Indian Cement Industry has got a very chequered history starting practically from 1914 with a very small capacity it has today spread to practically all lime stone bearing states of the country except in North East where only Mini Cement Plants have come up except one plant of CCI at Bokajan in Assam.

In the Financial Year 1996-97, the total cement production from large plants was about 70 Million Tonnes and another 4 Million Tonnes came from Mini Cement Plants. In the present financial year 1997-98, the growth rate is not so high but still production is 8.5% above than the comparative period upto Nov.97. Similarly, the Cement consumption is also higher by almost 9%.

Today the installed capacity as per Cement Manufacturers' Associations' latest bulletin is almost touched 100 million tonnes, precisely 99.35 Million Tonnes as at 30.11.97. Today India is the 3rd Largest Producer of Cement after China and Japan and very soon it is hoped that India will take over Japan. However, it should be noted that inspite of the spectacular growth of cement
capacity in 7th and 8th five year plant, the per capita consumption even today is about 78 kg. in comparison to world average of 233 Kg. (1993) and much less than the developing Countries like Egypt (265 Kg.) China (300 Kg.) Brazil (164 kg.) .

Cement Plays a very important role in development of social, industrial and commercial infrastructure in the construction of Houses, Schools, Roads, Bridges, Ports, Dams, Power Projects, etc. which are so essential for any human activity and economic development. The performance of Cement Industry on 7th and 8th five year plans has been very commendable. If we look back on the development of Cement Industry, then a very glaring fact emerges that cement was suffering from all sorts of Government rules and regulations on establishment of new capacity as well as on distribution for almost 40 years from the beginning of World War II till the cement control order was withdrawn completely in 1989.

During the control period, the industrie’s growth was simply fettered and there was very insignificant growth upto 1982. The Govt. of India announced first partial
decontrol for about 33% of the capacity and encouraged entrepreneurs to put up more cement plants and expand their existing capacity. Upto 1982, the Government took the responsibility to provide cement according to the needs of the country at reasonable prices with total control. The result was totally opposite. Cement was not available at reasonable prices and it was in acute shortage. After lifting of controls, may be partially, the cement growth galloped and leaps and bounds and it is reached the 3rd place in production in the World stage.

It is also pertinent that although the production and consumption figures are matching of all India basis but regionwise the North Eastern Zones are suffering huge surpluses while the Southern Zone is comfortable because practically all usable lime stone deposits have been earmarked are being used by the existing cement plants and there is a healthy growth in consumption and there is no surplus production so to say.

Traditionally, the Country is divided into 4 Zones.

- North Zone comprising Eight States namely, J&K, Punjab, Chandigarh, Haryana, Delhi, Rajasthan, U.P. and Himanchal Pradesh.
- West Zone comprising Four States of namely, M.P., Gujrat, Maharastra and Goa.

- South Zone comprising Five States of namely, A.P., Karnataka, Tamil Nadu, Kerala and Pondichery.

- East Zone comprising Five States of namely, Bihar, Bengal, Assam, Orissa and North Eastern States.

It must be noted that there is immense possibility of further growth in the Cement production and consumption once there is stability at the political scenario resulting in the industrial and environmental growth in the Country. After all our Country has got Huge Resources, Trained Manpower, Mineral Resources, Agricultural Resources and Source of Power in the form of Thermal, Hydro and Nuclear. The development is bound to come, may be little later. Once the developmental activities start the Cement Industry will again boom as has been the case during 7th and 8th five year plan.
TECHNOLOGY -

India is in no way inferior to other countries in the field of cement technology and capacity optimization. Initially in line with the World technology practically all cement plants are operating on the wet process of cement manufacturing but once the dry process technology was developed slowly but some old plants were discarded and new more efficient plants on dry process were installed. Afterwards, when in 1975, the Precalcinator technology with short kilns came with dry process, it was also adopted by Indian Industry immediately.

Now a days no plant is installed without this technology and except some of the very old plants or plants with difficult lime stone chemistry amounting to about 10%, practically 90% industry is operating on dry process or very little on semi dry process. In comparison to this, the US and European Industry is still largely operating on wet process which is not only fuel and power gagglers but also less efficient and costlier in manufacturing.
An attempt has been made in this Thesis to Highlight History of Cement in the context of our Country right from Historical development to date with a overview of the various milestones it crossed right from its inception with a small plant of less than 15,000 Tonnes Per Annum capacity to an installed capacity on 100 Million Tonnes capacity today. Similarly, I tried to project the effect of Govt. controls and also encouragement in the development of Cement Industry. To say more emphatically cement is very sensitive to the encouragement or controls which are imposed up on day.

This is the overall view of the General Status of Cement Industry.

The project "Cement Industry in India, its Problems and Progress during Plan period". Comprises 17 Chapters, segmented into Four Parts, the First Part - Problems faced by Cement Industry during Plan Period, consists of 4 Chapters, Namely - Production Problem, Production of Cement and its demand in the Country, Capacity Utilisation and Location of Additional Capacity. Part-II Problems of Cost and Prices consists of 2 Chapters. An analysis of Cost Trends, Pricing of Cement in India. Part-III Distribution Problem,

Further, Chapter Ist Introduction to Cement Industry gives overall view of the Cement Industry and is not covered in any of the 4 parts mentioned above.

ACKNOWLEDGEMENTS:

I must express my gratitude to Shri R.G. Bagla, President, J.K. Cement Works, Nimbahera (Rajasthan), who is very distinguished in their respective fields and some had found the time to prepare these Specialised Chapters. My sincere thanks are also due to my Colleague Shri Ashok Rastogi and Shri A.K. Pandey for their significant contribution to the Research Project.
My Special thanks are due to Shri. Abodh Khandelwal A.C.A., Shri. V.P. Srivastava, Shri. K. Duraisamy, Shri. Venu Gopalan and a large number of friends and colleagues, who have helped me in carrying out this Research Project and preparation of the same.

I, greatly acknowledge the contributions of J.K. Cement Works, Nimbahera, Udaipur Cement Works, Udaipur, Jaypee Cement, Rewa, Associated Cement Companies Ltd., Regional Office, Kanpur, and various other companies for their help and co-operation in supplying the required data(s) and for sparing much valuable time for discussions.

My Wife, Mrs. Veena Verma, Patiently endured and cheered me up through rather a long time the Thesis took to be completed. No words can express my feelings for the sacrifices made by her.

PLACE: KANPUR
DATED: 7th DECEMBER'97

(P.P. VERMA)