PREFACE

Cement is one of the important products among construction materials. It is an essential commodity required for all modern constructions. All building activities and in a way building of modern civilisation itself depends upon the growth of cement industry. Cement industry is considered as one of the basic infrastructure industries for development. It constitutes an important segment for modern industrial economy of India. The first cement factory in India was established in the year 1904 by the South Indian Industries Limited, Madras with an installed capacity of 30 Metric Tonnes per day accounting for nearly 11,000 Metric Tonnes per annum and an investment of Rs.9.00 lakhs. The next Cement Factory in India was established at Porebander in Junagadh District of Gujarat State in the year 1940 with an installed capacity of 1,000 Metric Tonnes. By the end of 1918, there were three Cement Factories in India with a production capacity of 85,000 Metric Tonnes per year. The first and second world wars gave a great fillip to the development of Cement Industry in India. It was only during the first world war period that the Government of India brought the Cement Industry under its control. The entire output was brought under the control of the Government of India. The second world war also provided a good opportunity for the development of Cement Industry in India. After the attaining of independence and launching of five year plans in India, there was a tremendous
boost up to the growth of Cement Industry in our country. At the end of the First Five Year Plan, the total production of Cement in India was 4.6 Million Metric Tonnes. By the end of the Sixth Five Year Plan, the total production of cement reached a high level of 30.2 Million Metric Tonnes. By the end of the Seventh Plan, it has gone up to still higher level of 49 Million Metric Tonnes. The array of statistics provided above will indicate the spectacular growth of cement industry in India. Projections of Cement Industry by experts indicate that by the end of the Eighth Five Year Plan period, the demand for cement would go up to a high level of 65 Million Tonnes. The Cement Industry will have an installed capacity of 82 Metric Tonnes and an investment of Rs.3,600 crores by the end of the Eighth Five Year Plan. By the end of the Ninth Five Year Plan period, according to the projections made by experts, the Cement Industry in India will have a total investment of Rs.6,000 crores with an installed capacity of 109 Metric Tonnes and a demand of 87 Million Metric Tonnes. What is stated above will give a clear picture of the bright future that is awaiting the cement industry in India.

Andhra Pradesh does not lag behind in the development of cement industry with its rich limestone deposits, ranking first in India in the matter of production of limestone. Andhra Pradesh provides a good base for the development of cement industry. The limestone deposits of Andhra pradesh are estimated
at 19,832 Metric Tonnes which constitute 33.2 per cent of the total limestone deposits in India. The first cement plant in Andhra Pradesh was established at Vijayawada in the year 1934. According to the latest information available, there are 29 cement factories in Andhra Pradesh with an investment of Rs.58,910 lakhs providing employment to 14,874 people. The per capita consumption of cement in Andhra Pradesh was estimated at 36.20 tonnes in the year 1978 and it has gone up to a high level of 52.90 tonnes by the end of 1987. The estimates of demand for cement in Andhra Pradesh by the end of 1989-90 indicate that it was at a high level of 43.03 lakh tonnes. By the end of 1994-95, it is estimated that this demand for cement will go up to a still higher level of 64.84 lakh tonnes. The statistics furnished above will indicate beyond an iota of doubt that there was a tremendous growth of cement industry in Andhra Pradesh and in fact Andhra Pradesh is one of the leading States in India in the matters of production of cement. Turning now to Rayalaseema, the area chosen for this research study, there are five major cement factories. In addition, there are three mini-cement plants also in Rayalaseema with 20 tonnes per day production capacity. M/s.Panyam Cement and Mineral Industries Limited, Cementnagar in Kurnool District; M/s.Cement Corporation of India, Yerraguntla at Cuddapah District; M/s. Coromandal Cement Company at Chilamkur in Cuddapah District; M/s. Texmaco Company,
particular and Andhra Pradesh in general. As a matter of fact several problems that are experienced by the cement industry in India have also been experienced in Rayalaseema and in Andhra pradesh. The researcher collected a fund of information for this purpose from various sources, such as Cement Manufacturers Association at New Delhi; Bureau of Cost of Process, Department of Company Affairs, Government of India, New Delhi; Directorate of Stock Exchanges at New Delhi and Bombay; Andhra Pradesh State Industrial Development Corporation, Hyderabad, etc.

Despite the fact that the Cement Industry had considerably grown over the years in respect of installed capacity and production, it has by and large failed to accomplish the targets fixed during the different five year plans except during the Sixth Five Year Plan period. The achievements in all the previous five year plans fell short of the expectations. It clearly indicates that there is an imminent need to undertake a number of measures to keep the cement industry of Rayalaseema in particular and Andhra Pradesh and India in general on a still high plane of activity. Steps have also to be taken in various directions for placing the cement industry on a more profitable level. For this purpose, (1) undertaking programmes of modernisation; (2) upgradation of technology; (3) enhancement of production levels; (4) better utilisation of capacity; (5) promotion of efficiency; (6) immediately arresting the deterioration in the financial health of the industry; (7) rejuvination of
of raw materials and finished products; (12) Inadequate scales of economy; (13) Too frequent variations in price controls; (14) Problems of distribution, such as loss and wastages in storage and transport of cement; (15) Restrictions on packaging causing a lot of irritation to the managements of cement companies; (16) Heavy concentration of cement plants in certain areas only due to the availability of limestone deposits in abundance there; (17) Problems of modernisation and the attendant need for heavy capital investment for the purpose; (18) Problems of environmental pollution and the great need for installation of devices to prevent environmental pollution and investing heavy capital amounts for the purpose; (19) Labour problems such as strikes and work stoppages resulting in loss of production; (20) Problems of scarcity of water to carry on the manufacturing operations; (21) Lack of ancillary industrial units in the vicinity of the major cement plants; (22) Rigidity of present distribution system, etc.

Unless and until all these problems are overcome and earnest efforts are made to place the cement industry on an economically viable footing, the cement industry in Rayalaseema can not dream of any right future. The researcher has conducted this research study with a view to dig out deep at the root causes of these various problems, study the growth trends and suggest suitable measures to over come the various problems that are experienced by the cement industry in Rayalaseema in
Yerraguntla in Cuddapah District; and M/s. S.V. Cements Limited at Kanakadripalli in Kurnool District, are the major cement companies that are established in Rayalaseema so far. All these five cement companies are selected for a detailed study in this research work. By the end of 1988-89, the Cement Industry in Rayalaseema had a fixed capital of Rs.112.24 crores, working capital of Rs.23.37 crores; and total capital of Rs.135.61 crores. The total installed capacity of the cement industry in Rayalaseema was estimated at 22.81 lakh tonnes by the end of 1988-89. The actual production of cement in Rayalaseema at the end of 1988-89 was estimated at 14.52 lakh tonnes. The cement industry in Rayalaseema had also established a considerable growth during recent years. Inspite of some of the progress achieved by the cement industry in Rayalaseema, it is not completely free from various problems. Some of the problems reported to have been experienced by the cement industry in Rayalaseema can be summed up as follows:

(1) Paucity of demand leading to lower capacity utilisation;
(2) Raising output costs; (3) Unremunerative Prices; (4) Shortage and also poor quality of coal; (5) Disruptive power supply; (6) Large scale obsolescence; (7) Government controls over cement prices; (8) Levy quota obligations with their dampening affect on the growth of the cement industry; (9) Infrastructural crisis; (10) Acute power shortage and frequent power cuts; (11) Transport bottlenecks including shortage of wagons for transport
essential. Modern material handling equipment and mechanism of holding operations should also be incorporated. The Government should adopt a more pragmatic attitude towards providing fiscal reliefs and also adequate infrastructural support for the cement industry. Financial institutions should also come forward with greater and liberal financial assistance to the cement industry for setting up new plants and modernisation of the existing ones. The researcher has given these and a number of other suggestions in this research work for restructuring and rejuvenating the entire cement industry in Rayalaseema, the area chosen for this research work as well as in Andhra Pradesh and India in general. The researcher feels humbly that the implementation of these various suggestions will place the cement industry of Rayalaseema on an economically viable footing and it will have a bright future.

The researcher tried to collect as much upto date data as possible and incorporate the analysis of this data in his thesis but due to certain inherent limitations of data collection, there are some serious gaps of information for which the researcher expresses his regrets. The various findings and analysis, observations and suggestions, included in this thesis will be definitely of great use to all people who are interested in solving the problems of cement industry not only in Rayalaseema but also in Andhra Pradesh and in India even.
the entire industry and continue unimpeded the process of accelerated growth to attain capacity targets; (8) finding solutions to the problems of escalation in costs; (9) stepping up the levels of investment; (10) meeting the problems of shortage of power, raw materials, etc; (11) total decontrol of the industry; (12) reduction in levy cement quotas; (13) finding solutions to the labour problems; (14) introduction of simplified production circuits; and (15) evolving suitable designs of cement plants favouring strong installations, requiring scarce maintenance, work, little technical assistance and servicing of minimum import of spare parts, etc., have to be done without any further loss of time. The pricing policies should have some amount of inbuilt flexibility. Adequate care has also to be taken to design typical projects applicable to various cases with slight modifications. Import of modern technology for purposes such as precalcination of cement with a view to increase the output at a minimum production cost is also a dire need of the day. Kilns of lower capacity should be replaced by economically viable kilns. Production capacity should also be expanded substantially to reap the benefits of the economies of scale. Efforts should also be made to reduce energy consumption to the minimum and reduce costs of manufacturing of cement. Appropriate technology involving the use of inferior grade of coal of high ash content and of lower calorific values should also be adopted without any further loss of time. Installation of pollution control equipment by every cement plant is also
particular and Andhra Pradesh in general. As a matter of fact several problems that are experienced by the cement industry in India have also been experienced in Rayalaseema and in Andhra pradesh. The researcher collected a fund of information for this purpose from various sources, such as Cement Manufacturers Association at New Delhi; Bureau of Cost of Process, Department of Company Affairs, Government of India, New Delhi; Directorate of Stock Exchanges at New Delhi and Bombay; Andhra Pradesh State Industrial Development Corporation, Hyderabad, etc.

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