Chapter – 2

History and Development of Cement Industry

➢ A historical overview of cement industry
➢ Post Independence growth
➢ Problem facing the cement companies
➢ Problem of cement industry in A CC Ltd and Prism Cement Ltd. in M.P. and their solution
CHAPTER-2

History and Development of Cement Industry

A historical overview of cement Industry

Cement is one of the important infrastructure industries, which contributes to the rapid economic growth of country. Cement is not only significant but necessary requirement of the rapid development of every country. In present Social set up cement is an essential as food grain items. Cement is treated as an essential item for construction industry. In our country Industry is among give oldest industries of our economy i.e., Cotton Textile Industry, Jute Industry, Cement Industry, Iron and Steel Industry and Paper Industry. The Production Systems of these industries are out dated and excess costly in comparison to cement industries of developed countries. Thus, a proper understanding of the nature, functions, objectives and method of various aspects of accounting is primarily important. The Indian Cement industry has come a long way since 1914. When the first cement plant was commission had with a production level at 1000 tons/annum.

Development of Cement Industry in India (1919-1925)

Before independence India was mainly dependent on imported cement. The manufacture of cement was started in Madras state (Now Tamilnadu state) as long back as 1904 by the south India industrial Ltd. The cement manufacture by this company was 30 tones per day.¹ This venture

¹ 50 Years of cement industry in India. P.7
failed but it provided a nucleus for the growth of the cement industry. Between 1912 and 1913 the Indian cement company Ltd. was established which produced about 1,000 tones of Portland cement in 1914. This was the real foundation stone of the modern cement industry in India. In the next two years, two more plants were added, one at Katni (Madhya Pradesh) and the other at Lakheri (Rajasthan). The first world war gave a fillup to the infant industry and by 1918 the three plants together was able to produce about 85000 tones of cement per year.

Between 1919 and 1924 six new plants were installed and the capacities of the existing three old plants were increased. Table no. 2.1 shows the name and place of installed units and installed capacity of these units. The total installed capacity in 1924 was about 5,59,800 tones, but actual production was almost half of that figure, which was outstripping the demand. An unfortunate rate was amongst the companies started and it resulted in cutting down prices to such as extent that in it was sold even below production cost, which forced some companies in to liquidation. It was at this Juncture that the government of India intervened and referred the working of the cement Industry to the tariff Board in the month of April 1924. The Protection of industry, Board emphasized the urgent need for cooperation among the existing units. This resulted, The Indian cement manufacturers Association came in existence in 1925. The main function of

1. Ibid., P.5.
2- N.L. Hingorani, op. cit., P.16.
4. The Pre-Independence growth history of the industry is based on cement manufactures association, 1964.
this body was to regulate the cement prices. As a result of the efforts of the Cement Manufacturers Association, cement price were regulated. But the regulating of cement prices could not of itself solve the problem. At that time cement was a relatively new building material and had to be popularized. Even engineers had to be persuaded and told of its potentialities. The production capacity of Cement Industry in India during 1919-1925 is given in table no. 2.1

<table>
<thead>
<tr>
<th>S.N.</th>
<th>Units</th>
<th>Place</th>
<th>Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Dwarka Cement Co. Ltd.</td>
<td>Dwarka (Gujrat)</td>
<td>100000</td>
</tr>
<tr>
<td>2.</td>
<td>Sone Velley Portland</td>
<td>Japla (Bihar)</td>
<td>50000</td>
</tr>
<tr>
<td>3.</td>
<td>Jubbalpore Portland</td>
<td>Jukhehi (M.P.)</td>
<td>60000</td>
</tr>
<tr>
<td></td>
<td>Cement Co. Ltd.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Gwalior Cement Ltd.</td>
<td>Sanmor (M.P.)</td>
<td>40000</td>
</tr>
<tr>
<td>5.</td>
<td>Punjab Port land Cement Co. Ltd.</td>
<td>Wah(P.B.)</td>
<td>36000</td>
</tr>
<tr>
<td>6.</td>
<td>Central Cement Provinces</td>
<td>Kymore (M. P.)</td>
<td>100000</td>
</tr>
<tr>
<td></td>
<td>Portland Cement Co. Ltd.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(Source: - V. Poddar, Cement Industry in India, P.3)

The Cement Manufacturers Association formed the Concrete Association of India in 1927 with the twin objects of educating the public
about the manifold uses of cement and popularizing Indian cement. The next step taken was to strength marketing arrangements and the cement marketing company of India Ltd. was formed in 1930 to promote the sale and distribution of cement at Regulated price. As a result of the efforts of the Concrete association of India Cement sales registered a remarkable increase. Many factories were expended and two new companies namely, Coimbutore Cement Company Ltd. was established, the former being in the Southern Zone of India. All these efforts resulted in the increase of annual production capacity to 10,89,000 tonnes of the end of the year 1934, whereas the actual production was 7,41,025 tonnes, about 68 percent of the rated capacity. Further expansion continued in the existing capacious resulting in a production capacity of 1488000 tonnes per annum by the year 1936 while actual production of cement in India was 9,68,382 tones during this year showing a rise of 73 percent over 1929.1

Period Of Mergers And Control Of Supplies (1936-1945)

With the rapid growth of the production capacity during the period 1926-1936 the industry appeared to have turned the corner, but the problem of consolidating the companies remained to be solved. With the formation of cement manufacturers association in 1925, the cement companies got an opportunity to discuss their common problems and find out solution. They came nearer to each other and with the pioneering efforts of Mr. F.E. Dinshaw (a great cement industrialist) ten out of the eleven then

1. V. Poddar, OP. CIT., P.5-6.
the existing cement companies (except Sone Valley Portland cement company Ltd.) amalgamated in 1936 into a single Organization called the associated cement companies Ltd. The object of amalgamation defined as “......................not to attain a monopolistic position but to make and deliver cement as cheaply as possible.¹ Actually this amalgamation resulted in the maintain of quality and lowering the cost of production. As a result the industry become more efficient and self-reliant. With the amalgamation of ten companies the need for continuing the cement manufacturer’s association was felt no more and was wound up. The Cement manufacturing Company of India Ltd. became The Subsidiary Company of Associated Cement Companies Ltd. from the year 1936.

The Associated Cement Company Ltd. was registered on August 1936 with the head quarter of its registered office at Bombay. The Authorized share capital of the company was Rs. 8 Crores, divided into equity shares of Rs. 100 each; it was increased, to Rs. 16 crores in the year 1951 and further to Rs. 30 Crores in the month of January 1956.² with the formation of this company the quantity of Cement is a building material also increased considerably. To meet this rising demand of Cement The Dalmia Jain Group came into the area of cement production in 1937 by establishing three cement companies in India. One of them a company was Dalmia Cement Ltd., which owned three Cement units situated at different Places. The following table shows the details of the Cement factories established by Dalmia Jain Group during the year 1937.

---
¹ V. Poddar, OP. CIT., P.5-6.
² Place, Siddons & Gough: The Investors India Year Book (Orient Longmans Ltd., calculate), 1963 ed. pp. 281-82.
Table No. 2.2

Cement factories established by Dalmia Jain group
During the year, 1937
((In tones))

<table>
<thead>
<tr>
<th>S.N</th>
<th>Units</th>
<th>Place</th>
<th>Annual Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Rohats Industries Ltd.</td>
<td>Dalminagar (Bihar)</td>
<td>150000</td>
</tr>
<tr>
<td>2.</td>
<td>Dalmia Dadri Cement Ltd.</td>
<td>Charkhi Dadri (Haryana)</td>
<td>75000</td>
</tr>
<tr>
<td>3.</td>
<td>Dalmia Cement Ltd.</td>
<td>Dandot (Punjab)</td>
<td>75000</td>
</tr>
<tr>
<td>4.</td>
<td>Dalmia Cement Ltd.</td>
<td>Santi Nagar (Sind)</td>
<td>150000</td>
</tr>
<tr>
<td>5.</td>
<td>Dalmia Cement Ltd.</td>
<td>Dalmiapuram(Tamilnadu)</td>
<td>75000</td>
</tr>
</tbody>
</table>

Source: - V. Poddar, Cement Industry in India, P.3

With the establishment of the above factories two leading groups namely ACC Ltd. and Dalmia Jain Owned almost all the cement factories existing at that time. The fear of competition existed amongst the two group and in order to avoid the same, attempts were made to combine both the groups but without success. Mean while other entrepreneurs also enter the field of cement production for example the Assam-Bengal Cement Company Ltd. Established its factory at Chhatak (Bengal), and the Kalyanpur Lime and Cement Works Ltd. established its factory at Banjari (Bihar). The Mysore Iron and Steel Works also setup a cement factory at Bhadravati. This was the first Instance of State Enterprise in the history of cement production in India. The Andhra Cement Company Ltd was also incorporated to set-up a factory at Vijaywada (A.P).
The selling up of all the above factories proved to be an overdose in the direction of cement production and again the rate was started in 1938-1939 prices were once again reduced to uneconomic levels and in many cases, cement was sold at prices even below the cost of production. This time ACC Ltd., decided to close, and some unprofitable units, But the Period of rate war was a temporary phase as the Second World War started in 1939 and the demand for cement spurted for various project like construction of airfields and other defence requirements. The government for war purpose consumed more than 95 percent of the production and a very small percentage was left for public use. During the first work of July 1942, the government commanded the supply of Cement from all the factories by issuing an ordinance under defence of India rules. This Control Continued for 23 years up to December 31, 1965.

To meet the rising demand of cement during Second World War period ACC Ltd. established four new factories at Rohri (Sind), Surajpur (Punjab), Kistna (Andhra Pradesh) and Khaluri (Bihar) During 1945 the factories under ACC Ltd. Dalmia Jain Group and Other entrepreneurs produced about 1.7 million tonnes at Cement in India against the total rated capacity at 2.2 Million tonnes.

Birla Corporation Limited is the flagship company of the M.P. Birla group. Incorporated as Birla Jute Manufacturing Company Ltd in 1919, it was Mr. Madhav Prasad Birla who gave shape to it present forms. As chairman of the company, Sri Madhya Prasad Birla Transformed it from a manufacturer of jute Goods to a leading multi product Corporation with wide spread activities.

67
Post Independence Growth

The Post Independence years gave a new impacts us to the cement industry one at the most notable developments immediately after the independence was the first Indian Standard specification for Portland cement by the Indian Standards Institution (I.S.I.). Earlier, the specifications governing the quality of Portland cement were produced in India, Which lay down the British Standards Institution. The most important feature at the India Specification was that the permissible limit of Magneria content in cement was raised from 4 percent to 5 percent in line with the specification of most countries in the world. Further, as a result of the first specification many raw materials and by Products were found to be useful in cement manufacturing which otherwise would have gone wasted.

In 1951 for the first time, targets of cement production were planned as a part of a result during the first five year plan (1951-56) Cement production increased from 2.69 million tones to 4.60 million tones; by the end of the first plan there capacity at about 5 million tones. The second plan period (1956-61) witnessed further expansion of the cement industry. The total installed capacity increased to about 9.2 million tones, actual Production raised from 4.6 million tones to about 7.8 million tones and number of unit increased from 27 to 34. This period also saw the manufacture in India new types of cements including white cement and Portland blast furnace slag. Cement unlike in Pre-Independence years where production was out stripping the demand for cement, Post-Independence year’s registered a sharp increase in the demand for cement reversing the demand supply passion in order to meet the increasing demand the targets of
annual capacity and production during the third plan period (1961-66) were subsequently stopped to 13.0 and 15.0 million tones respectively.

During the fourth five year plan (1969-74) the achievable target at production was projected at 18 million tones against which the actual production was 14.5 million tones for the year 1973-74 in 1976, 55 cement unit operating in the country had a total capacity at 21.23 million tones against which actual production was about 19 million tones in the year 1976-78 at the fifth plan 1.89 million tones addition capacity was to be created bringing the total to 23.31 million tones. Seventh plan target installed capacity 60 million tones.

Prism Cement Ltd (PCL) was incorporated in 1992 in the name of Karan Cement. The company jointly promoted by Rajan Raheja Group of Mumbai, F.L. Smidth & Co, Denmark (FLS), a world leader in cement technology and Industrialization fund for developing Countries, Denmark (IFU). Later, the company was taken over by Rajan, a real estate developer. The company’s name changed to Prism Cement Ltd (PCL) in 1994.

The company has 2.5 million tonne per annum cement plant at Satna, Madhya Pradesh, which is equipped with latest technology and has special features like a six-stage low-pressure drop pre-heater, bucket elevators for silo and kiln feeding, roller presses for cement grinding and electric packers for cement.

The company caters to the markets of Madhya Pradesh, Uttar Pradesh and Bihar. Moreover, Prism Cement Ltd (PCL) has installed 6 DG
sets with a total capacity of 31 MW, which is sufficient to meet the company's entire power requirement. The company markets its products under the brand name of Champion.

Though the best of our industry matches quite well with world standards in terms of energy (Thermal energy Kcal/kg of clinker-India 665 against 690 of Japan) and pollution norms (SPM of 40 in India against 20 of Japan) but the average performance of the Indian industry is lagging behind.

In the coming years, in order to survive and grow in the globalize market, rapid modernization and adoption of cost effective energy efficient and environment friendly technologies will be the prime mover for the viability of the industry in the global canvas. The industry should increasingly look for other cheaper fuel options like sludge from paper plants, Sugarcane trash, baggage, jute dust, textile dust, biogas refinery waste like pet coke etc. The industry should be known in future as savior of the country for sustainable development by consuming.

**Latest Development**

Till about a decade ago, the country was deficient in cement and it had to resort to import in order to fill up. The gap in supply the production at cement has increase from around 2.73 million tonnes in 1950-51 to over 69.31 millions in 1950-96, 1024 million tonnes in 2001-02 and 141.8 million tonnes in 2005-06. Industry recorded a growth of 12.4 percent in 1999-2000 11.2 percent during the financial year 2006 to 141.81 million tonnes by comparison production increased 8.6 percent during financial year 2005 and 5.5 percent during financial year 2004.
Production has increased at 8-year Compound annual growth rate (CAGR) at 8.4 percent. On decadal basis, India cement production increase at annual average at 8.2 percent during financial year 1996-2006 as compared with 6.9% during financial year 1986-96 the latest India’s Cement Production and Growth is given in table No. 2.3

Table No. 2.3

The Latest India’s Cement Production and Growth

<table>
<thead>
<tr>
<th>Year</th>
<th>Installed Capacity</th>
<th>Cement Production</th>
</tr>
</thead>
<tbody>
<tr>
<td>1998-99</td>
<td>105</td>
<td>81.8</td>
</tr>
<tr>
<td>1999-00</td>
<td>111</td>
<td>94.2</td>
</tr>
<tr>
<td>2000-01</td>
<td>121</td>
<td>93.6</td>
</tr>
<tr>
<td>2001-02</td>
<td>135</td>
<td>102.4</td>
</tr>
<tr>
<td>2002-03</td>
<td>140</td>
<td>111.4</td>
</tr>
<tr>
<td>2003-04</td>
<td>144</td>
<td>117.5</td>
</tr>
<tr>
<td>2004-05</td>
<td>151</td>
<td>127.6</td>
</tr>
<tr>
<td>2005-06</td>
<td>157</td>
<td>141.8</td>
</tr>
</tbody>
</table>

Source: - (ICRA WWW. ICRA.IN)
Chart No. 2.1

India’s cement production and growth

The Mini-Cement Industry of India

In order to reduce transportation as well as capital to increase regional development and to make use of smaller limestone deposits, many cement plants have been set up in dispersed locations across India. Construction of such plants began in the 1980s and they're capacity (including capacities of white cement plants, aggregate about 11.1 million tonne per annum. The main attraction of the mini-cement plant concept is the lower Capital costs per tonne of requirement of large plants, against the requirement of more than Rs. 3500 per tonne of capacity of large plants; capital costs for mini-cement plants come to about Rs. 1,400-1,600 per tonne. This reduces to a large extent the fixed cost per tonne of cement produced. Also, as the main market is in the vicinity of a mini-cements plant, savings are large on transportation costs.

All these benefits however are regretted by other factors like diseconomies associated with small-scale operation, significant competition form large-scale units and rising cost of production. The mini-cement plants almost entirely on the State Electricity Boards for power supply; captive generation is uneconomical for small size. A backup DG set for meeting 25% of the power it however usually provided for. Hence, even when mini-cement plants consume fewer units their power costs are comparable to those of pare cement plants. Further, reliance on SEB power implies exposure to frequent power cuts. Primarily, the mini cement plants were conceived to utilize isolated limestone deposits too small to support a large Cement plants. Strategically, the Policy marks may have viewed them as a counter weight against concentration, both in terms of output and as a means of reducing the threshold entry barrier. However most of these plants
are yet to make an up gradation from mini to large Cement plant. Even with the excise Concession, these plants have not made any significant inroads into the Indian Cement Market. One in roads into the Indian cement market, One inroad is that the quantity produced be these plants are extremely insignificant to give any real price completion to large Cement companies. The realizations achieved to large plants due to the quality Perception of the establishment brands of large companies.

Further, most of the mini-Cement plants are to some measure dependent on clinker from the large cement plants. Their flexibility to be price setters is limited by their poor financial health.

Process Technology: -

While adding fresh capacities, the Cement manufacturers are very conscious of the technology used. In cement Production, raw materials Preparation involves primary and secondary crushing of the quarried material, during the material (for use in the dry process) or undertaking a further raw grinding through either wet or dry process, and blending the materials.

Clinker production is the most energy-intensive step, Accounting for about 80% of the energy used. In cement production by during a mixture of materials, mainly limestone, Silicon oxides, aluminum, and iron oxides, Clinker is made by one of two-production process wet or dry; thus refer to the grinding process although other Configurations and mixed forms (Semi-wet, Semi-dry) exist for both types.
In the dry process, the raw materials are ground, mixed, and into the kiln in there dry state. In the wet process, the crushed and proportioned materials are ground with water, mixed, and fed into the kiln in the form of slurry the choice among different processes is dictated by the characteristics and availability of raw materials. For example, a wet process may be necessary for raw materials with high moisture content (greater than 15%) or for certain chalks and alloys that can be best processed as a slurry.

The dry process is the more modern and energy-efficient configuration. In general, the dry is much more energy efficient than the wet process, and the semi-wet somewhat more energy efficient than the semi-dry process. The semi-dry process has never played an important role in Indian cement production and accounts or less than 0.2% of total Production.

In 1960, around 94% of the cement plants in India used wet process kilns. These kilns have been phased out over the past 46 years and at present, 96.3% of the kilns are dry process, 3% are wet and only 1% is semi-dry process. Dry process kilns are typically larger, with capacities in India ranging from 3000-8,000 tonnes per day or tpd (average of 2,880 tpd). While capacities in semi-dry kilns range from 600-1,200 tpd (average 521 tpd) capacities in wet process kilns range from 200-750 tpd (average 425 tpd).

Over the last decade increased preference is being given to the energy efficient dry process technology so as to obtain a cost advantage in a competitive market. More, since the initiation of the decontrol process,
many manufactures have switched over from the wet technology to the dry technology by making suitable modification in their plants due new, even more efficient technologies the wet process is expected to completely phase out in the near future.

Due to the dominant use of carbon intensive fuels such coal in clinker making, the cement industry has been a major source of carbon dioxide (Co2) emissions, besides energy Conception, the clinker making process also emits Co2 due to the claiming process. Increased atmospheric concentration of gases such as Co2, methane and nitrous are believed to be responsible for the rise in global mean land and sea temperature since the 1855-2005. The warning occurs because these so-called green house gases, white they are transparent in incoming solar redaction, absorb infrared (heat) radiation from the earth that would otherwise escape from the atmosphere into space the green house gases are re-radiate some of this heat back towards the surface of the earth. Indians per capital carbon emission rate was 0.33 tonnes during 2003, which was below the global average of 1.14 and the smallest per capital rate of any country with fossil fuel Co2 emission exceeding 35 mt. of carbon.

The global cement industry contributes about 4% to global emission making, the cement industry an important sector for Co2 emission mitigation strategies. In India, while Co2 emission from cement production has increased from 7.32 mt. of carbon in 1993 to 16.73 mt. in 2003, its share in total Co2 emission by India has increased from 3.3% to 4.8% emission mitigation options include enhancing energy efficiency process conversion away from wet to dry semi dry processor; using blast furnace slag power
station fly ash, natural pozzolona or limestone as a constitution of the final cement thereby reducing the clinker reused, shift to low carbon fuels; application of waste fuels; and increased use of additives in cement making. In India, Co₂ emission per tonne of Cement production have declined with increased share of balanced cements, where energy use and associated emissions are reduced; increased share of dry process; energy efficiencies and other emissions mitigations measure Indian cement plants are also begging to explore the use of alternative and waste fuels, such as lignite, pet, Coke, tires nice huskes, groundnut shells, etc. to replace the use of cool in cement kilns.

After the complete de-controlled of price and distribution 1 March, 1989 and introduction of other policy reforms, the cement industry has made rapid strides bath in capacity production and in production process technology at present there are 129 large cement plants within 54 cement companies and over 300 million cement plants with in a total capacity of 157 million tonnes and production of 141.81 million tonnes. The utilization of installed capacity of my research period is given in Chart No.2.2
Chart No. 2.2

Installed Capacity And Capacity Utilisation

Source: Annual Report of ICRA March 2007
Process Trend:

In India, about 44% of the cement produced is Ordinary Portland Cement (OPC), 47% is Pozzolona Cement (PPC), 8% is Portland blast furnace slag cement (PBFS), and the remaining 1% is special cements. Blended cement (PPC and PBFS) has a low but rising share of India’s cement production. Energy usage is significantly lower in blended cement because other materials such as fly ash or blast furnace slag replace a portion of the clinker. Blended cement are composite cement produced by blending clinker—which is the output of the kiln at the grinding stage with Pozzolonic or other material with cement like properties. Although compressive strength of the major types of blended cement is equitant to that of grade 33 OPC cement; blended cement offers a reduction in the risk of thermal cracking; superior performance under elevated temperature curing conditions; good long-term strength; higher resistance to acids, sulphates and alkali attacks, with more suitability for coastal areas; reduced permeability with consequent improvement in durability, smoother finishing, etc.

In India, the share of blended in the total production had increased from 47% in 1978-79 to 76% in 1982-83. After this, the Indian cement industry witnessed a higher production of the higher grade OPC, and the Production of blended cement gradually declined to 27% in 1992-93. However, this was followed by an upward trend, and the share of blended cement reached approximately 56% in 2004-05. Process Trend of my research period given in Chart No.2.3
Chart No. 2.3

Process Trend of Indian Cement Industry

Source: Annual Report of ICRA March 2007
Reasons behind the historically low share in consumption of blended cement in India:

- As the compressive strength of the blended cement is comparable to the 33-grade OPC, which is the lowest grade, the market perceives the blended cements as relatively lower strength varieties.

- The cement Consumer is not confident of the quality of the blended material used for manufacturing blended cements.

- The darker colour of blended cements and the colour variation in them are mistakenly attributed to impurity. For example, PPC is generally of darker colour as compared with OPC because of the carbon present in flash.

- Consumer are yet to realize the advantages of using blended cement in certain locations, like aggressive soils, further, there is a wrong impression in the market that addition of blended material degrades the properties of blended cements.

These receptions on blended cement are gradually phasing out with consequent increase in consumption share of blended cement. In fact there are certain regions in India, such as Punjab, Himanchal Pradesh, Jharkhand, Uttar Pradesh, Chhatisgarh, Tamilnadu, Kerla, Bihar, Orrisa, Madhya Pradesh and West Bengal, Where blended cement is more popular and hence, more than 50% (More than 80% in some cases) of the cement produced in these states is of the blended variety.
Give the Strong benefits associated with the use of blended cement; the industry can initiate corrective action for enhancing its consumption. Some of the likely ways in which this can be done are as follows:

- Improving the quality of the additive. For example, the quality of a pozzolonic material like flyash can be improved by processing it, so that its fineness and chemical composition can be assured.
- Increasing customer awareness by organizing training programs.
- The Government can also play a role by taking strategic initiatives like increasing the concession on excise duty on blended cements, or providing sales tax exemption benefits to producers of blended cement. Key benefits acquiring to the country from this move would include greater pollution control (because of the effective use waste material like slag) and preservation of the valuable limestone reserve of the country. Besides, it would also help in improving the construction quality in the country.

Andhara Pradesh is the largest cement producing state with an installed capacity of 24.9 million tonnnes and cement production during year 2006 was 19.9 million tonnnes. Other major cement producing states include Rajasthan, Madhya Pradesh, and Gujrat are also contributed.
Chart No. 2.4
Major Cement Producing States

Capacity (in %)

Source: Annual Report of ICRA March 2007
About 15 units were declared sick because there is no proper depreciation policy in these units. Another thing is that the cement industry faced crises situation due to state government phenomenal decision to increase the mineral Tax.\(^1\) On making a primary security it was found that the main reason for closure of these units was their defective depreciation policy.\(^2\) The names of these sick units are given in table No. 2.4

**Table No. 2.4**

**The Cement Units Which is declared as Sick.**

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>ACC, Dwarka</td>
</tr>
<tr>
<td>2.</td>
<td>ACC, Lakheri</td>
</tr>
<tr>
<td>3.</td>
<td>ACC, Sindri</td>
</tr>
<tr>
<td>4.</td>
<td>India Cement Shanker Nagar</td>
</tr>
<tr>
<td>5.</td>
<td>The Jaipur Udyog Ltd. Sawal madhopur</td>
</tr>
<tr>
<td>6.</td>
<td>Kalyanpur Cement Ltd.</td>
</tr>
<tr>
<td>7.</td>
<td>Sone Velly Portland Cement Co. Ltd.</td>
</tr>
<tr>
<td>8.</td>
<td>Tamil Nadu Cement Ltd., Ariyalpur</td>
</tr>
<tr>
<td>9.</td>
<td>Tamil Nadu Cement Ltd., Alangalam</td>
</tr>
<tr>
<td>10.</td>
<td>UP SCC Churk</td>
</tr>
<tr>
<td>11.</td>
<td>UP SCC Dalla</td>
</tr>
<tr>
<td>12.</td>
<td>ACC, Khalary</td>
</tr>
<tr>
<td>13.</td>
<td>ACC, Sevalia</td>
</tr>
<tr>
<td>14.</td>
<td>OCI, Charkhi Dadri</td>
</tr>
<tr>
<td>15.</td>
<td>Visvesveraya Iron &amp; Co. Ltd.</td>
</tr>
</tbody>
</table>

(Source: - ‘Cement’ Vol. XIX No. 4 July-Sep 1986.)

2. Cement Vol. XIX No. 4 July-Sep. 1986
Problems Facing the ACC, Prism & other Cement Industry

The Problems faced by the cement industry can be divided under the following broad heads: -

(1) Actual Shortage of Lubricants Greases and M.S.D. Oil: -

The Cement Manufacturers have been encountering difficulties in procurements of vital lubricants needed for highly sophisticated equipments like steam turbines, earth moving equipments, large and heavy-duty gearboxes etc. The non-availability of right type of lubricants have been adversity affecting the operation of many of the cement units.

It is found that even low grades at engine oils meant for ordinary tracks were recommended for use in heavy-duty earth moving equipments. The situation had been worse as regards turbine oil for powerhouse’s axle oils for compounded lubricants for heavy-duty gearboxes and axle oil for railway wagons. The supply position of high temperature grease and other types of greases had also become critical. Even Indigenously prepared greases like index No. 20 for kiln girth gears and multipurpose greases for automotive lubrication were difficult to procure. The use of low-grade lubricants would prove to be extremely deterred mental to the life of costly imported earth-moving equipments the replacement of which had become impossible due to both non-availability from indigenous sources and paucity of foreign exchange.
(2) Transport Difficulty: -

Availability of means of transports is a problem faced by the cement Industry. Cement is transported in bulk quantity. It is necessary to develop back loading handing, transport and ship loading facilities at selected ports. Non- Availability of railway wagons is another problem as movement at cement of distant places by road is very costly. Risky and burden some.

It is generally happened that raw materials used in the cement industries are not carried by Indian Railways at scheduled time. Specially the coal and lime stone are not transported by Indian Railways when one asks about collori where stocks have piled up, This is likely to be answered by railway authorities in general terms such as “operational difficulties” or dislocation of rail movement due to strikes, go slow by worker’s or civil unrest. The situation is worst in case of carrying finished product of cement industries. The goods handed over to railway authorities or are mishandled and stolen by unsocial elements. The result is about 20% raw materials are in short when weighted at factory go down. It is the common practice that from 3 to 5 Kg. Cement is in short in one bag of cement of 50 Kg.

The second and last substitute as mean of transport is road transport. It is to costly and scheduled delivery for continuous supply is not assured by transport companies it is found that transport companies are charging any amount as freight and this amount is fluctuating from 50% to 200% as per availability of trucks and need of cement industry. It is hoped that with economic liberalization and with added emphasis placed by united front government on infrastructure the Industry will meet its challenges.
(3) Modernization: -

Out of the total cement production in our country nearly 84 percent is being produced by the dry Process technology. The other technologies are wet process or semi-dry process technologies. The modernization program has included conversion of wet process to dry process, energy conservation measure, Computer controlled system etc. An investment of Rs.30 Billion was incurred on modernization of cement Industry in our Country Many units in cement Industry could not rehabilitate or modernize their plants after their establishment. In 8 Units out of 12 units of my study, plant & machinery are more than 40 to 50 Year’s old. As regards to modernization Conversion of wet process to dry process may not be economically viable due to poor quality of lime stone or its limited deposit, small size and age of the kiln etc.

It is common knowledge that to ensure optimum utilization of capacity by restoring health to the existing plants entails a fraction of cost of installing new capacity. Besides the magnitude of work involved a creating new capacities is enormous. Yet, there is no separate provision in the prices structures for the purpose of rehabilitation and modernization of machinery and equipments.

The Industrial Development Bank of India, Which is implementing the soft loan scheme¹ for modernization and rehabilitation of machinery and equipment in the cement industry but the industry, has not

---

been able to derive benefits from the soft loan scheme of the IDBI (Industrial Bank of India). It is only because the scheme is extremely limited in scope and does not meet the special requirement of the cement industry.

(4) Powers:

Availability of power in large quantity is pre-requisite in cement manufacturing shortage of power supply; about Frequent power cut is the other of the day. It is important to note that about 55 percent of the cost of production of cement cost belongs to power. Besides this, ash content in coal is 57 percent, which is very high, which further, increase the cost of production.

The position regarding availability of power has undoubtedly remained some what unsatisfactory in the country. Power cuts have been imposed on high-tension industries on the whole. The industry is still bugged by the phenomenon of voltage fluctuation and sudden power shedding, which not only affects the production adversely, but also puts the equipment to avoidable stresses.

(5) Coal:

As a major consumer of coal, next only to the power sector, the steel industry and the railways, the cement industry is greatly dependent among others on the supply coal, coal is not merely a fuel for this industry but also a raw material used in the process of cement manufacture. It was stressed that the poor quality of coal poses many serious problem for the industry.
First- It increases the coal consumption itself and demands a higher line content in the raw material, constituting a waste score resources.

Secondly- it creates operational problems, impairing efficiency and causing break down and interruptions.

Thirdly: - quarrying operations, kiln operations as well as grinding operations are seriously affected besides becoming more expensive.

To make matters worse, the quality of coal supplied to the cement industry has been progressively deteriorating with high ash and moisture contents often enough sale and other foreign materials have been found in coal supplies received by cement factories.

(6) Distribution: -

The problems under distribution arose due to concentration by large of production units around areas of limestone deposits, its demand being spread through the country. Further, the present level of production of cement is insufficient to meet the demand and shortages, which have persisted in the recent past, leading to black marketing of this commodity. In order to ensure an equitably distribution of available supplies of cement at a uniform price throughout the country, The Government has been exercising control over distribution of cement and its price. Under the price control measures, the government fixes the price payable to the manufacturer, by equalizing railway freight charges on movement of cement the F.O.R. price of cement at all destinations is kept at the same level. While the Government has been neutralizing freight differentials for the final product, no such equalization was undertaken in respect of procurement of raw materials, such as lime stone gypsum and coal, As a result production
cost of cement varied from unit to unit, depending on the nearness of the plant to the source of raw materials though the price payable for the product was the same for all units. The difference in the power tariff in various states, in some cases even within the states for different units also aggravated this problem. In the Process, the unit cast of Production of some cement plants exceeded the retention price allowed by government to the manufacturers with every increase in costs not compensated fully by increase in the retention price, the manufacturers are at a disadvantage and the level of profitability falls.

(7) Fear of Nationalism

At Present all the industries of the country are apprehensive of being nationalized. This is particularly so when one talks in consideration of the fact that the cement industry has been the least profitable. A major portion of the industry has been languishing for years in the form of marginal or loss making units. It a proof was needed of the veracity of statements, our government should only cost a glance at the recent Phenomenon when most of the cement units faced with precarious financial conditions have thrown out of employment thousands of workers in a period of actual unemployment. Surely, mismanagement is not the monopoly of cement industry in our country; where a variety of other industries thrive. The failure of a cement unit that closed down cannot therefore, be attributed solely to mismanagement as has often been made out.¹ It is far cheaper to

¹In the case of Jaipur Udhyog Ltd. Rajastahn Govt has adapted same policy.
help a unit while it is on its feet than to wait till it folds up, causing serious break in employment.

Such post-mortem salvage operations are invariably expensive just from the disorganization caused through stoppage of production and the deterioration caused to machinery through suspension of operation. Timely financial help through loans and guarantees would yield for better results, as lesser sacrifice in terms of employment than procedural delays and indecisions resulting in the closure of the industry for same time. There are, of course, units beyond salvage and they have unavoidably to be scrapped. As things stand today government enterprises seems to have waned.

(8) **Under Utilization of Capacity: -**

Nearly 24 percent of the installed capacity of cement is unutilized. The Problem of under utilization of Production capacity results into increase in the cost of production. Under utilization of capacity in India is probably the highest in the world and is largely due to non-availability of raw materials at reasonable price and shortage of power. The cement unites in India would stand to lose heavily as not only there would be loss in production due to extra weekly holiday, but financial burden too due to the obligation to pay lay-off compensation. These shortcomings must immediately be over come to make cement available. The Industrial capacity of the country must be utilized at optimum output.
(9) **Inferior Quality Control:**

Indian cement industry has ignored the quality control factor cement made in India is of inferior quality. In order to meet the challenges of globalization, Indian cement industry must gear it up to adopt ISO 9000 is 14000 series of standards and the total quality management.

(10) **Low Profitability:**

The Profitability of cement industry is generally below that of other industries In order to sustain, modernize and expend this industry reasonable profits have to be earned and ploughed back into it. If we want the supply of cement to our citizens at a reasonable cost, the capacity of the industry has to expand and the productivity has to be increased through modernization. Both measures need investment. In addition our cement prices have to be brought down to world price levels so that we can price our products at a reasonable level in the home market and become more competitive in the world market.

(11) **High Tax Charges:**

While the railways have had capacity to meet the requirement, it is expected that in March—the commencement of peak season for the procurement of food grains, the railways would be constrained to provide adequate number of wagons. “So freight rates are up, railways cannot provide wagons and trucks are unlikely to be viable so there could be a serious dislocation of supplies going forward. The concern stems from both side-cost of freight and whether there is enough capacity to move cement.” Said Mr. Jain.
According to the Cement Manufactures association (CMA), total taxes and duties on cement come to around Rs. 900 a tonne or Rs. 45 a bag.” So at a price of Rs. 150 a bag in the market, one third is accounted for by taxes and duties; which is high for such a basic product. This includes excise duty, sales tax, royalty tax and royalty on limestone, which is one of the highest as a percentage of the pithead cost,” Said Mr. Jain.

The importance of limestone can only be underscored as for every tonne of cement produced, 1.5 tonnes of limestone is required. “For limestone, royalty is on a per tonne basis of Rs. 40, whereas for most minerals it is a percentage of the pithead cost. Effectively we are paying Rs. 70 a tonne for limestone as royalty. VAT is at 12.5 percent without any justification and it should be in 4 percent category, excise is at Rs. 408 per tonne when it should be around Rs. 200. In all aspects, we are way above what a commodity like cement should attract.”

(12) Freight/Logistics problems:

The importance of freight for the cement industry cannot be emphasized enough. While in the last few months, railways have been steadily losing freight to road sector they have been confined to long distances. The outward freight- freight to move finished cement to market-is around Rs. 350-400 a tonne or Rs. 20 a bag and that could go as high as Rs. 800 for long leads. This would only reach the first level of sale and additional costs are involved to take it further.

1. Survey Of Indian Industry 2006. Published By The Hind
Another issue, which will hit the industry hard, is that of logistics and a Supreme Court judgment on ‘carrying capacity’ for trucks. Accordingly, State governments have been directed to enforce the discipline that trucks only carry a specified load. “Many States are already implementing this and there is already an increase in freight rates and in some cases, it has gone up by 50 percent. Also, the requirement for trucks to carry the same freight has nearly doubled and in many places, the industry is being forced to move to railways.”¹

Problem of Cement Industry in Madhya Pradesh and Their Solution:

1. Improving the management in cement industry so as to make the industry more competitive in domestic market should reduce cost of production.

2. Mini-cement plants have to face stiff competition from large scale units. Their development is possible on an increase in the demand for cement in future.

3. Power supply should be adequate and regular and the future of this industry along with other industries would depend upon factor to a great extent.

¹ Survey Of Indian Industry 2006. Published By The Hindu
4- Most modern plants should be started in future along with the modernization of existing units so as to make the industry viable and competitive. As stated earlier the future of cement industry in bright in Madhya Pradesh. The state Government reduced the central sales-tax on cement industry from 16% to 7% in state-budget for 1990-91, so that sales of cement may be promoted and entrepreneurs may not resort to 'Branch-transfer' to sell cement in other states.

Conclusion:

In modern time cement is as an essential as food grain item. In India cement industry is among five oldest industries. The manufacture of cement started in Madras State (now Taminadu) as long back as 1904 by South India Industries Ltd. The cement manufacture by this company was 30 tonne per day. The problems faced by the cement industry can be divided under following heads:

(a) Acute shortage of lubricants, greases and HSD Oil
(b) Transport difficulties
(c) Modernisation
(d) Power
(e) Coal
(f) Distribution
(g) High tax charges
(h) Fear of Nationalisation
(i) Under Utilisation of Capacity
(j) Low profitability

The State of Madhya Pradesh is regarded as a leading state in cement industry. Ample quantity of cement grade lime is found here. The problems given are in above are in also M.P, but the position of profitability is much better than any other state.