Aerated Water   | 55.00  | 74  | 52.99  | 55  |
| 124. | Chamundi Roller Flour Mills<br>Ltd., Hosur Road                    | 1973 | Maida, Soji, Atta,<br>Bran etc.                         | 37.00  | 40  | 26.40  | 40  |
| 125. | Elgin Electric Flour Mills,<br>Hosur Road                          | 1930 | Wheat Products such<br>as Maida, Soji, Bran, Atta etc., | 6.31   | 35  | 43.81  | 49  |
| 126. | Gayatri Roller Flour Mills,<br>Magadi Road                         | 1971 | Wheat Products  | 14.00  | 39  | NA     | NA  |
| 127. | Joy Ice Creams (Bangalore) (P)<br>Ltd., Whitefield Road            | 1966 | Ice Creams, Syrups, etc.                                | 56.56  | 89  | 24.73  | 99  |



| 1    | 2   | 3    | 4   | 5      | 6   | 7      | 8   |
|------|---|------|---|--------|-----|--------|-----|
| 128. | Karnataka State Agro Corn product Ltd., Hebbal                        | 1973 | Maize Products, Animal feeds, Energy food           | 327.54 | 422 | N.A.   | 545 |
| 129. | Kissan Products Ltd. Old Madras Road                                  | 1948 | Fruit Juices, Syrups, pulps etc.,                   | 353.75 | 538 | NA     | NA  |
| 130. | Krishna Flour Mills (Bangalore) Ltd., Platform Road                   | 1977 | Maida, Soji, Atta, Bran, etc.,                      | 153.51 | 135 | 153.51 | 115 |
| 131. | Kwality Biscuites (Pvt) Ltd., Mysore Road                             | 1969 | Biscuits  | 204.64 | 266 | 243.52 | 247 |
| 132. | Maanay Roller Flour Mills (P) Ltd., Old Tharagupet                    | 1910 | Wheat Products- Maida Soji, Atta, Bran Etc.         | 25.64  | 41  | 25.64  | 41  |
| 133. | J.B. Mangharam & Sons, Tumkur Rd.                                     | 1969 | Varieties of Biscuits.                              | 100.00 | 210 | 100.00 | 150 |
| 134. | Modern Food Industries (India) Ltd., Industrial Estate, Yeshwanthapur | 1970 | Bread   | 61.51  | 134 | NA     | NA  |
| 135. | Mysore Feeds (P) Ltd., Nayandahalli                                   | 1965 | Animal Feeds  | 134.00 | 199 | 127.69 | 189 |
| 136. | Seethalakshmi Hall Flour Mills Ltd., Industrial Suburb, Tumkur Road   | 1970 | Wheat Products such as Maida, Atta, etc.            | 97.40  | 110 | 89.26  | 135 |
| 137. | Sri Balakrishna Flour Mills Old Madras Road                           | 1935 | Soji, Maida, Atta, etc.                             | 170.73 | 56  | NA     | NA  |
| 138. | Sree Venugopal Flour Mills Ltd., Sultanpet                            | 1928 | Maida, Soji, Atta Bran etc.                         | 25.81  | 35  | 18.71  | 47  |
| 139. | National Products, Kaval Byrasandra                                   | 1942 | Chewing Gum, Bubble Gum, Hand-boiled Confectionary. | 127.43 | 750 | 128.00 | 750 |

BANGALORE DISTRICT

| 1    | 2  | 3    | 4  | 5       | 6    | 7         | 8    |
|------|--|------|--|---------|------|-----------|------|
| 140. | Agro Extracts Ltd.,<br>Phase II, Peenya Industrial Area                    | 1974 | Non-Edible Oils,<br>Deoiled Cakes etc.,  | 37.00   | 53   | 83.00     | 64   |
| 141. | Kartnataka Soaps and Detergents-<br>Limited, Malleswaram                   | 1918 | Toilet Soaps, Washing<br>soaps, Detergents, Agarbathies, etc.                                  | 3167.20 | 1224 | NA        | NA   |
| 142. | Karnataka Consumer Products<br>Ltd., Jalahalli Camp Road,<br>Yeshwanthapur | 1962 | Coir products such as<br>Mattresses, Furnitures,<br>Cushion blocks, Car<br>Cool cushions etc., | 105.38  | 202  | 387.55    | 256  |
| 143. | Mysore Chrome Tanning Co.,<br>Ltd., Mysore Road                            | 1940 | Finished Leather<br>Footwear and Leather goods.  | 83.72   | 181  | 85.94     | 144  |
| 144. | Bharat Heavy Electricals Ltd.,<br>Science Institute Post                   | 1932 | Porcelain Insulators,<br>Disc Insulators, Post<br>Insulator's Bushings etc.                    | 894.94  | 1675 | 2213      | 1587 |
| 145. | Standard Bricks and Tile<br>Co.,(P) Ltd., Yelahanka                        | 1970 | Roofing Tiles, Flat<br>Tiles etc.  | 19.85   | 136  | NA        | NA   |
| 146. | Mysore Stoneware Pipes<br>and Potteries Ltd., Soladevanahalli              | 1937 | Salt-glazed Stone-ware<br>Pipes, Fittings, etc.  | 20.96   | 204  | NA        | NA   |
| 147. | Mafathlal Plywood Industr-<br>ies Ltd., Yeshwanthapur,                     | 1943 | Plywood, Block Board,<br>Flush Doors etc.  | 251.63  | 569  | 225.04    | 523  |
| 148. | Chamundi Granite (P) Ltd.<br>Bommasandra Industrial Area                   | 1985 | Cut and polished granite-<br>& Monuments<br>Blocks, Slabs etc.,                                | 60.32   | 18   | 39.51     | 12   |
| 149. | Graphite India Ltd.,<br>Visvesvaraya Industrial<br>Area, Whitefield Road   | 1973 | Graphite Electrodes, Anodes, etc.,   | 1652.32 | 681  | 1998.76   | 700  |
| 150. | I.T.C. Limited, Frazer Town  | 1912 | Cigarettes   | 1800.00 | 1981 | 25,507.00 | NA   |

| 1    | 2  | 3    | 4  | 5     | 6   | 7         | 8    |
|------|--|------|--|-------|-----|-----------|------|
| 151. | Ittina Printers (P) Ltd.,<br>Jigani Industrial Area            | 1983 | Off-set Printers<br>in labels, packing<br>materials, posters etc., | 95.47 | 61  | NA        | NA   |
| 152. | Bangalore Printing and<br>Publishing Co., Ltd.,<br>Mysore Road | 1916 | Publishing and<br>printing.  | 26.42 | 121 | 27.59     | 80   |
| 153. | Mysore Press (P) Ltd.,<br>Basavanagudi Road                    | 1947 | Prajamatha Kannada Weekly.   | 44.34 | 144 | 39.25     | 85   |
| 154. | Hindustan Machine Tools<br>(Electronic Watch Project)          | 1981 | Quartz Analogue Watches  | NA    | NA  | NA        | 60   |
| 155. | Wheel and Axle Plant<br>Yelahanka                              | 1984 | Railway Wheelsets<br>Loose wheels & axles                          | NA    | NA  | 14,359.00 | 1672 |

Source: Directory of Medium/Large Scale Industries, Bangalore District  
by Directorate of Industries and Commerce, July 1987.

### Small Scale Industries

The small scale industries have many advantages like low investment, high potential for employment generation, diversification industrial base and dispersal of industries in rural and semi-rural areas. They play a key-role for development of industries in the district. An examination of the existing industries shows clearly that the city specialises in public utility units, while the surrounding area is devoted to agriculture, specially sericulture. The reeling and silk cloth making has been encouraged in the city and at Anekal for this reason.

A survey of home industries in Bangalore city till June 1915 was conducted in 1914-15 by T. Hanumantha Rao, Assistant Secretary of Dasara Industrial and Agricultural Exhibition with a view to find out how regular work could be provided and low quality of work of the home industries be improved. It advised promotion of home industries in the schools in city. Equipments to undertake rattan work and book-binding in schools were supplied. It recommended the opening of a sales room to supply materials for wood, rattan and book-binding workers in the city. It also recommended encouragement for starting rattan work, book-binding, ink-making, dyeing, dress-making, etc. at the home industries level. Dress-making by women showed remarkable results as women's welfare societies like Mahila Seva Samaja and Sharada Stree Samaja took special interest in training women in the work. They received a grant of Rs. 500 each to pursue the venture. Bangalore in the long run became a leading centre for producing ready-made garments providing work to hundreds of women as a result.

At the end of March 1989, there were 10,566 registered small scale industrial units besides adequate number of un-registered units, engaging in manufacture of various products such as food and beverages, leather, textile, chemical, engineering and allied items, etc. The capital investment on them was about Rs. 177.56 crores. They provided employment for about 2,16,110 persons. This sector has now entered many sophisticated fields such as electronics, plastics, ceramics, etc. After independence, both Central and State Governments, have given special importance for development of small scale industries. Many Boards and Corporations have been set up for the purpose. In 1959, the Mysore Small Industries and Handicrafts Board was constituted with the object of advising government generally on the production and growth of small scale industries in the state. In 1960, the Mysore Small Industries Corporation Limited, which later became the Karnataka Small Industries Development Corporation was set up for rendering various types of assistance to small scale industries such as the construction of industrial estates and their management and opening of raw material depots at important industrial centres to stock and distribute supplies to small scale industries. In the field of finance, small scale entrepreneurs are pleased with the changed attitude of the major banks after their nationalisation. Karnataka Industrial Co-operative Bank and, Karnataka State Finance Corporation are also rendering their helping hand to small scale industries. The government of Karnataka have reserved a number of

items for exclusive production in this sector. The Department of Industries and Commerce has opened a separate section under the control of Joint Director to look after the programmes of small scale industries. The Government of Karnataka have reserved some of the articles for purchase from the tiny and small scale industries in the state.

*Engineering and allied:* Small scale industrial units such as foundries, automobile workshops, repair shops and units engaged in welding, turning, cutting and smithy and those making steel furniture and agricultural equipments are scattered all over the district. Owing to the increased use of bicycles and automobiles, the repair establishments of these vehicles are spread everywhere in the city and towns in the district. Metal work in gold, silver, brass and copper are pursued throughout the district. It has given rise to a number of welding concerns and workshops. There are a large number of unregistered units. There were 3,640 registered units engaged in this sector at the end of March 1989. The fixed capital investment on them was Rs. 5,412.43 lakhs and they have provided employment to 31,333 persons.

*Agro-based Industries:* Though agriculture is not predominant in the district, mulberry, horticultural crops and garden crops are its principal commercial crops. Industrial units such as food products, flour and rice mills, paddy dehusking, oil extraction, silk reeling and twisting, etc. are scattered all over the district. In addition to these, there are manufacturers of woollen goods, such as carpets and blankets. The indigenous oil pressing units are scattered all over the district. Besides screw presses, there are Anderson Oil Expellers and Rotary Mills in Bangalore. There are small silk reeling houses, where domestic basins manufactured locally are used for reeling silks of high quality. Besides a large number of unregistered units, there were 66 registered units engaged in this sector at the end of March 1989 in the district. The fixed capital investment on them was Rs.150.47 lakhs and they have provided employment to 1,254 persons.

*Chemical Industries:* Besides the seven large and medium scale chemical industries in the district, there were large number of small scale chemical industrial units engaged in the manufacture of soap chips and bars, wax candles, detergent washing powder, ink, lac and paint, etc. In addition to the several unregistered units, there were 914 registered units at the end of March 1989 engaged in this sector in the district. The fixed capital investment on them was Rs. 1,564.37 lakhs. They provided employment to 12,418 persons.

*Food and Beverages:* Small scale industries, such as preparing coffee powder, bakery products, pickles, fruit processing, beedi rolling, oil extracting, etc. are scattered all over the district. Besides, a large number of unregistered units, there were 364 registered units engaged in this sector at the end of March, 1989. The fixed capital investment on them was Rs. 627.62 lakhs and they have provided employment to 9,597 persons.

**Wood-based Industries:** Wood based industrial units like saw mills, wooden furniture, carpentry, wood toys, bullock carts making, etc, are scattered widely in the district. Chairs, tables, doors and windows are extensively made in the city. Carts and wheels are also assembled in a number of small concerns. Power driven saw mills have been established in Bangalore. Coach and carriage building is also being successfully carried on in furniture factories working in Bangalore. Besides, a large number of unregistered units, there were 489 registered units engaged in this sector at the end of March 1989 in the district. The capital investment on them was Rs. 216.81 lakhs. They provided employment to 5,974 persons.

**Textiles:** Small scale textile industrial units are mainly concentrated in Bangalore city and Anekal in the district. At the end of March 1989, there were 1,203 registered units, besides a large number of unregistered units engaged in this sector. The fixed capital investment in the registered units was Rs. 982.20 lakhs and they have provided employment to 1,06,750 persons.

**Leather and rubber products:** Small scale leather and rubber product units such as foot-wear, suit-cases, manufacture of hides and skins, rubber-stamps, tyre, retreading and repairing, etc. are scattered in the district. Besides, a large number of unregistered industrial units, there were 305 registered units engaged in the production of leather and rubber products at the end of March 1989. The fixed capital investment on them was Rs. 563.04 lakhs and they have provided employment to 3,417 persons.

**Miscellaneous:** Small scale industrial units such as automobile, electrical, ferrous and non-ferrous, glass and ceramics, paper and pulp, plastic, printing, etc. are mainly concentrated in Bangalore city. At the end of March 1989, there were 3,193 registered units besides a large number of unregistered units in the district. The registered units provided employment to about 39,703 persons. The fixed capital investment on them was Rs. 5,326.50 lakhs.

Statement showing the taluk-wise number of small scale industrial units in the district registered during the year 1987-88 and 1988-89.

| Name of the taluk | 1987-88      |                         |                       | 1988-89      |                         |                       |
|-------------------|--------------|-------------------------|-----------------------|--------------|-------------------------|-----------------------|
|                   | No. of units | Investment Rs. in lakhs | Employment in numbers | No. of units | Investment Rs. in lakhs | Employment in numbers |
| Anekal            | 41           | 147.93                  | 331                   | 69           | 160.06                  | 527                   |
| Bangalore South   | 332          | 867.50                  | 2,605                 | 413          | 1,188.47                | 3,365                 |
| Bangalore North   | 460          | 1,149.00                | 4,366                 | 547          | 1,244.58                | 4,325                 |
| <b>Total</b>      | <b>833</b>   | <b>2,164.43</b>         | <b>7,302</b>          | <b>1,029</b> | <b>2,593.11</b>         | <b>8,217</b>          |

Source: District Industries Centre, Bangalore.

Statement showing the category-wise total number of registered small scale industrial units in the district as on 31st March 1989.

| Sl. no. | Name of the Industrial Unit    | No. of units | Fixed capital investment (Rs. in lakhs) | No. of persons employed |
|---------|--------------------------------|--------------|---|-------------------------|
| 1.      | Automobile                     | 170          | 178.73                                  | 1,090                   |
| 2.      | Chemical                       | 914          | 1,564.37                                | 12,418                  |
| 3.      | Electrical                     | 536          | 1,166.41                                | 13,342                  |
| 4.      | Electronics                    | 382          | 2,912.44                                | 5,667                   |
| 5.      | Ferrous & non-ferrous          | 338          | 570.49                                  | 4,460                   |
| 6.      | Food & beverages               | 364          | 627.62                                  | 9,597                   |
| 7.      | Glass & ceramics               | 344          | 397.60                                  | 5,250                   |
| 8.      | Job work repairing & servicing | 774          | 623.38                                  | 5,254                   |
| 9.      | Leather                        | 140          | 136.42                                  | 1,693                   |
| 10.     | Mechanical engineering         | 2,866        | 4,789.05                                | 26,079                  |
| 11.     | Paper, pulp & allied           | 164          | 314.70                                  | 1,855                   |
| 12.     | Plastic                        | 531          | 1,252.74                                | 4,685                   |
| 13.     | Printing                       | 677          | 663.61                                  | 4,999                   |
| 14.     | Rubber                         | 165          | 426.62                                  | 1,721                   |
| 15.     | Textiles                       | 1,203        | 982.20                                  | 1,06,750                |
| 16.     | Wood-based                     | 489          | 216.81                                  | 5,974                   |
| 17.     | Agro-based                     | 66           | 150.47                                  | 1,254                   |
| 18.     | Miscellaneous                  | 443          | 782.22                                  | 4,022                   |
| Total   |                                | 10,566       | 17,755.88                               | 2,16,110                |

Source: Director of Industries & Commerce, Bangalore.

### KHADI AND VILLAGE INDUSTRIES

The Khadi and Village Industries are labour-oriented industries. Spinning and weaving were popularised by the Congress during the freedom movement. Mahatma Gandhi had made special efforts to popularise Khadi during his long stay in Bangalore in 1927. The important industries in the schedule of Khadi and Village Industries Board are Khadi-cotton, woollen and silk, processing of cereals and pulses, village oil, manufacture of cane gur and khandasari, cottage match works, non-edible oil soap, village pottery, leather, carpentry and blacksmithy, lime, etc. The state planning strategy has been devised for khadi and village industries sector

with the twin objective of arresting the displacement of labour from the existing crafts and creation of new work opportunities in the rural area. The scheme for reviving the hereditary industries in rural areas in the state was first tried to be implemented through the Rural Artisan Training Institutes during 1959-60. The institutions laid emphasis on providing training to the hereditary artisans in the use of improved tools and equipments, to improve their efficiency and skill, and to settle them in the industry in their own villages. The Khadi and Village Industries Board generally organises and implements the programmes for development of Khadi and Village Industries in the state. In the village industries sector, pottery, leather, village oil, carpentry and black-smithy are important in the district. At the end of March 1989, there were 777 khadi and village industrial units in the district which provided employment to 2,103 persons; of which 903 were full-time workers and 1,199 part-time workers. These industrial units have drawn loan of Rs. 1,18,29,988 from Khadi and Village Industries Board since its inception. Of the 777 industrial units in the district, eight khadi, four wool and three hand-made paper units are not functioning at present.

*Khadi Industry:* Khadi industry consists mainly cotton khadi, wollen khadi and silk khadi besides spinning and weaving and manufacturing *charakas*. At the end of March 1989, there were six silk industrial units which provided employment to 270 persons. They produced silk goods valued at Rs. 60 lakhs and sold it for Rs. 72 lakhs during the year 1988-89. Other eight khadi units and four woollen units in the district are not functioning at present.

*Cane and bamboo industry:* Cane and bamboo industrial units are generally making articles like bamboo mats, baskets, cane chairs, etc. The raw materials viz bamboo and cane are purchased from the Forest Department and from open market. These industrial units are found all over the district, mainly in Koracharapalya and the Bamboo bazar where most of the people are engaged in this work. At the end of March 1989, there were 10 units having provided employment to 30 persons in the district. They produced goods valued at Rs. 1.80 lakhs and sold it for Rs. two lakhs during the year 1988-89.

*Carpentry and blacksmithy:* Carpentry and blacksmithy are being pursued in almost all bigger villages and towns. The village carpenters are mostly engaged in preparing and repairing agricultural implements and household and building materials. In urban centres, they manufacture various items of furniture. The blacksmiths are engaged in manufacture and repair works of various implements such as plough-share, bullock-shoes, sickles, etc. There were 71 industrial units which provided employment to 213 persons at the end of March 1989, and they produced goods valued at about Rs. 24 lakhs and sold it for Rs. 29 lakhs during the year 1988-89.

*Pottery:* Unglazed pottery work is carried on by the hereditary craftsmen called Kumbars. They carry on this work from November to May end and in the remaining



period they are engaged in agriculture. They prepare various types of vessels and also country tiles. At the end of March 1989, there were 51 pottery units which have provided employment to 102 persons in the district. They produced goods valued at about Rs. 15 lakhs and sold it for Rs. 17 lakhs during the year 1988-89.

*Leather works:* Tanning and leather works are an age-old industry and persons engaged in this craft prepare foot-wears, drums, belts, etc. The bulk of the tanning is done in small concerns towards the east of Cantonment within a radius of about 10 km. The hides produced in the city are from animals which die a natural death and also those slaughtered. The Department of Industries and Commerce has plans for the construction of living- cum-work sheds, tanning yards, etc. Karnataka Leather Industries Development Corporation Ltd. (LIDKAR) is another institution set up by the government for development of this industry. LIDKAR Leather Emporia have been established to increase their commercial activities. At the end of March 1989, there were 277 leather industrial units which have provided employment to 781 persons. They produced goods valued at about Rs. 35 lakhs and sold it for Rs. 40 lakhs during the year 1988-89.

*Village Oil Industry:* The village oil industry is a family occupation of the Ganigas. They extract oil from groundnut, castor seed, sun-flower seed, etc. by using indigenous oil presses. These indigenous oil presses (*ganas*) are being replaced by mechanised (power operated) oil mills. At the end of March 1989, there were 25 industrial units engaged in extracting oil from oilseeds. They have provided employment to 35 persons. They extract oil valued at about Rs. 2 lakhs and sold it for Rs. 2.50 lakhs during the year 1988-89.

*Foodgrains processing:* The Processing of pulses and cereals is an important cottage industry in the district. At the end of March 1989, there were 232 industrial units engaged in food processing in the district. They have provided employment to 464 persons. They produced goods valued about Rs. 27 lakhs and sold it for Rs. 31 lakhs during the year 1988-89.

*Other cottage industries:* Industrial units which are engaged in the production of lime, non-edible oil and soap, gur and khandasari, cottage match industry, fibre, etc. are found in the district. At the end of March 1989, there were about 90 units having provided employment to 167 persons. They produced goods valued about Rs. 6.60 lakhs and sold it for Rs. 11.36 lakhs.

*Co-operative units:* Among the co-operative units in the district, some of them have specialised in the field of certain special items. The Fancy Steel Association was set up in Bangalore during the year 1979-80 with a share capital of Rs. 14,025. The capital investment on this firm was Rs. 25,000. It invested Rs. 2.50 lakhs as working capital during the year 1988-89. The Khadi and Village Industries Board has advanced Rs. 2.75 lakhs as loan to it. It is manufacturing steel furniture, office equipment, etc. During the year 1988-89, it manufactured goods valued about Rs. 2.58 lakhs and sold it for Rs. 3.21 lakhs. It has provided employment to 14 persons.

The Bangalore Bee-keepers Society was registered during the year 1979-80 and started work at Heball in 1987 with a share capital of Rs. 18,600. The Khadi and Village Industries Board has extended Rs. 44,350 as loan to it. During the year 1988-89, the Society provided employment to 25 persons and produced honey valued about Rs. 4,060 and sold it for Rs. 1.21 lakhs. The Dathathreya Gramodyoga Sahakara Sangha was registered during the year 1967-68 and started work at Rajajinagar in 1976 with a share capital of Rs. 11,175. The Khadi and Village Industries Board has advanced Rs. 30,800 as loan to it. During the year 1988-89, it was preparing pickles, chilli powder, etc. valued about Rs. 1,390 and sold it for Rs. 28,068. The B.N. Vani Agarbathi Society was registered during the year 1985-86 and started work at Bhyrasandra in 1987 with a share capital of Rs. 3,762. The Khadi and Village Industries Board has provided Rs. 35,000 as loan to it. During the year 1988-89, it has provided employment to 9 persons and produced agarbathis valued about Rs. 8,800 and sold it for Rs. 98,267.

### HANDLOOM INDUSTRY

The Handloom industry is one of the ancient and important industries in the State. Bangalore and Anekal are the important centres of handloom weaving in the district. With the advent of the British, the industry had to face severe competition from the textile mill products. The severe famine of 1876-78 and the plague of 1898 made many weavers to give up their profession for good. But the handloom industry did not disappear totally due to efforts of the Department of Industries and Commerce founded in 1913 and the Swadeshi movement. After the II World War, this industry found extreme difficulties to carry on and the situation began deteriorating rapidly after 1948, when the textile control was reimposed by the Government of India. But various steps were taken by the State Government to press upon the Government of India to extend their assistance to this industry in the state. In response to this pressure, the production of goods such as 'Sarees' and 'Dhoties' with wide borders, bed-sheets, honey comb towels and white furnishing fabrics was completely reserved for handlooms. There were 11,850 handlooms with the capital investment of Rs. 605 lakhs providing employment to 12,284 persons functioning in the district at the end of March 1989.

In 1951, the Mysore State Cotton Handloom Weavers Co-operative Society was established to look after the welfare of cotton handloom weavers. To safeguard the interest of the woollen and silk weavers, Mysore State Woollen Handloom Weavers Society was formed in 1955, and the Mysore State Silk Handloom Weavers Central Co-operative Society was formed in 1956. Handloom weavers are given assistance by arranging for the supply of yarn through the Apex Weavers Co-operative Society and also by conducting demonstrations in the use of improved equipments and in weaving new designs. In 1963, All India Handloom Board has set up the Weavers Service Centre at Bangalore with a view to provide following assistance in 1) supplying modern and attractive designs for dress, saree borders, bed-sheets, etc., 2) rendering spot technical assistance in introducing new design,

**Statement showing the category-wise total number of Khadi and Village Industries in the district and other particulars as on 31st March, 1989**

| Sl. No.      | Industry                         | No. of units | Production value<br>Rs. in lakhs | Sales value<br>Rs. in lakhs | Employment                                 |              |
|--------------|----------------------------------|--------------|----------------------------------|-----------------------------|--|--------------|
|              |                                  |              |                                  |                             | FT   | PT           |
| 1.           | Silk                             | 6            | 60.00                            | 72.00                       | 170  | 100          |
| 2.           | Khadi                            | 8            |                                  |                             | All the units at present are not working   |              |
| 3.           | processing of Cereals and Pulses | 232          | 27.00                            | 31.00                       | 232  | 232          |
| 4.           | Village oil                      | 25           | 2.00                             | 2.50                        | 15   | 10           |
| 5.           | N.E.O. & soap                    | 16           | 1.00                             | 1.20                        | 16   | 4            |
| 6.           | Village leather                  | 277          | 35.00                            | 40.00                       | 277  | 554          |
| 7.           | Village pottery                  | 51           | 15.00                            | 17.00                       | 51   | 51           |
| 8.           | Lime industry                    | 24           | 2.70                             | 3.20                        | 24   | 48           |
| 9.           | Wool                             | 4            |                                  |                             | At present all the four units are defunct  |              |
| 10.          | Fibre                            | 13           | 0.40                             | 0.50                        | 10   | 5            |
| 11.          | Hand-made paper                  | 3            |                                  |                             | At present all the three units are defunct |              |
| 12.          | Cottage match industry           | 25           | 2.50                             | 2.70                        | 15   | 10           |
| 13.          | Cane and bamboo                  | 10           | 1.80                             | 2.00                        | 10   | 20           |
| 14.          | Carpentry & black-smithy         | 71           | 24.00                            | 29.00                       | 71   | 142          |
| 15.          | Dhobi (service industry)         | 1            | -                                | 0.06 (service)              | 1  | 1            |
| 16.          | Barber                           | 1            | -                                | 0.10 (-do-)                 | 1  | 2            |
| 17.          | Fruits and Vegetable processing  | 10           | 3.00                             | 3.60                        | 10   | 20           |
| <b>Total</b> |                                  | <b>777</b>   | <b>174.40</b>                    | <b>204.86</b>               | <b>903</b>                                 | <b>1,199</b> |

BANGALORE DISTRICT

315

Source: District Khadi and Village Industries Board, Bangalore.

Statement showing the taluk-wise and industry-wise loan advanced by the Khadi and Village Industries Board since inception and number of units benefited in the district as on 31-3-1989.

316

| Sl. No. | Name of the Industry           | Name of TALUKS |            |                |             |                |             |
|---------|--------------------------------|----------------|------------|----------------|-------------|----------------|-------------|
|         |                                | Anekal         |            | BangaloreSouth |             | BangaloreNorth |             |
|         |                                | No. of units   | Loan in Rs | No. of units   | Loan in Rs. | No. of units   | Loan in Rs. |
| 1.      | Silk                           | 1              | 1,65,000   | 4              | 10,66,000   | 1              | 13,13,000   |
| 2.      | Khadi                          | 1              | 1,26,520   | 2              | 88,000      | 5              | 6,43,000    |
| 3.      | Processing of cereals & pulses | 2              | 6,500      | 73             | 2,02,500    | 157            | 9,77,941    |
| 4.      | Village oil                    | 2              | 47,060     | 12             | 2,50,550    | 11             | 2,34,400    |
| 5.      | Non-edible oil & soap          | 3              | 27,637     | 6              | 3,30,300    | 7              | 1,91,250    |
| 6.      | Village leather                | 20             | 63,000     | 112            | 7,50,000    | 145            | 12,99,000   |
| 7.      | Village pottery                | 20             | 1,17,970   | 18             | 3,49,000    | 13             | 2,50,000    |
| 8.      | Lime                           | 3              | 11,500     | 9              | 57,250      | 12             | 27,150      |
| 9.      | Wool                           | 1              | 45,000     | 1              | 38,780      | 2              | 4,17,810    |
| 10.     | Fibre                          | 10             | 12,500     | 2              | 17,750      | 1              | 19,600      |
| 11.     | Hand-made paper                | -              | -          | 3              | 4,25,600    | -              | -           |
| 12.     | Match                          | -              | -          | 9              | 4,63,950    | 16             | 6,14,000    |
| 13.     | Cane & bamboo                  | 6              | 44,500     | 2              | 9,750       | 2              | 16,520      |
| 14.     | Carpentry & black-smithy       | 40             | 1,50,000   | 16             | 87,200      | 15             | 6,90,000    |
| 15.     | Dhobi                          | 1              | 4,400      | -              | -           | -              | -           |
| 16.     | Barber                         | 1              | 5,000      | -              | -           | -              | -           |
| 17.     | Fruit & Vegetable preservation | -              | -          | 3              | 38,500      | 7              | 1,73,100    |
| Total   |                                | 111            | 8,26,587   | 272            | 41,36,630   | 394            | 68,66,771   |

Sources: Khadi & Village Industries Board, Bangalore

**Statement showing the taluk-wise disbursement of loan by Khadi & Village Industries Board through Registered Institutions, Co-operative Societies and Individuals to set up Khadi & Village Industries in Bangalore District during the years 1987-88 and 1988-89**

| Name of the taluk and industry | 1987-88                 |                        |                   |                 | Name of the taluk and industry | 1988-89                 |                        |                   |                 |
|--------------------------------|-------------------------|------------------------|-------------------|-----------------|--------------------------------|-------------------------|------------------------|-------------------|-----------------|
|                                | Regd. Institution (no.) | Co-op. Societies (no.) | Individuals (no.) | Loan amt. (Rs.) |                                | Regd. Institution (no.) | Co-op. Societies (no.) | Individuals (no.) | Loan amt. (Rs.) |
| (1)                            | (2)                     | (3)                    | (4)               | (5)             | (6)                            | (7)                     | (8)                    | (9)               | (10)            |
| <b>Anekal</b>                  |                         |                        |                   |                 | <b>Anekal</b>                  |                         |                        |                   |                 |
| Cane & Bamboo                  | -                       | 1                      | 4                 | 2,400           | Dhobi                          | -                       | -                      | 1                 | 4,400           |
|                                |                         |                        |                   |                 | Barber                         | -                       | -                      | 1                 | 5,000           |
| <b>Bangalore North</b>         |                         |                        |                   |                 | <b>Bangalore North:</b>        |                         |                        |                   |                 |
| Match                          | -                       | -                      | 1                 | 8,000           | Carpentry                      | -                       | -                      | 3                 | 11,700          |
| Agarbathi                      | -                       | -                      | 1                 | 8,000           | Masala                         | -                       | 1                      | 1                 | 7,000           |
| Leather                        | -                       | 1                      | -                 | 10,000          | Bee-keeping                    | 1                       | -                      | 3                 | 17,300          |
| Carpentry                      | -                       | -                      | 1                 | 65,000          | Agarbathi                      | -                       | -                      | 1                 | 35,000          |
| Fruit Processing               | -                       | -                      | 1                 | 53,900          | Leather                        | -                       | -                      | 1                 | 15,000          |
| Bakery                         | -                       | 1                      | -                 | 5,500           | Black-smithy                   | -                       | -                      | 1                 | 4,800           |
| Papad                          | -                       | 1                      | -                 | 4,000           |                                |                         |                        |                   |                 |
| Masala                         | -                       | 1                      | 1                 | 7,000           |                                |                         |                        |                   |                 |
| Black-smithy                   | -                       | 1                      | -                 | 4,800           |                                |                         |                        |                   |                 |

| (1)                     | (2)      | (3)      | (4)       | (5)             | (6)                     | (7)      | (8)      | (9)       | (10)            |
|-------------------------|----------|----------|-----------|-----------------|-------------------------|----------|----------|-----------|-----------------|
| <b>Bangalore South:</b> |          |          |           |                 | <b>Bangalore South:</b> |          |          |           |                 |
| Silk                    | 1        | -        | -         | 2,35,000        | Silk                    | 1        | -        | -         | 1,40,000        |
| Agarbathi               | -        | -        | 1         | 35,000          | Bakery                  | -        | -        | 1         | 10,500          |
| Black-smithy            | 1        | -        | -         | 2,00,000        | Carpentry               | -        | -        | 1         | 65,000          |
|                         |          |          |           |                 | Masala                  | -        | -        | 2         | 7,000           |
|                         |          |          |           |                 | Dhobi                   | -        | -        | 1         | 4,400           |
|                         |          |          |           |                 | Lime                    | -        | -        | 1         | 5,000           |
|                         |          |          |           |                 | Khadi                   | 1        | -        | -         | 32,000          |
|                         |          |          |           |                 | Barber                  | -        | -        | 1         | 5,000           |
|                         |          |          |           |                 | Agarbathi               | 1        | -        | 1         | 20,000          |
|                         |          |          |           |                 | Papad                   | -        | -        | 1         | 4,000           |
|                         |          |          |           |                 | Brick                   | -        | -        | 1         | 15,000          |
|                         |          |          |           |                 | Marketing               | 1        | -        | -         | 1,40,000        |
| <b>Total</b>            | <b>2</b> | <b>6</b> | <b>10</b> | <b>6,38,600</b> |                         | <b>5</b> | <b>1</b> | <b>22</b> | <b>5,48,100</b> |

Sources: Khadi and Village Industries Board, Bangalore

and rendering spot assistance on problems connected to bleaching dyeing and printing. During the Vth Plan Period, a separate Directorate of Handloom of the Government of India started functioning to look into the problems of handloom industry in the state. In 1975, the Handloom Development Corporation was formed in the state with a view to ensure the flow of working capital to individual weaver families, to provide term loans for modernising the equipments, to make arrangements for training in modern methods of weaving and processing and to take up the marketing of handloom products. The Government of Karnataka is giving package of facilities like supply of improved appliances, modernisation of looms, living-cum-work-sheds, collective working centre facilities, dye-house to societies and share capital investment facilities, etc. It also indirectly assists them in marketing through rebate for sale of handloom cloth. Under the Thrift Fund Scheme, the government has undertaken the social benefit scheme, a contribution from both the side (50% from weavers and 50% from craft), interest together the total sum collected is paid back to the weavers in their old-age. To encourage and expand hand-loom weaving, the government imparts training to interested weavers through Handloom Development Corporation or Societies. The products of the handlooms are being sold either through Handloom Development Corporation or through co-operative societies.

The Department of Industries and Commerce has given special importance for training of handloom weavers and improved appliances for development of handloom industries in the district. For training of handloom weavers, it has sanctioned grants of Rs. 10,000 and Rs. 20,000 for the year 1987-88 and 1988-89 respectively. For improved appliances, it has sanctioned loan of Rs. 89,334 and Rs. 50,000 and grants of Rs. 44,666 and Rs. 25,000 for the years 1987-88 and 1988-89 respectively. The Karnataka Handloom Development Corporation has extended loan facility of Rs. 23,41,450 to 1,466 persons in the district upto end of March, 1989.

The Taluk-wise numbers of existing handlooms and other particulars as on 31 March, 1989.

| Sl. no. | Name of the taluk | No. of hand-looms | Investment (Rs. in lakhs) | Employment (in nos.) |
|---------|-------------------|-------------------|---------------------------|----------------------|
| 1.      | Anekal            | 1,564             | 92.00                     | 1,684                |
| 2.      | Bangalore North   | 3,428             | 171.00                    | 3,500                |
| 3.      | Bangalore South   | 6,858             | 342.00                    | 7,100                |
|         | Total             | 11,850            | 605.00                    | 12,284               |

Source: District Industries Centre, Bangalore District, Bangalore.

**Power-looms**

Power-looms came to be started in many places in the district during the later parts of the 1920s and early years of the 1930s as towns and important places in the district were supplied electricity in that period. At the end of March 1989, there were 18,870 power-looms scattered over the district with a capital investment of Rs. 18.87 crores and have provided employment to 37,753 persons.

Taluk-wise distribution of power-loom units, capital investment and total no. of persons engaged in them at the end of March 1989 were as follows.

| Sl. no. | Name of the taluk | No. of power-looms | Investment (Rs. in lakhs) | Employment (in nos.) |
|---------|-------------------|--------------------|---------------------------|----------------------|
| 1.      | Anekal            | 1,265              | 89.00                     | 2,532                |
| 2.      | Bangalore North   | 890                | 126.50                    | 1,782                |
| 3.      | Bangalore South   | 465                | 46.50                     | 936                  |
|         | Bangalore city    | 16,250             | 1,625.00                  | 32,503               |
|         | <b>Total</b>      | <b>18,870</b>      | <b>1,887.00</b>           | <b>37,753</b>        |

Source: District Industries Centre, Bangalore District, Bangalore.

**HANDICRAFTS**

Handicrafts, which are also a part of the cultural heritage, flourished through the ages, cherished by an aesthetically conscious people and nourished by royal and noble families. The Bangalore district is known for rich variety of silk, ceramics, lacquer-ware and toys, sandalwood carving, stone and wood engraving, etc. The department of Industries and Commerce has, right from its inception, been giving sustained and continuous attention to the resuscitation and development of handicrafts in the state. Manufacture of artistic baskets and mats, metal work in gold and silver, brass and copper, rattan work, etc. are common in Bangalore city. The Mysore Arts and Crafts Institute which was opened in South Parade has given wide publicity to the articles manufactured in the city and helped the local artisans in finding a market for their goods.

*The Karnataka State Handicrafts Development Corporation* was formed in 1964 in Bangalore with a view to help the artisans of handicraft in the state. It starts crafts complexes, production and procurement centres, raw material depots, rural marketing and servicing centres, show-rooms and sales emporia in important places to help the artisans. The craft complex programme provides facilities of credit, marketing, wax material, tools and equipments, etc. It helps to eliminate the middlemen and ensure higher returns to the craftsmen. The production procurement centre procures raw materials for artisans.



*The Regional Design Technical Centre* was opened in 1958 in Bangalore with a view to revise and revitalise the age-old tradition and hereditary crafts. It has two wings viz., the design wing and technical wing. The design wing undertakes research and development work in design of southern region, while the technical wing undertakes development work in various material and technical aspects. The design wing also acts as liaison between the manufacturers of handicrafts and various marketing agencies.

At the end of March 1989, one Sandalwood Raw Material Depot with 205 craftsmen and one Bronze Crafts Complex with 40 craftsmen, besides Regional Design and Technical Centre at Church Street and Victoria Road, Bangalore were functioning in the district.

The following craftsmen of the district have secured certificate of appreciation and state awards since 1969. S.B. Shankar has secured the certificate of appreciation in 1969 for his sculpture. E. Panchaksharam has secured the certificate of appreciation for his bronze work in 1970. In 1971, K. Rangaswamy and S.G. Nagaraja have secured state award for their bronze work and wood carving respectively. In the same year K.M. Veerabramhachar and S. Doreswamy have secured the certificates of appreciation for their metal thin sheet work and traditional art respectively. In 1972, D.G. Ramachandra and M. Srihari Rao have secured state award for their sandalwood carving and metal moulding work respectively. In the same year, Doreswamy has secured certificate of appreciation for his traditional art. During the year 1973-74, N.G. Neelakantachar and Meer Dilbar Husain have secured state award for their metal moulding work and wood and ivory work respectively. In the same year, Shivaiahchar and Beasheer Ahmed have secured certificate of appreciation for their metal thin sheet work and lacquer-ware respectively. In 1978, R. Veerabhadrachar, K.R. Nagalakshmi, Panchaksharam and Narasingarao have secured state award for their metal moulding work, traditional art, metal thin sheet work and musical instruments respectively. Mayachar has secured state award in 1982 for his metal sculpture. Sarswathi Basavaraju has secured certificate of appreciation for her traditional art in 1983 and state award in 1984. In the year 1984, Neela Pench has secured certificate of appreciation for her traditional art. E. Panchaksharam and T. Shivaiahchar have secured state award in 1985 for their metal moulding work and metal thin sheet as well as metal moulding respectively. In the same year, Ashok Gudigar and J. Nagendra have secured the certificate of appreciation for their sandalwood carving and wood carving respectively. J. Nagendra has secured state award for his sandalwood carving in 1988.

Statement showing the taluk-wise total number of craftsmen in Bangalore district as on 31st March, 1989.

| Sl. no. | Name of the Craft      | Taluk-wise no. of craftsmen |                 |                 |
|---------|------------------------|-----------------------------|-----------------|-----------------|
|         |                        | Anekal                      | Bangalore North | Bangalore South |
| 1.      | Toy and doll           | 5                           | 1               | 6               |
| 2.      | Lacquer-ware           | 2                           | -               | 2               |
| 3.      | Stone carving          | 106                         | 369             | 60              |
| 4.      | Ivory                  | 3                           | -               | 5               |
| 5.      | Metal work             | 2                           | 1               | 16              |
| 6.      | Wood carving           | 9                           | -               | 4               |
| 7.      | Painting               | 7                           | 31              | 9               |
| 8.      | Pottery and ceramics   | 51                          | 64              | 52              |
| 9.      | Cane and bamboo crafts | 52                          | 21              | -               |
| 10.     | Gold and silver smithy | 33                          | 56              | 21              |
| 11.     | Coir crafts            | 12                          | -               | 3               |
| 12.     | Embroidery             | 5                           | 19              | 2               |
| 13.     | Florist                | 44                          | 64              | 25              |
| 14.     | Leather works          | 28                          | 35              | 10              |
|         | Total                  | 359                         | 661             | 215             |

Source: Director of Industries and Commerce, Bangalore.

### SERICULTURE

Sericulture includes growing of mulberry plants, rearing of silk worms, production of cocoons and reeling of silk and is a labour-oriented industry. Cultivation of mulberry and rearing of silk worms are agricultural in character and reeling of silk is distinctly industrial in nature. The reeling of cocoons is carried on either in cottage establishments or in large scale factories called filatures.

The beginning of sericulture can be traced back to the last quarter of 18th century. Tipu Sultan, organised a silk worm rearing unit in the southern part of his dominion. He imported the old yellow multivoltine race of silk worms. They are surviving today and popular as "Pure Mysore Race". In 1866, Signor De Vacehj of Italy started a company called "De Vacehj's Silk Filature Company" at Kengeri near Bangalore. This company got assistance from the princely government. He introduced two species of mulberry viz., *Morus Smensis* and *Morus Kerolite*. In addition, farmers were using two other species, viz., *Morus albs* and *Morus nigra*. It also recorded that attempts at acclimatising the strains of silk worms which were obtained from Japan as the De Vecchj's factory premises at Kengeri had failed

while crops raised of eggs directly received from Japan were successful. A disease known as "atrophy" caused much damage to the standing crops.

In 1896, J.N. Tata established "Soil to Silk" in 13 acres, comprising mulberry cultivation, silk worm rearing, silk worm egg production and reeling in Bangalore. Even today, this area is popularly known as Tata Silk Farm. Persons like Thiru Kenkadaswamy Mudaliar and V.M. Appa Dorai Mudaliar underwent training in this farm. V.M. Appa Dorai Mudaliar was subsequently appointed as Sericultural Inspector in the state. The men trained at Tata's Silk Farm in Bangalore were sent out for work in sericultural taluks. In 1913-14, the Department of Sericulture was started and its activities were confined to (1) seed production grainages, (2) demonstration of better methods of rearing. Due to the efforts put forth by Sir M. Visvesvaraya in 1914, services of Signor Washington Mari, Italian expert was obtained. Navarathna Rama Rao, Superintendent of Sericulture Department, took active role in preparation and supply of disease-free layings in 1916. He was responsible for securing the services of Yonemura a Japanese expert in 1919. With an intention to develop sericulture in the state, a syllabus for a two-year course in sericulture was furnished to the Education Department during the year 1926-27. Three varieties of mulberry seeds were obtained from Kashmir and seedlings had been raised in the district. The Second World War gave impetus to the Silk industry. All cocoons produced in the state were taken to the Mysore Silk Filatures Ltd., and all filatures in the state were turned on to war production (to manufacture parachutes) in 1942. This increased the area under mulberry in the district.

The establishment of Central Silk Board in 1949 was a milestone in the development of sericulture. The schemes which introduced during the Five Year Plans period were aimed at reducing the costs and improving the quality. With this end in view, improved mulberry varieties have been propagated, better cultivation methods introduced and ryots given financial incentives to grow mulberry. Under Karnataka Sericulture Project assisted by World Bank, an institute called Karnataka State Sericulture Department Institute was established at Talaghatapura of Bangalore South taluk for undertaking applied research in different fields of sericulture industry.

The Bangalore district is having the suitable climatic condition and soil for cultivation of mulberry, rearing silk worms and production of silk. Anekal taluk has been declared as Bivoltine Seedling Area by Government of Karnataka from 1978 and other silk worms are not allowed to be reared in the taluk. During the year 1988-89, the average yield per 1,000 Disease-Free-Layings (DFL) in the taluk was 2,14,540 silk worms or 330 kg cocoons. Seeding from Chandapura (Anekal taluk), N.S.S.P., Bangalore, Thandavapura (Mysore district), Sirsi (Uttara Kannada district), Hubli (Dharwad district) and K.P. Doddi (Bangalore district) are supplied to the taluk. About 4,80,691 layings were supplied to 1,576 farmers in 1987-88. The

Department of Sericulture is having several programmes to develop bivoltine in the taluk. It supplies sufficient D.F.L. to farmers well in time at the cost of 20 per cent of actual cost of production. Bivoltine Silk Worms reared in the Chawki Rearing Centre upto second fever are supplied to the farmers at free of transportation cost. Formoline and Bleaching powder are sprayed 2 to 4 times per crop without charge. Cocoons of the taluk are purchased by the Department at a reasonable price. Seedlings are purchased from seed centres at the fixed rate. Reeling cocoons are supplied to the Karnataka Silk Development Corporation for fixed price. The difference in price between seedling and reeling cocoons is met by the department. It also bears the 50 per cent cost price of nylon mesh which is used to avoid the attack of oozi fly in the taluk. The technical persons of the department supervise the crop for five to six times and guide the farmers. The Dena Bank of the taluk is providing financial help to the sericulturists in the taluk.

At the end of March 1989, about 5,836 sericulture families were engaged in cultivating mulberry in 4,085.05 acres of land in 575 villages in the district. Five technical service centres at Chikkajala, Yelahanka, Kengeri, Chandapura and Sarjapura were providing technical guidance to the sericulturists. There were 35 Chawki rearing centres in the district, of which 8 centre were attached to the technical service centre at Yelahanka, six to Chikjala, 10 to Kengeri, six to Sarjapur and five to Chandapura.

*Silk Farms:* Silk farms perform several functions such as maintenance and propagation of breeder stock of silk worm races, propagation of high yield varieties of mulberry, maintaining the mulberry gardens, harvesting and preservation of mulberry leaves, rearing of silk worms, mounting and harvesting of cocoons, control of diseases and imparting training to the farmers. At the end of March 1989, there were three government silk farms in the district working at Thalagattapura of Bangalore South taluk and Kumbarahalli of Anekal taluk, besides a Government Silk farm at Bidaraguppe of Anekal taluk which is working under the control of the Central Silk Board.

*Cocoon Markets:* Cocoon markets facilitate the securing of good prices for cocoons produced in the area. At the end of March 1989, there were four cocoon markets in the district, and they were Government Bivoltine Cocoon Market, Bagalur in Bangalore North taluk, Anandarao Circle, Bangalore; Government Bivoltine Cocoon Markets at Attibele and Sarjapura in Anekal taluk. There were three mulberry growers co-operative societies working at Sarjapura in Anekal taluk, Chikkajala and Bagalur in Bangalore North taluk in the district.

### **Grainages**

The nucleus of sericulture industry is the grainage where silk-worm eggs are produced in large quantities under hygienic conditions. The grainage rooms are required to be equipped with temperature control devices. The equipments of a grainage are wooden rearing stands, round bamboo trays, wooden trays, plastic

conicals, acid treatment equipments, electrically operated moth crushing sets, microscopes, hydrometres, microslides, chemicals, etc., besides refrigerators. The silk worm eggs produced in the grainages are supplied to the sericulturists when demand arises. When demand decreases the eggs have to be kept at a low temperature to postpone the development of embryo. The demand for disease-free-layings from sericulturists are to be met by government grainages and the private licensed seed preparers (LSP). At the end of March 1989 there were seven grainages in Bangalore district. Of this seven, three were government grainages functioning at Bagalur and Singahalli in Bangalore North taluk and of the remaining, one is Government Model Grainage functioning at Chandapura in Anekal Taluk. One NSSP is functioning at Lalbagh West Gate Bangalore; one of the AIRD is working at Basavanagudi, Bangalore; one of the KSSDI is functioning at Thalaghattapura; one Licensed Seed Preparer's Grainage is functioning at Basavanagudi, Bangalore, in Bangalore South taluk.

The Central Sericulture Board has set up a Research Extension Centre at Bidaraguppe in Anekal taluk and providing D.F. Ls. to the selected villages besides imparting training to the sericulturists.

Statement showing the taluk-wise particulars of sericulture in Bangalore district as on 31st March 1989.

| Sl. No. | Particulars                    | Name of the taluk |                 |                 | District total |
|---------|--------------------------------|-------------------|-----------------|-----------------|----------------|
|         |                                | Anekal            | Bangalore North | Bangalore South |                |
| 1.      | Area under mulberry (in acres) | 1329.34           | 1,220.06        | 1,535.05        | 4,085.05       |
| 2.      | Sericultural villages (nos.)   | 176               | 167             | 232             | 575            |
| 3.      | Sericultural families (nos.)   | 5,413             | 1,709           | 1,714           | 8,836          |
| 4.      | Charakas (nos.)                | -                 | 756             | 5               | 761            |
| 5.      | Basins (nos.)                  | -                 | 12              | -               | 12             |
| 6.      | Reelers (nos.)                 | -                 | 252             | 1               | 253            |

Source: Dy. Director of Sericulture, Govt. Model Grainage, Sulibele.

Statement showing the taluk-wise production of cross breed and Bivoltine cocoons (in Mt) in the district during years 1987-88 and 1988-89.

| Name of taluk | Category-wise production of cocoons in Mt. |            |         |             |            |         |
|---------------|--|------------|---------|-------------|------------|---------|
|               | 1987-88                                    |            |         | 1988-89     |            |         |
|               | Cross-breed                                | Bivol-tine | Total   | Cross-breed | Bivol-tine | Total   |
| Anekal        | -  | 122.669    | 122.669 | -           | 128.853    | 128.853 |
| B'lore South  | 220.412                                    | 4.076      | 224.488 | 256.726     | 12.875     | 269.601 |
| B'lore North  | 194.754                                    | 10.200     | 204.954 | 220.770     | 20.859     | 241.629 |
| Total         | 415.166                                    | 136.945    | 552.111 | 477.496     | 162.587    | 640.083 |

Source: Deputy Director of Sericulture, Government Model Grainage, Sulibele.

### Hotel Industry

The hotel industry has acquired greater significance in recent decades in view of the increasing mobility population. Tourists spots, industries, offices, schools and colleges, markets, etc. are the means to mobilise people from their native places to the required places.

In the 1880's there was a limited number of hotels in Bangalore, but a quite a good number of homes for paying guests situated close to Clubs, Institutes, etc. Among the more prestigious hotels of the City, the West End Hotel has been an important landmark of the Civil Station area. The original block of the hotel dates back to 1887 when a small bungalow of eight rooms was set up by one Mrs. Bronson as a Lodging House. It was then known as Bronson's West End. Mr. Bronson soon joined his wife in running the enterprise and in course of time they added other bungalows and buildings to the property. In 1905, the first wing of the main Block was commissioned and the whole set-up, including garden was given a face lift. The hotel was bought over by Spencers in 1912 and is currently being run by the Taj Group. Lavender's Hotel (later Cubbon Hotel), the Central Hotel, Lavelle Park Hotel, the New Cubbon Hotel, Hotel Royal and the Prince Hotel were started subsequently. Strathmore, McIrose, Hanson House, Loralai, Beresford Lodge, Ajmer House, The Albany, The Hollies, Sunny View Lodge, De Burgh Villa, Burnside, Home for Parsis, St. Michael, Arcadia, Cubbon House, The Dip, etc., were the homes for paying guests, in the 1920s. But all these were for the Europeans and the Westernised and were non-vegetarian. The local enterprise catering to the local taste developed a little later.

Prior to 1898, a hotel was started at the road touching Dodpeth and Chikpet by Avani Narasimha Rao. Some hotels were started when the epidemic plague visited the city in 1898, and many people, mainly government servants, had to stay

in the city alone, sending their families away. Venkatanna hotel was started around 1898 at Arcot Srinivasachar street. It served food on plantain leaf and the rate of one *dose* and *chatni* was three pies. The Modern Hindu hotel began in 1898 at Arcot Srinivasachar street and it supplied meals at the rate of 2 annas per meal or for seven rupees per month. Banana *bonda* was supplied at the rate of one paisa (2 pies). Subsequently, Hindu Coffee club at Chikpet, Annayappa hotel at Balepet, Udupi hotel at Chikpet were started in Bangalore. Tamil speaking Iyers, followed by Udupi brahmins and the local Veerashaivas were the early hotel keepers. Malabari Moplas started non-vegetarian hotels, and now all communities have entered the business. Road-side *dabhas* are being run by the Punjabis.

Since the beginning of this century hotels and restaurants had sprung up in a big number catering to the needs of tourists and working people. In the days of Dewan Visvesvaraya, government took special steps to help hotel industry in 1916. An interest-free advance of Rs. 2,000, building rent at the rate of Rs. 100 per month for two years as subsidy, and a further advance of Rs. 1,000 at the 6.5% rate of interest, re-payable after two years were the incentives provided for "high class" Indian hotels to be opened in Bangalore and Mysore cities. Migrant workers, businessmen and tourists form a major segment of Bangalore's floating population. Those coming from various parts of the country and abroad on specific work or temporary stay prefer to stay in hotels. A large number of them provide not only boarding and lodging facilities but also offer secretarial assistance, office space and equipment. Bangalore's impressive number of starred, luxury, economy and regular hotels and drive-in-restaurants offer a wide variety of cuisines and lodging comforts. Self-sufficiency is the name of the game of the city's five star hotels. They have large conference halls, audio-visual equipments, photo-copiers, typewriters and communication facilities besides secretarial assistance.

The city does not have any starred hotels except the five star category. Many unstarred ones offer good services and facilities, with provision for holding mini-conferences and small meetings. Some even provide facilities for holding marriages. These hotels are divided on vegetarian and non-vegetarian lines. Most of the hotels in this category do not extend other entertainment facilities such as music, video and live bands but serve a variety of dishes ranging from the traditional south Indian *thali* for lunch and dinner to north Indian delicacies for break-fast and tea. While most guests seem to prefer the south Indian *idli* and *dosa* for breakfast, a good number like a combination of *chapathis* with rice for lunch and dinner, *pooris* and sand-wiches are popular at tea-time. The large number of mini restaurants or tiffin-houses, as they are popularly called, concentrate on light snacks, leaving the serving of meals and sophisticated dishes to the bigger hotels. Economy hotels, which provide boarding and lodging facilities are concentrated near bus stands and railway stations. The Majestic area and Anekal have a large number of such hotels. Tariff for either single bed room or double bed room are not uniform. Most hotels offer boarding facilities. Hotels in rural area are under-

equipped and a majority of them are run by individuals without appointing any labourers. At times, family members assist the hotel keeper in such ventures.

According to the Commissioner for labour in Karnataka, there were 1,877 hotels at the end of March 1989 providing employment to about 15,899 persons in the district. These are registered by the Department as per Shops and Establishments Act. The total number of hotels and workers engaged in them as given in brackets in municipal jurisdiction of the district were: Anekal 25 (135) and Yelahanka 18 (125). There were 2,927 licensed hotels working in the jurisdiction of Bangalore City Corporation at the end of March 1989. There are two notified areas in the Bangalore district. The total number of hotels and workers engaged in them as given in brackets in each notified area at the end of September 1989 were as follows. ITI notified area Krishnarajapura 12 (35) and H.A.L. Sanitary Board, Marathahalli 40 (280).

### Agarbathies

The age-old agarabathi industry which is labour intensive and declared as a cottage industry by the Central Government has played an important role in the economy of the State. Agarabathi largely depends on a number of forest-based raw materials like bamboo, sandal spent wood dust, white chips, *jigat* or gum, *halmaddi*, charcoal, etc. apart from pure sandal-wood and sandal oil. The sandal-wood trees in the state are famous for their high oil content. Workers of agarabathi are hailing from the economically lower strata of society. The other unique feature of agarabathi industry is the practice of rolling the agarabathi by women in rural and urban areas at their homes, at their leisure. Each manufacturer of agarabathies had a secret formula for the base mixture called *nurva*, built on the permutation and combination of the various basic raw materials. The formulation of *nurva* was a closely guarded family trade secret and was handed down to the successors. Since the beginning, the agarabathi manufacture has been marching ahead and today it gets a pride of place as a very important labour and export-oriented industry. Machines are now available for grinding the mass and for wrapping boxes, etc. But these machines require more investment and the industry loses its special image of being labour-oriented.

Just as in the other sphere of industrial activity, Bangalore was the hub of agarabathi manufacture in the state. It owes a great debt to Chinthamani in Kolar district where the story began. The rolling of the incense sticks was confined for generations to a few old households at Chinthamani. The secret of mixing and preparing the right concoction was part of a family tradition which was bequeathed from father to son. Excellent agarabathies of reputed quality were produced, using costly perfumed materials as well as *attars*. Some manufacturers capitalised on the technical advances made abroad in the areas of essential oils, aromatic chemicals and perfumery compounds.

Bangalore's manufacturers continued to play a major role in exports of agarabathies. In 1986-87, The southern region accounted for 90 per cent of the



country's exports (Rs. 7.32 crores out of Rs. 8.10 crores). Karnataka accounted for 95 per cent of the southern region's exports and Bangalore manufactures for almost one-third of the region's exports. Bangalore has retained this importance despite a number of changes in the international market.

### Gobargas and ASTRA Oven

Energy is a basic need. Fuel, one of the sources of energy is becoming scarce. The devices such as family type and community type biogas plant (*gobar gas plant*) besides the *ASTRA ole* (oven) are already making good impact on the life style of rural areas where natural fuel like fire-wood is short of supply. Though ASTRA oven require wood, its higher thermal efficiency cuts down the fire-wood requirements by 1/4 to 1/8. Emission of hazardous smoke is also less in them. Animal and agricultural wastes are the major raw materials for bio-gas production which are abundant in the rural areas. The slurry which is the waste out-put of bio-gas plants is much superior to farm yard manure. The use of bio-gas helps protection of our environment by limiting the use of forest for fuel purposes and checking the polluting atmosphere by burning firewood or dried animal dung. The technical guidance and supervision for construction and maintenance of gobar-gas plants are provided by the Khadi and Village Industries Board and Deputy Commissioner of the district. They also extend subsidy for installation of bio-gas plants and the banks extend loan facility for installation purposes.

Taluk-wise total number of gobar-gas plants and ASTRA oven units as given in brackets in the district at the end of March 1989 were as follows: Anekal 113 (1,382), Bangalore north 174 (2,851), Bangalore South 257 (1,726) of the district total 544 (5,959).

### Infrastructural facilities

Infrastructural facilities have played an important role for the growth and development of industries. Facilities such as transport and communication, banking and credit, industrial estates, industrial training, man-power, etc. are important among them. The details of man-power, transport and communication, banking and credit are discussed in earlier and later Chapters of the volume. A brief account of the factors is presented here.

*Transport and Communication:* All taluk headquarters of the district and district headquarters of the state are connected with Bangalore city through a network of good roads and these roads facilitate communication with important places, industrial areas and training centres. The total length of roads in the district at the end of March 1989 was 7,051 km; of which, National Highways accounted for 197 km, State Highways 271 km, district roads 1,185 km and village roads 5,398 km. Karnataka State Road Transport Corporation buses, city buses, trucks, etc. ply regularly from district headquarter to taluk headquarters and important places in the district. In the rural areas, bullock-carts are the chief means of transport.

Bangalore is connected by railways with important towns of southern India and some towns of northern India including New Delhi which help the transportation of goods and people for distant places. Bangalore district is having a good network of railway lines including broadgauge and metergauge. Broadgauge connects the city with Delhi, Madras, Bombay, Hyderabad and other important towns. Metergauge connects Miraj, Vasco and Mysore. The Mysore line has been taken up for conversion to broadgauge. The total length of railway line in the district at the end of March 1989 was 163 km.

Bangalore district has the air transport facility. Entrepreneurs can make use of this for quick transportation. There is no water transport facility in the district. The nearest place for the purpose is Mangalore which is well connected with roads and railways. Facilities for water transport through sea to other countries are available in Bangalore city.

During the year 1987-88, there were 392 post offices, 196 telegraph offices, 12 telephone exchanges, 85,475 telephone connections in the district. All towns and big villages in the district are well served in respect of postal and telecommunication facilities.

*Banking and credit:* The network of financial institutions mobilise savings and extend advances to industries. At the end of December 1988, there were 49 banking institutions with 586 branches including 12 branches of the Kalpatharu Grameena Bank, functioning in the district. Of the 586 branches, 502 were in Bangalore city and 84 in rural areas of the district. Industrial co-operative bank and Karnataka State Financial Corporation are also functioning. The Karnataka State Financial Corporation, a leading institution of the state is financing small industries in the district. It has assisted in as many as 6,349 cases, the total amount being Rs. 27,145.14 lakhs in the district since its inception upto March 1989. Karnataka State Industrial Investment and Development Corporation, a public sector bank, set-up by the Government of Karnataka is financing medium and large scale industries in the state. In addition to these, Industrial Finance Corporation of India has taken up a scheme of subsidy for implementing the modernisation programme of tiny, small scale and auxiliary units which have been in operation at least for a period of five years and where implementation of modernisation programme is considered to be necessary in order to keep pace with the changing technology, consumer needs or productivity investment, etc. It helps the entrepreneurs through the Technical Consultancy Service Organisation of Karnataka. Industrial Development of India had a scheme of refinance for modernisation assistance at concessional rate to small and medium scale industrial units. The Risk Capital Foundation has relaxed its various schemes for providing assistance for medium-scale industries. The Central Government has set up a Board for Industrial and Financial Reconstruction with effect from 12th January 1987 in pursuance with enactment of the Sick Industrial Companies (Special Provision) Act, 1985. This is a major step for investing at an early stage and detecting, preventing as well as taking ameliora-

live remedial measures which need to be taken with respect to sick and potentially viable companies.

### **Industrial Estates**

In order to help industrial enterprise and to see that more and more industries come up in the area, industrial estates are being established in various parts of the state. These estates provide ready-built work space in a well-laid-out area, with roads and other communication facilities with water and power connections. The Karnataka State Small Industries Development Corporation has constructed 12 industrial estates in the district. There is a proposal to construct 10 sheds at Peenya Ist Stage, 12 sheds at Peenya IInd Stage and 8 sheds at Peenya IIIrd Stage, 14 sheds at Dyavasandra industrial estate and 14 sheds at Bommasandra industrial estate during the year 1989-90.

The following is the statement showing the industrial estate-wise and category-wise total number of sheds constructed and number of sheds allotted in the district at the end of March 1989 as shown in Table 14.

| Name of the estate | Number of sheds constructed |            |            |            |          |           |           |              | Number of sheds allotted |            |            |           |          |           |           |              |
|--------------------|-----------------------------|------------|------------|------------|----------|-----------|-----------|--------------|--------------------------|------------|------------|-----------|----------|-----------|-----------|--------------|
|                    | A                           | B          | C          | D          | E        | F         | M         | Total        | A                        | B          | C          | D         | E        | F         | M         | Total        |
| Rajajinagar        | 19                          | 30         | 26         | 22         | -        | 16        | 30        | 143          | 19                       | 30         | 26         | 22        | -        | 16        | 30        | 143          |
| Peenya I Stage     | 79                          | 174        | 118        | 10         | -        | -         | 20        | 401          | 79                       | 173        | 117        | 10        | -        | -         | 19        | 398          |
| Peenya II Stage    | 142                         | 152        | 90         | 18         | -        | -         | -         | 402          | 142                      | 151        | 89         | 18        | -        | -         | -         | 400          |
| Peenya III Stage   | 30                          | 40         | 30         | -          | -        | -         | -         | 100          | 29                       | 38         | 30         | -         | -        | -         | -         | 97           |
| H.A.L.             | -                           | 10         | 0          | 0          | 0        | 0         | 0         | 10           | -                        | 10         | -          | -         | -        | -         | -         | 10           |
| Yelahanka          | -                           | 13         | 12         | 10         | -        | -         | -         | 35           | -                        | 13         | 12         | 10        | -        | -         | -         | 35           |
| N.G.E.F.           | 6                           | 6          | 8          | 2          | -        | -         | -         | 22           | 6                        | 6          | 8          | 2         | -        | -         | -         | 22           |
| Dyavasandra        | -                           | 82         | 20         | -          | -        | -         | -         | 102          | -                        | 80         | 20         | -         | -        | -         | -         | 100          |
| KEONICS            | 72                          | 36         | 18         | -          | -        | -         | -         | 126          | 10                       | 2          | 4          | -         | -        | -         | -         | 16           |
| Bommasandra        | 9                           | 22         | 14         | -          | -        | -         | -         | 45           | 9                        | 22         | 13         | -         | -        | -         | -         | 44           |
| Kumbalgod          | -                           | 4          | 8          | 8          | -        | -         | -         | 20           | -                        | 4          | 8          | 8         | -        | -         | -         | 20           |
| Veerasandra        | -                           | 36         | 28         | 30         | -        | -         | -         | 94           | -                        | 36         | 28         | 28        | -        | -         | -         | 92           |
| <b>Total</b>       | <b>357</b>                  | <b>605</b> | <b>372</b> | <b>100</b> | <b>-</b> | <b>16</b> | <b>50</b> | <b>1,500</b> | <b>294</b>               | <b>565</b> | <b>355</b> | <b>98</b> | <b>-</b> | <b>16</b> | <b>49</b> | <b>1,377</b> |

Source: Karnataka State Small Industries Development Corporation, Bangalore.

The Karnataka Industrial Area Development Board has developed 3,679 acres of land in eight industrial areas in the district and allotted to the entrepreneurs at the rate ranging from Rs. 5 per sq mtr to Rs. 75 per sq mtr. The details of taluk-wise land developed and rate fixed for allotment to the entrepreneurs at the end of February 1989 were as follows:

| Sl. No. | Name of the Industrial area | Taluk in which situated | Extent developed (in acres) | Approximate extent available (in acres) | Rate per sq. mtr. (in Rs.) |
|---------|-----------------------------|-------------------------|-----------------------------|---|----------------------------|
| 1.      | Peenya                      | Bangalore North         | 1,485.00                    | 10.00                                   | 75.00                      |
| 2.      | Doddanekkundi               | Bangalore South         | 175.00                      | 3.00                                    | 75.00                      |
| 3.      | Kadugodi-Sadaramangala      | Bangalore South         | 248.00                      | 2.00                                    | 75.00                      |
| 4.      | Kumbalgodu                  | Bangalore South         | 109.00                      | 7.50                                    | 62.50                      |
| 5.      | Bommasandra                 | Anekal                  | 900.00                      | 20.00                                   | 5.00                       |
| 6.      | Veerasandra                 | Anekal                  | 108.00                      | 1.00                                    | 75.00                      |
| 7.      | Jigani                      | Anekal                  | 339.00                      | 12.00                                   | 62.60                      |
| 8.      | Attibele                    | Anekal                  | 315.00                      | 9.20                                    | 62.60                      |

[Source: The Karnataka Industrial Area Development Board]

*The Artisan Training Institute* laid emphasis on providing training to the hereditary artisans in the use of improved tools and equipment to improve their efficiency and skill and to enable them to settle in the industries in their own villages. Artisans who take up the occupation of their parents acquire skill at the hands of their elders. But, they have to under-go training to use modern equipments and to adopt themselves to know techniques to serve modern sophisticated industries. The Artisan Training Centres were recognised during 1959-60 and Rural Training Institutes were started in composite Bangalore district. Bangalore Urban district is not having artisan training institutes at present.

*The Industrial Training Institutes* are imparting training including carpentry, smithy, weaving and spinning, mechanic, electrical works, general electronics, secretarial practice, printing technology, etc. In terms of technical man-power, Bangalore was well equipped. An Engineering School had been set up as early as 1862, and other institutes such as the Sri. Jayachamarajendra Technical Institute (1927), the Jayachmarajendra Occupational Institute (1943) followed, training young people in occupations ranging from automobile engineering to cinematography. At the end of March 1989, there were 21 Industrial Training Institutes in the district, of which two Industrial Training Institutes were under government and remaining 19 were under private management. Both the Government Industrial Training Institutes are in Bangalore; one is on the Tumkur Road, Bangalore, and the other is on the Hosur Road, Bangalore-29. The name and location of the private Industrial Training Institutes in the district at the end of March 1989 were 1) The Ghousia Technical Training Institute, Hosur Road, Bangalore-29, 2) Acharya

Training Institutes are in Bangalore; one is on the Tumkur Road, Bangalore, and the other is on the Hosur Road, Bangalore-29. The name and location of the private Industrial Training Institutes in the district at the end of March 1989 were 1) The Ghousia Technical Training Institute, Hosur Road, Bangalore-29, 2) Acharya Industrial Training Institute, Peenya Industrial Estate, Bangalore-58, 3) Vidyasada Technical Training Institute, Gandhi Bazar, Bangalore-4, 4) M.R. Jayaram Technical Training Institute Cubbon Road, Bangalore, 5) Association of the Physically Handicapped Industrial Training Institute, Lingarajapuram, Bangalore-84, 6) Sri Srinivasa Industrial Training Institute, Jayanagar, Bangalore-11, 7) K.S.R.T.C. Industrial Training Institute, Shanthinagar, Bangalore-27, 8) R.T.P.I. Industrial Training Institute, Chamarajpet, Bangalore-18, 9) Reddy Janasangha Industrial Training Institute, Koramangala Layout, Bangalore-34, 10) Goodwill International Industrial Training Institute, Nandidurg Road, Bangalore-46, 11) St. Mary's Industrial Training Institute, St. Mary's Town, Bangalore-84, 12) Sadhana Technical Foundation- cum-Production Centre, Banashankari II Stage, Bangalore-70, 13) Sri Manjunatha Industrial Training Institute, Dooravaninagar, Bangalore-16, 14) Muslim Orphanage Industrial Training Institute, Dickenson Road, Bangalore-42, 15) Jeevan Bharathi Vidhyapeeth Industrial Training Institute for Women, Jayanagar, Bangalore-11, 16) Globe Industrial Training Institute, Oblappa Garden, Bangalore-82, 17) St. Patricks Industrial Training Institute, Museum Road, Bangalore-25, 18) Rank Institute Computer Centre, Benson Town, Bangalore-46, and 19) The Electronic Training Centre for Women, Rajajinagar, Bangalore-44.

In addition to these, there are about 10 Engineering Colleges and 41 Polytechnics which impart several courses to the students. Tools Room Centres impart training to the engineers and diploma- holders in the line of Tool Room Technology. The Food Craft Institute in Bangalore city is imparting training of one year course in Restaurant and Counter-service, Reception and Book-keeping, House-keeping, Bakery and Confectionary and Cookery besides canning and food preservation. Entrepreneurs of the district can utilise the facilities provided by the Small Industries Service Institute and the Technical Consultancy Service Organisation of Karnataka (TECSOK).

### **Development Prospects**

Concentration of large number of giant public sector industries in Bangalore district, requiring many components and sub- assemblies has provided scope for small scale industries as their ancillary units. Essence oils, which are used in the manufacture of soap, perfumes, cosmetics and pharmaceutical industries, can be obtained from *dhavana*, citronella, eucalyptus and lemon grass. The climatic condition of the district is suitable for growing them and welcome the entrepreneurs to start one or two essence oil units in the district. As there is adequate demand

for decorative tiles, ready-made garments, hosiery, paper bags and envelopes, leather products, plastic products, etc. the entrepreneurs can set up one or two industrial units in each demand-based items in the district. Clay suitable for the manufacture of tiles is available in several parts of the district. Entrepreneurs can make use of this and set up a few units for manufacture of tiles.