

CEMENT



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CEMENT

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GOVERNMENT OF INDIA
MINISTRY OF MINES
INDIAN BUREAU OF MINES

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5 Cement

The Cement Industry in India is among the core Industries that is vital for economic growth and development. Ever since the Industry was delicensed in 1991, there has been remarkable growth that metamorphosed it to a globally competitive Market, making India the second largest producer of cement after China in the world. Cement is the basic building material and is used extensively in urban housing, industrial sector and infrastructure development. It has become synonymous with construction activity and the per capita consumption of cement is accepted as an important indicator of the country's economic growth.

In terms of quality, technology, productivity and efficiency, India compares well with the best in the world. The demand for cement is closely linked to the overall economic growth, particularly the housing and infrastructure sector. The recent government thrust on housing and infrastructure development augurs well for the industry. However, the per capita consumption of cement in India still remains substantially low at about 240 kg when compared with the developed world or world average which stands at about 530 kg. The Indian Cement Industry plays a key role in the national economy, not only by generating substantial revenue for State and Central Governments but also as a key industry that generates maximum employment directly or indirectly. India has a lot of potential for development in the Infrastructure and Construction Sector and the Cement Sector is poised for a positive growth in the days ahead. Some of the recent major government initiatives, such as, development of 98 smart cities are expected to provide a major boost to the sector.

India exported about 5.82 million tonnes cement valued at ` 2,029 crore (including 3.57 million tonnes clinker, 2.01 million tonnes of portland grey cement and 0.03 million tonnes portland white cement) in 2018-19 to Sri Lanka, Nepal, Bangladesh, Maldives etc.

IBM captures data from mineral consuming industries as per provisions made under Rule 45, MCDR-2017 in Form 'M' (Erstwhile Form 'O').

As per the returns received from various cement plants and Survey of Cement Industry & Directory, 2017, the total installed capacity and the total production of cement of these plants have been arrived at 556.94 million tonnes and 241.26 million tonnes, respectively.

The Department of Industrial Policy and Promotion (DIPP), Ministry of Commerce, Govt. of India publishes data on production and capacity of cement in its Annual Report. As per Annual Report 2018-19, the total installed capacity of cement plants has been placed at 537 million tonnes and more than 350 mini cement plants with an estimated capacity of 11.10 million tonnes per annum are currently operational. During 2018-19, the production of cement was 337.32 million tonnes which is more than that of the year 2017-18 which reported a production of 297.71 million tonnes.

Three cement plants, having a total capacity of 1.338 mtpa produced white cement. Most of these capacities are modern and based on the energy-efficient dry processing technology.

There are as many as 175 plants with over a million tonnes or more capacity. In the Public Sector, however, there is only one Central Public Sector Undertaking i.e., CCI which had 10 units, spread over eight States/Union Territories. Out of these, only three plants, namely, Bokajan, Rajban and Tandur units are operational, the remaining cement plants have shut operations for more than a decade now. There are five large cement plants owned by various State Government Undertakings like Tamil Nadu Cement, Malabar Cements, J&K Ltd and Mawmluh-Cherra Cement Ltd, Shillong, Meghalaya. The company-wise annual installed capacity and production of cement plants during the year 2018-19 in the country is furnished in Table-1.

Data on capacity, production and growth in Cement Industry are reflected in Table-2.

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Table 1: Company-wise Installed Capacities and Production of Cement Plants 2018-19

(In million tonnes)

Company/ Plant Name	Capacity	Production
ACC Ltd	34.49	8.51
Bargarh, Bargarh, Odisha	2.5	1.34
Chaibasa, Singhbhum, Jharkhand	0.9	-
Chanda, Chandrapur, Maharashtra	3.8	-
Damodar (G), Purulia, West Bengal	0.75	-
Gagal-I & II, Bilaspur, Himachal Pradesh	4.4	3.35
Jamul, Durg, Chhattisgarh	2.4	-
Kudithini (G), Ballari, Karnataka	1.1	-
Kymore, Katni, Madhya Pradesh	2.72	-
Lakheri, Bundi, Rajasthan	1.5	-
Madukkarai, Coimbatore, Tamil Nadu	1.08	0.19
Sindri (G), Dhanbad, Jharkhand	2.35	-
Thondebhavi (G), Chikballapur, Karnataka	1.66	-
Tikaria (G), Sultanpur, Uttar Pradesh	3	-
Vizag (G), Vizag, Andhra Pradesh	0.3	-
Wadi & Wadi New, Wadi, Karnataka	6.03	3.63
ACL, Jaypee Group	2.85	-
Durga Cement Works, Guntur, Andhra Pradesh	2.31	-
Vishaka Cement Works, Vizag, Andhra Pradesh	0.54	-
Ambuja Cement Ltd	32.36	20.83
Ambujanagar I & II, Kodinar, Junagadh, Gujarat	5.7	4.99
Bathinda (G), Bathinda, Punjab	1.2	-
Bhatapara, Raipur, Chhattisgarh	3.5	2.82
Dadri- (G), G B Nagar, Uttar Pradesh	1.8	1.24
Darlaghat, Solan, Solan, Himachal Pradesh	1.6	0.86
Farakka (G), Murshidabad, West Bengal	1.25	1.12
Magdalla (G), Surat, Gujarat	1.56	-
Maratha Cement, Chandrapur, Maharashtra	4.75	3.97
Nalagargh, Solan (G), Solan, Himachal Pradesh	1.5	0.81
Rabriyawas, Pali, Rajasthan	3.6	2.37
Roorkee (G), Haridwar, Uttarakhand	1	0.11
Ropar (G), Ropar, Punjab	2.5	2.54
Sankrail (G), Howrah, West Bengal	2.4	-
Amrit Cement	3	-
Jaintia Hills, Jaintia Hills, Meghalaya	3	-
Anjani Portland Cements	1.92	0.99
Anjani Portland Cements, Nalgonda, Telangana	1.92	0.99
Asian CCPL	1.3	-
Asian Cement, Solan, Himachal Pradesh	1.3	-
Asian FCPL	1.5	-
Asian Cement, Patiala, Punjab	1.5	-
Bagalkot Cement & Ind Ltd	0.6	-
Bagalkot Cement, Bijapur, Karnataka	0.6	-
Barak Valley Cement	0.33	-
Karimganj, Karimganj, Assam	0.33	-
Bharathi Cement	5	3.20
Kadapa, Kadapa, Andhra Pradesh	5	3.20
Bhavya Cement	1.4	0.90
Bhavya Cement, Guntur, Andhra Pradesh	1.4	0.90
Bheema Cement (Earlier Coromandel Cements)	0.9	-
Bheema Cement, Nalgonda, Telangana	0.9	-
Binani Cement	1.4	-
Sikar (G), Sikar, Rajasthan	1.4	-
Birla Corp. Ltd	9.8	3.57
Chandera, Chittorgarh, Rajasthan	4	3.57
Durgapur and Durga Hitech Cement (G), Bardhaman, West Bengal	2.3	-
Raebareli (G), Raebareli, Uttar Pradesh	1.3	-
Satna, Satna, Madhya Pradesh	2.2	-

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Table-1 (Contd)

Company/ Plant Name	Capacity	Production
Birla Corp. Ltd (erstwhile Reliance Cement)	5.5	2.72
Butibori (G), Nagpur, Maharashtra	0.5	-
Kundanganj (G), Raebareli, Uttar Pradesh	2	-
Maihar, Satna, Madhya Pradesh	3	2.72
BJCL, Jaypee Group	3.5	-
Bhilai Jaypee (G), Durg, Chhattisgarh	2.2	-
Bhilai Jaypee, Satna, Madhya Pradesh	1.3	-
Burnpur Cement	0.6	-
Asansol, Burdwan, West Bengal	0.3	-
Patratu, Ramgargh, Jharkhand	0.3	-
C.C.I.Ltd	1.45	-
Bokajan, Karbi, Assam	0.2	-
Rajban, Sirmaur, Himachal Pradesh	0.25	-
Tandur, Rangareddy, Telangana	1	-
Century Textiles and Industries Ltd	12.9	9.29
Century Cement, Raipur, Chhattisgarh	2.40	2.05
Maihar Cement I & II, Satna, Madhya Pradesh	4.2	3.88
Manikgarh Cement I & II, Chandrapur, Maharashtra	4.8	3.36
Sonar Bangla (G), Murshidabad, West Bengal	1.5	-
Chettinad Cement	14.2	7.83
Ariyalur, Ariyalur, Tamil Nadu	5.5	2.81
Kallur, Gulbarga, Karnataka	2.5	1.70
Karikkali, Dindigul, Tamil Nadu	4.5	2.42
Puliyur, Karur, Tamil Nadu	1.7	0.90
Dalmia Cement (Bharat) Ltd	16.12	8.57
Adhunik Cement Ltd, Jaintia Hills, Meghalaya	1.5	0.83
Ariyalur, Ariyalur, Tamil Nadu	3	1.86
Belagavi, Belagavi, Karnataka	4	1.55
Kadapa, Kadapa, Andhra Pradesh	2.5	2.00
Dalmiapuram, Trichy, Tamil Nadu	3.4	2.33
Calcom Cement India Ltd, Noagoan, Assam	1.72	-
Dalmia Cement (Bharat) Ltd (erstwhile Jaypee Group)	2.1	-
Bokaro (G), Bokaro, Jharkhand	2.1	-
DCM Shriram Cement	0.4	-
Shriram Cement Works, Kota, Rajasthan	0.4	-
Deccan Cement	1.8	1.74
Nalgonda, Nalgonda, Telangana	1.8	1.74
ECO Cement	1	-
Durgawati, Bhabhua, Bihar	1	-
Emami Ltd	5.0	4.38
Panagarh, Burdwan, West Bengal	2	1.61
Risda, Baloda Bazaar, Chhattisgarh	3.0	2.77
Green Valley Industries	1	-
Green Valley Industries, Jowai, Meghalaya	1	-
Grey gold Cement	0.09	0.05
Grey gold Cement, Nalgonda, Telangana	0.09	0.05
Heidelberg Cement	5.21	-
Ammasandra, Tumkur, Karnataka	0.51	-
Imlai (G), Damoh, Madhya Pradesh	2	-
Jhansi (G), Jhansi, Uttar Pradesh	2.7	-
Hi-Bond Cement	1.2	-
Hi-Bond cement, Gondal, Gujarat	1.2	-
Hills Cement Company	1	-
Hills Cement, Jaintia Hills, Meghalaya	1	-
Hemadri Cement Ltd Andhra Pradesh	0.25	0.23
Hemadri Cement, Vedadri, Jaggyyapet, Andhra Pradesh	0.25	0.23
India Cements Ltd	20.11	10.99
Chilamkur Works, Kadapa, Andhra Pradesh	1.46	-

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Table-1 (Contd)

Company/ Plant Name	Capacity	Production
Dalavoi, Ariyalur, Tamil Nadu	2.16	1.38
Malkapur, Rangareddy, Telangana	2.9	1.89
Parli (G), Beed, Maharashtra	1.1	-
Sankaridurg, Salem, Tamil Nadu	1.39	0.87
Sankarnagar, Tirunelveli, Tamil Nadu	2.05	1.32
Trinetra Cement, Banswara, Rajasthan	1.8	1.59
Vallur (G), Chennai, Tamil Nadu	1.1	-
Vishnupuram, Nalgonda, Telangana	3.5	1.96
Yerraguntla, Kadapa, Andhra Pradesh	1.00	0.57
Andaman Nicobar Islands	1.65	1.41
J&K Cement Ltd	0.5	-
Khrew, Pulwama, J & K	0.4	-
Samba, Jammu, J & K	0.1	-
J.K. Cement Ltd	10.8	6.81
Gotan White, Nagaur, Rajasthan	0.5	-
Jharli(G), Jhajjar, Haryana	1.5	-
Mangrol, Chittorgarh, Rajasthan	2.5	2.56
Muddapur, Bagalkot, Karnataka	3	1.86
Nimbahera, Chittorgarh, Rajasthan	3.30	2.39
JAL, Jaypee Group	7.1	-
Chunar (G), Mirzapur, Uttar Pradesh	2.5	-
Churk, Mirzapur, Uttar Pradesh	1.5	-
Rewa, Rewa, Madhya Pradesh	2.5	-
Sadva Khurd (Blending), Allahabad, Uttar Pradesh	0.6	-
JCCL, Jaypee Group	1.2	-
Shahabad Cement, Shahabad, Karnataka	1.2	-
JK Lakshmi Cement Ltd	15.05	5.73
Durg, Durg, Chhattisgarh	2.7	2.30
Jhajjar (G), Jhajjar, Haryana	1.3	-
Kalol (G), Gandhinagar, Gujarat	1	-
Sirohi, Sirohi, Rajasthan	8.70	3.43
Surat, Surat, Gujarat	1.35	-
JPVL, Jaypee Group	2	-
Jayprakash Power Ventures (G), Singrauli, Madhya Pradesh	2	-
JSPL	0.85	-
Raigarh, Raigarh, Chhattisgarh	0.85	-
JSW (erstwhile Heidelberg Cement (I) Ltd)	1	-
Dolvi (G), Raigad, Maharashtra	1	-
JSW Cement	10.4	1.76
Nandyal, Kurnool, Andhra Pradesh	4.8	1.76
Salboni, P Medinipur, West Bengal	2.4	-
Vijayanagar, Bellary, Karnataka	3.2	-
JUD Cements	0.5	-
Jaintia Hills, Jaintia Hills, Meghalaya	0.5	-
Kalburgi Cement	2.75	2.72
Gulbarga, Gulbarga, Karnataka (formerly Virat Sagar Cement Pvt Ltd)	2.75	2.72
Kakatiya Cement & Sugar Ind.Ltd. Telangana	0.30	0.20
Kakatiya Cement & Sugar Ind. Ltd Telangana	0.30	0.20
Kalyanpur Cement	1	-
Kalyanpur Cement, Rohtas, Bihar	1	-
Kanodia Cement	1.53	-
Kanodia Cement, Bulandsahar, Uttar Pradesh	0.33	-
Kanodia Infra, Bhabhua, Bihar	1.2	-
Keerthi Industries (Formerly Suvarna Cement)	0.59	-
Keerthi Industries, Nalgonda, Telangana	0.59	-
Kesoram Industries	10.75	6.35
Kesoram Cement, Karimnagar, Telangana	1.75	1.05
Vasvadatta Cement, Gulbarga, Karnataka	9	5.30
Khyber Industries (P) Ltd	0.33	-
Khyber Cement, Srinagar, J & K	0.33	-

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Table-1 (Contd)

Company/ Plant Name	Capacity	Production
KJS Cement	2.2	1.85
KJS Cement, Satna, Madhya Pradesh	2.2	1.85
Lafarge Cement (Nuvocon Vistas Corp Ltd)	11.65	4.44
Arasmeta, Janjgir, Chhattisgarh	1.8	-
Chittorgarh, Chittorgarh, Rajasthan	2.6	2.31
Jojobera (G), Singhbhum, Jharkhand	4.6	-
Mejia (G), Bankura, West Bengal	1.65	1.57
Sonadih, Raipur, Chhattisgarh	1.00	0.56
Mawmluh Cherra Cements Ltd	0.18	0.03
Mawmluh Cherra Cements Ltd	0.18	0.03
Maa Chandi Cement	0.33	-
Bamunara, Burdwan, West Bengal	0.33	-
Malabar Cements	0.86	0.40
Cherthala (G), Alappuzha, Kerala	0.2	-
Walayar, Palakkad, Kerala	0.66	0.40
Mancherial Cement	2.33	-
Mancherial Cement, Adilabad, Telangana	0.33	-
Jalgaon (G), Jalgaon, Maharashtra	2	-
Mangalam Cement Ltd	4	2.62
Aligarh(G), Aligarh, Uttar Pradesh	0.75	-
Mangalam Cement I & II, Kota, Rajasthan	3.25	2.62
Megha Technical & Engineers Pvt. Ltd	0.7	-
MTEPL-Lumshong, Jaintia Hills, Meghalaya	0.7	-
Meghalaya Cements Ltd	0.86	0.60
Jaintia Hills, Jaintia Hills, Meghalaya	0.86	0.60
Mehta Group	4.26	1.6
Gujarat Sidhee Cement, Junagadh, Gujarat	1.2	0.11
Saurashtra Cement, Porbandar, Gujarat	3.06	1.49
Murli Industries	3	-
Murli Cement, Chandrapur, Maharashtra	3	-
My Home Industries Ltd	6.8	2.71
Mellacheruvu, Nalgonda, Telangana	3.3	2.71
Mulakalapalli (G), Vizag, Andhra Pradesh	2	-
Ottapidaram, Thoothukudi, Tamil Nadu	1.5	-
NCL Industries	2.99	1.43
Kondapalli (G), Krishna, Andhra Pradesh	0.99	-
Simhapuri, Nalgonda, Telangana	2.00	1.43
Nirma Ltd.	2.28	1.68
Nirma Cement, Pali, Rajasthan	2.28	1.68
OCL India Ltd	6.7	3.00
Bengal Works, Midnapore, West Bengal	1.35	-
Kapilas (G), Cuttack, Odisha	1.35	-
Rajgangpur, Sundargarh, Odisha	4	3.00
Orient Cement	10	5.03
Chittapur, Gulbarga, Karnataka	3	2.29
Devapur, Adilabad, Telangana	5	2.74
Jalgaon (G), Jalgaon, Maharashtra	2	-
Panyam Cement	1	-
Panyam Cement, Kurnool, Andhra Pradesh	1	-
Parasakti Cement	1.26	1.15
Parasakti Cement, Guntur, Andhra Pradesh	1.26	1.15
Penna Cement Industries Ltd	7.4	2.36
Boyareddypalli, Anantapur, Andhra Pradesh	2	-
Ganeshpahad, Nalgonda, Telangana	1.2	1.18
Talaricheruvu, Anantapur, Andhra Pradesh	2.2	1.18
Tandur, Rangareddy, Telangana	2	-
Prism Cement Ltd	6.6	-
Prism Cement-I & II, Satna, Madhya Pradesh	6.6	-

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Table-1 (Contd)

Company/ Plant Name	Capacity	Production
Purbanchal Cement	0.36	-
Sonapur, Kamrup, Assam	0.36	-
Rain Cements Ltd	4.27	2.34
Kurnool Cem. Plant, Kurnool, Andhra Pradesh	2.77	1.47
Ramapuram Cem. Plant, Nalgonda, Telangana	1.5	0.87
Ramco Cements Ltd	16.49	7.66
Alathiyur Works I & II, Perambalur, Tamil Nadu	3.05	1.41
Ariyalur, Perambalur, Tamil Nadu	3.5	2.41
Changelpet (G), Kancheepuram, Tamil Nadu	0.5	-
Jyantipuram, Krishna, Andhra Pradesh	3.65	1.91
Kolaghat (G), P Medinipur, West Bengal	0.95	-
Mathodu, Chitradurga, Karnataka	0.29	-
Ramasamyraja Nagar, Virudhnagar, Tamil Nadu	2	1.93
Salem (G), Salem, Tamil Nadu	1.6	-
Vizag (G), Vizag, Andhra Pradesh	0.95	-
RNB Cement	0.4	-
East Khasi Hills, East Khasi, Meghalaya	0.4	-
Sagar Cement Ltd	1	0.83
BMM Cement, Anantapur, Andhra Pradesh	1	0.83
Sagar Cements	3.2	1.81
Bayyavaram, Vizag, Andhra Pradesh	0.2	-
Mattampally, Nalgonda, Telangana	2.65	1.81
Pedaveedu, Nalgonda, Telangana	0.35	-
Sanghi Industries Ltd	4.1	2.62
Sanghi Cement, Kachchh, Gujarat	4.1	2.62
Shree Cements	36.4	24.08
Baloda Bazar, Raipur, Chhattisgarh	3	2.38
Bangur Cement (G), Aurangabad, Bihar	3.6	2.64
Bangur Cement , Suratgarh, Rajasthan	3.6	1.34
Beawar I & II, Ajmer, Rajasthan Unit-III Andheri Deori	3.6	1.74
Bulandshahr (G), Sikandrabad, Uttar Pradesh	2	1.71
Jaipur (G), Jaipur, Rajasthan	1.5	1.06
Khushkhera (G), Alwar, Rajasthan	3.5	2.82
Karnataka Cement Project , Sedam	3.00	0.36
New Bihar Cement Plant, Bihar	2	1.90
Ras, Pali, Rajasthan	3	3.24
Roorkee (G), Haridwar, Uttrakhand	1.8	1.41
Ras New Cement Unit, Ras Rajasthan	4.0	3.25
Suratgarh (G), Sriganganagar, Rajasthan	1.8	0.23
Shree Cements (erstwhile Jaypee Group)	1.5	1.00
Panipat (G), Panipat, Haryana	1.5	1.00
Shree Digvijay Cement Co.	1.2	1.05
Shree Digvijay-Sikka, Sikka, Gujarat	1.2	1.05
Shristi Cement	0.36	-
Mangalpur, Burdwan, West Bengal	0.36	-
Sparta Cements & Infra Ltd	1	-
Sparta Cements, Bhuj, Gujarat	1	-
Sri Chakra Cements	0.57	-
Annamarajupet Grinding Unit (G), Vizianagaram, Andhra Pradesh	0.26	-
Narasimhapuri Cement Unit, Guntur, Andhra Pradesh	0.31	-
Sri JayaJothi Cements Pvt. Ltd	3.2	2.29
Sri JayaJothi Cement Plant, Kurnool, Andhra Pradesh	3.2	2.29
Sri Lalita	1	-
Matampally, Nalgonda, Telangana	1	-
Star Cement Ltd	3	0.60
CMCL-Lumshong, Jaintia Hills, Meghalaya	1	0.60
CMCL-Sonapur (G), Guwahati, Assam	2	-
Swasata Cements Ltd	1.5	-
Swasata Cements, Purulia, West Bengal	1.5	-
Tamil Nadu Cement	0.79	-
Alangulam, Virudhunagar, Tamil Nadu	0.29	-
Ariyalur, Ariyalur, Tamil Nadu	0.5	-

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Table-1 (Contd)

Company/ Plant Name	Capacity	Production
Tata Chemicals Limited	0.5	0.50
Tata Chemicals Cement Division, Mithapur, Gujarat	0.5	0.50
Tamil Nadu Newsprint & Papers Limited	0.33	0.23
Tamil Nadu Newsprint & Papers Limited	0.33	0.23
The K.C.P. Ltd	4.34	2.45
Macherla, Guntur, Andhra Pradesh	0.82	0.67
Muktyala, Krishna, Andhra Pradesh	3.52	1.78
Topcem	0.66	-
Gauripur, Kamrup, Assam	0.66	-
Udaipur Cement	1.24	1.08
Udaipur Cement, Udaipur, Rajasthan	1.24	1.08
UltraTech Cement Ltd	96.08	39.34
Aditya, Chittorgarh, Rajasthan	8	0.55
Aligarh(G), Aligarh, Uttar Pradesh	1.3	-
Anantapur, Anantpur, Andhra Pradesh Cement Works	9.0	4.16
Arakkonam (G), Vellore, Tamil Nadu	1.1	-
Awarpur, Chandrapur, Maharashtra	3.6	2.71
Bhatinda (G), Bhatinda, Punjab	1.75	-
Dadri (G), G B Nagar, Uttar Pradesh	1.3	-
Dankuni, Hooghly, West Bengal	1.6	-
Dhar, Madhya Pradesh (Nagda)	3.50	-
Giniger (G), Koppal, Karnataka	1.3	-
Gujarat Cement Works, Amreli, Gujarat	6.4	5.30
Hirmi, Raipur, Chhattisgarh	2.75	2.31
Hotgi, Solapur, Maharashtra	4	2.41
Jafrabad, Amreli, Gujarat	1.45	1.17
Jhajjar (G), Jhajjar, Haryana	1.6	-
Jharsuguda (G), Jharsuguda, Odisha	2.6	-
Kotputli, Jaipur, Rajasthan	4	2.83
Magdalla (G), Surat, Gujarat	0.75	0.77
Nagpur, Nagpur, Maharashtra	2	-
Panipat(G), Panipat, Haryana	1.3	-
Nathdwara Cement Ltd.,(earlier Binani Cement Sirohi)	4.85	2.45
Patliputra, Patna, Bihar	1.9	-
Rajashree, Gulbarga, Karnataka	6.1	4.45
Ratnagiri (G), Ratnagiri, Maharashtra	0.48	-
Rawan, Raipur, Chhattisgarh	2.5	2.00
Reddipalayam, Ariyalur, Tamil Nadu	1.4	1.35
Sirohi, Sirohi, Rajasthan	4.85	1.73
Sewagram, Kachchh, Gujarat	2.4	2.49
Vikram, Neemuch, Madhya Pradesh	4.5	2.66
Wanakbori (G), Kheda, Gujarat	2.4	-
WBCW (G), Burdwan, West Bengal	1.4	-
Bara Allahabad, Uttar Pradesh	4	-
UltraTech Cement Ltd (erstwhile Jaypee Group)	18.74	5.96
Ayodhya (G), Ambedkar Nagar, Uttar Pradesh	1	-
Baga, Solan, Himachal Pradesh	2.54	0.89
Bagheri (G & B), Solan, Himachal Pradesh	2	-
Balaji Cement, Krishna, Andhra Pradesh	5	3.12
Bela, Rewa, Madhya Pradesh	2.6	-
Dalla, Sonebhadra, Uttar Pradesh	0.5	0.44
Roorkee (G), Haridwar, Uttarakhand	1.1	-
Sidhi, Sidhi, Madhya Pradesh	3.0	1.51
Sikandrabad, Bulandsahar, Uttar Pradesh	1	-
Vadraj Cement	6	-
Mora, Surat, Gujarat	6	-
Vijay Cements	0.08	0.02
Vijay Cements, Trichy, Tamil Nadu	0.08	0.02

(Contd)

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Table-1 (Concl'd)

Company/ Plant Name	Capacity	Production
Vinay Cement	1	0.97
Vinay Cement Dima Hasao, Umrangshu, Assam	1	0.97
Wonder Cement	8	6.47
Wonder Cement, Chittorgarh, Rajasthan	8	6.47
Zuari Cement Ltd	7.3	3.69
Chennai (G), Chennai, Tamil Nadu	0.9	-
Sitapuram, Nalgonda, Telangana	1.4	1.13
Solapur, Solapur, Maharashtra	1.2	-
Yeraguntla, Kadapa, Andhra Pradesh	3.8	2.56
Grand Total	556.94	241.26

* Survey of Cement Industry and Directory 2017 and Annual Return in Form 'M' (Erstwhile Form 'O').

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Table –2: Capacity, Production and Growth in Cement Industry, 2014-15 to 2018-19

(In million tonnes)

Year	Capacity growth			Production growth		
	Annual capacity	Growth	% Growth	Production	Growth	Growth%
2014-15	356.00	6.00	1.71	276.93	20.89	8.15
2015-16	479.35*	123.35	34.65	283.45	6.52	2.35
2016-17	502.03*	22.68	4.73	279.97	(-)3.48	(-)1.22
2017-18	532.16*	30.13	6.00	297.71	17.74	6.34
2018-19	556.94*	24.78	4.65	337.32	39.61	13.30

Source: DIPP, Annual Reports.

* Survey of Cement Industry and Directory 2017 and Annual Return in Form 'M' (Erstwhile Form 'O').

A large number of mega plants with capacity of one million tonne and above, possessing the latest technological features like roller process, vertical roller mills, process control equipment and efficient pollution control devices have emerged in different parts of the country. The induction of advanced technology has helped the Industry immensely to conserve energy & fuel and thereby save the raw materials substantially.

India is producing different varieties of cements like Ordinary Portland Cement (OPC), Portland Pozzolana Cement (PPC), Portland Blast Furnace Slag Cement (PBFSC), Oil-well Cement, Rapid Hardening Portland Cement, Sulphate Resistant Portland Cement (SRPC) and White Cement. BIS covers two types of PPC, viz. IS 1489

(Part1): 1991 (Reaffirmed 2009) Flyash-based and IS 1489 (Part 2):1991(Reaffirmed 2009) Calcined clay-based. PPC is suitable for all general construction, particularly, for marine & hydraulic construction and other mass concrete structures. Portland Slag Cement (PSC)-IS 455:1989 (Reaffirmed 2009) is particularly useful for marine works. BIS specifies three grades of OPC – (i) IS 269:1989 (Reaffirmed 2008), i.e., 33 grade suitable for all general constructions, particularly for masonry and plastering works (ii) IS 8112:1989 (Reaffirmed 2009), i.e., 43 grade is particularly suitable for high strength concrete work, and (iii) IS 12269:1987 (Reaffirmed 2008), i.e., 53 grade suitable for specialised work, such as, precast concrete, prestressed concrete, long span structures/bridges, tall structures, etc.

All these varieties of cement are produced strictly conforming to the BIS specifications for maintaining high quality. The Cement Quality Control Order dated 12 February 2003 issued under the BIS Act ensures quality of cement produced and sold in the market.

Power, coal and freight constitute about 15-20% each of the total production cost of cement while capital cost (interest and depreciation) forms 20-30 per cent. Although the Industry is largely under Private Sector, Government controls more than 40% of the cost. Power, coal and freight costs are all regulated by Government bodies, such as, State Electricity Boards, Coal Monopolies and the Railways.

Operating Cost

The cement capacity in the country is mostly concentrated near the main raw material source, i.e., limestone. According to some estimates, around 1.5 tonnes of limestone and 180-250 kg of coal is required to produce a tonne of cement. Cement manufacturing also consume minerals, such as, gypsum, quartz, bauxite, coal, kaolin, and iron ore too in varying amounts. Other important raw material is coal (0.25 tonnes required per tonne of cement). Many cement plants are situated near the coal belts in eastern Madhya Pradesh, primarily due to two reasons, namely, (i) less freight cost incurred to transport coal, and (ii) inability of domestic coal producers to fulfil supply-requirements of cement plants due to fall in production and prioritised supply to power plants. However, limestone reserves have been the primary consideration in choosing the location of plants. Presence of clusters of capacity and high transportation cost make the cement market regional in nature with the producers supplying cement to areas around the location of the plant.

Power is a major parameter that influences the operating cost. Grid power purchased from SEBs is costlier than captive power from coal-based plants by more than 25-30 per cent. Where conditions are favourable, setting up captive wind power farms has become a realistic option for cement plants.

Coal Distribution

Coal being a low value, bulk product with regional concentration of deposits entails freight costs that constitute a substantial part in the production cost of cement. Though, rail is the predominant form of transport, road transport is commonly used by plants located close to pitheads. The Government in its notification to the Cement Industry has permitted cement plants to operate their own captive coal mines. Many cement plants have expressed interest in taking up coal blocks on lease and operating the mines for coal. As proposed by the Government, cement is one of the core sectors for which captive mining blocks would be allocated.

Power Availability

The Industry's average energy consumption is estimated to be about 725 kcal/kg clinker thermal energy and 80 kWh/t cement electrical energy. The best thermal and electrical energy consumption presently achieved by the Indian Cement Industry is about 667 kcal/kg clinker and 67 kWh/t cement which are comparable to the best reported figures of 660 kcal/kg clinker and 65 kWh/t cement in a developed country like Japan. Since the controls were lifted, aggregate power requirements have grown rapidly with rising cement capacity without commensurate growth in power generating capacity in the country. To offset the power crisis situation, many cement plants have set-up installations for captive power generation. Further, as part of reform process in Coal Sector, the Government has also permitted 100% FDI in captive coal blocks in Cement Sector along with Power and Steel Sectors to facilitate and augment power availability.

Freight Costs

Logistics in the Cement Sector affect freight costs to a large extent. The basic raw materials for manufacturing cement, such as, limestone and coal are low value high bulk material and, as a result, entail huge freight cost which form the single largest cost component, usually accounting for 33% of the variable costs. During 1990s, the most significant developments were the emergence of big

plants and formations of clusters of cement plants. These clusters, typically located far away from the major consumption centres meant that cement has to be transported over very long distances. The Indian Railways transported 117.34 million tonnes cement in 2018-19, an increase from 112.96 million tonnes of cement transported in 2017-18, as a part of revenue earning freight traffic. Alternatively, the cost-conscious manufacturers have attempted to use sea route for transportation as sea route is cost-effective and could benefit coast-based manufacturers. Some cement plants have set-up dedicated jetties for promoting bulk transportation and export.

Cost Control

Cement producers of the country have continuously attempted to lower the cost by various methods like:

- improved efficiency by increasing usage of captive power;
- locating units closer to the market place;
- increasing production of blended cement;
- availing of various State incentives like sales tax exemption; power tariff; exemption/concession (Himachal Pradesh and Tamil Nadu);
- conversion from wet to dry process, wherever possible, depending on quality of limestone; and
- enhanced capacities to achieve economy of scale. (Expansion is the preferred route as setting up new plant costs thrice the cost of expansion).

Environment

Ministry of Environment and Forests has notified the emission standards for cement plants in 1987, which were subsequently revised in February, 2006. In India, the permissible stack dust emissions from various sources for existing cement plants is 1.50 mg/Nm and 100 mg/Nm for plants located in critically polluted areas. However, the limit for new plants in our country is 50 mg/Nm which is at par with some of the developed countries. All large plants do have in place necessary air pollution control equipment to control dust emissions. Thermal power stations use

bituminous or sub-bituminous coal and produce large volumes of fly ash. Fly ash is a fine powder recovered from gases created by coal-fired electric power generation. These micron sized earth elements consist primarily of silica, alumina and iron. When mixed with lime and water, the fly ash forms a cementitious compound with properties very similar to portland cement. The research outcomes so far have established that low-grade /dolomitic limestone up to 15-20% can be used in the manufacture of cement conforming to 43 grade OPC. Fly ash up to 45% can be used in high volume fly ash cement thereby enhancing the fly ash utilisation. The research outcome pursued under Swatchchta Action Plan established that poor quality fly ash can be used up to 40% by activating it through mechanical and chemical routes resulting in additional fly ash utilisation of about 15 million tonnes annually over and above the current quantum of fly ash utilisation limit of 35%. These efforts have certainly impacted the country in a big way by saving it from severe environmental consequences. Industrial wastes, such as, petcoke, tar waste and by-products, such as, red mud from aluminium industries, ferrous and non-ferrous slag from steel & other industries, phospho-chalk & phospho-gypsum from fertilizer industries, lime sludge from paper & sugar industries, carbide sludge from carbide industries, phosphorus furnace slag, etc. are now finding use in the manufacture of cement.

Ready-Mix Concrete

Ready-mix Concrete (RMC) is a relatively nascent market in India accounting for only about 0.5% of the demand. RMC is ready-to-use concrete blend of cement, sand & aggregate and water mixed in convenient proportion. It was first launched in Mumbai a few years ago and is gaining ground in other metros in India. RMC is a corollary to bulk handling and transportation of cement. It has several advantages. It is produced under controlled conditions and hence has consistency in quality and it can be directly powered in the required form which would not only save time but also would improve the quality of construction.

POLICY

The Export & Import Policy 2015-20, incorporated in the FTP for cement is free. The import of cement viz. portland cement, white

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cement, aluminous cement, slag cement, super sulphate cement and similar hydraulic cements, whether or not coloured or in the form of clinkers, under ITC (HS) Code 2523 is free.

Development Council for Cement Industry

Development Council for Cement Industry has been set-up under Section 6 of the Industrial (Development & Regulation) Act, 1951. The activity of the Council is funded through the cess collected from Cement Manufacturers in terms of the Cement Cess Rules, 1993. The Cement Council promotes development of the Cement Industry by funding development projects in areas of base level activities of National Council for Cement & Building Materials and R&D, improving productivity by reducing cost, optimum utilisation of raw materials, modernisation of cement plants, improvement of environment, standardisation and quality control progress, bulk supply and distribution of cement, training and upgradation of skill in Cement Industry.

WORLD REVIEW

The cement production in 2019 was estimated at 4,100 million tonnes which decreased slightly by 1% from the preceding year. China (2,200 million tonnes) was the largest producer of cement in the world, contributing about 54% to the world output, followed by India (320 million tonnes) 8%, USA (89 million tonnes) 2%, Turkey (95 million

tonnes) 2%, Vietnam (95 million tonnes) 2%, Republic of Korea (55 million tonnes) 1%, Russia (57 million tonnes) 1%, Japan (54 million tonnes) 1%, and Brazil (55 million tonnes) 1% (Table-3).

FOREIGN TRADE

Exports

Export of cement (total) decreased marginally by 13% to 5.82 million tonnes in 2018-19 from 6.66 million tonnes in 2017-18. In 2018-19, exports of portland grey cement were 2.01 million tonnes and those of cement clinker 3.57 million tonnes in the total cement exports. Exports of portland white cement and other cements were 29,181 tonnes and 2,09,898 tonnes, respectively. Exports of cement in 2018-19 were mainly to Sri Lanka (47%), Nepal (44%), Bangladesh (4%) and Maldives (2%) (Tables - 4 to 8).

Imports

Cement imports like exports also decreased substantially in 2018-19 by 14% to 2.26 million tonnes from 2.62 million tonnes in 2017-18. In 2018-19, imports of portland grey cement were 1.20 million tonnes. Similarly, imports of cement clinker were 0.78 million tonnes, other cements 0.23 million tonnes and portland white cement about 62 thousand tonnes. The main suppliers in 2018-19 were Pakistan (47%), UAE (15%), Bangladesh (11%), Japan & Thailand (5% each) and Iran (4%) (Tables- 9 to 13).

**Table – 3: World Production of Cement^e
(By Principal Countries)**

Country	2017	2018	2019
World : Total (rounded)	4050000	4050000	4100000
Brazil	53000	53000	55000
China	2320000	2200000	2200000
Egypt	53000	81200	76000
India	290000	300000	320000
Indonesia	65000	75200	74000
Iran	54000	58000	60000
Japan	55200	55300	54000
Korea, Rep. of	56500	57500	55000
Russia	54700	53700	57000
Saudi Arabia	47100	45000	-
Turkey	80600	72500	51000
USA*	86600	87000	89000
Vietnam	78800	90200	95000
Other countries	756000	870000	900000

*Source: USGS, Mineral Commodity Summaries, 2019 & 2020.
e: Estimated. * : Includes Puerto Rico*

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**Table – 4: Exports of Cement : Total
(By Countries)**

Country	2017-18(R)		2018-19(P)	
	Qty (t)	Value (` 000)	Qty (t)	Value (` 000)
All Countries	6664210	23048577	5824303	20293766
Nepal	3010371	12198841	2545775	9912345
Sri Lanka	3111050	9204450	2754708	8498152
Bangladesh	15418	42905	236200	662129
Maldives	103187	445584	126445	567814
Bhutan	53497	204956	48497	243530
Mozambique	125561	255299	58350	131686
Reunion	17276	67580	16100	70295
Madagascar	57234	176192	19306	59966
Seychelles	17516	62129	10062	35902
Nigeria	2837	29378	2497	28484
Other countries	150263	361263	6363	83463

*Figures rounded off***Table – 5: Exports of Cement (Portland Grey)
(By Countries)**

Country	2017-18(R)		2018-19(P)	
	Qty (t)	Value (` 000)	Qty (t)	Value (` 000)
All Countries	2276162	7380587	2014673	6837613
Sri Lanka	2042434	6475898	1759475	5735422
Maldives	93566	398262	116928	517259
Nepal	44146	182391	96321	430181
Madagascar	57176	175544	19180	58422
Reunion	8876	35290	9240	41953
Seychelles	17513	62109	10024	35588
Bhutan	10560	36885	2524	14959
Mauritius	-	-	254	1210
Yemen Republic	-	-	400	1190
Myanmar	-	-	168	786
Other countries	1891	14208	159	643

Figures rounded off

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**Table – 6: Exports of Cement (Portland White)
(By Countries)**

Country	2017-18 (R)		2018-19 (P)	
	Qty (t)	Value (‘000)	Qty (t)	Value (‘000)
All Countries	23639	200857	29181	215183
Nepal	16746	134656	12096	111232
Sri Lanka	1	66	10300	29730
Nigeria	2486	26928	2203	25339
Djibouti	432	4793	981	13441
Qatar	1911	13562	2007	12924
Ethiopia	84	867	535	8071
Congo P Rep	112	1782	280	4816
Malawi	147	1737	190	2494
Bhutan	361	2199	169	2082
Madagascar	58	649	126	1544
Other countries	1302	13618	295	3509

Figures rounded off

**Table – 7: Exports of Cement Clinker
(By Countries)**

Country	2017-18 (R)		2018-19 (P)	
	Qty (t)	Value (‘000)	Qty (t)	Value (‘000)
All Countries	4092125	14525393	3570550	12477756
Nepal	2906669	11705036	2403284	9214121
Sri Lanka	860244	2094697	828109	2253078
Bangladesh	14850	39058	235731	658389
Bhutan	41818	160797	45106	221042
Mozambique	125500	254716	58300	131020
USA	0	1	16	66
Germany	0	18	3	36
Gambia	-	-	1	5
Japan	-	-	-	1
Yemen Republic	88000	188742	-	-
Other countries	55044	82328	-	-

Figures rounded off

**Table – 8: Exports of Cement (Others)
(By Countries)**

Country	2017-18 (R)		2018-19 (P)	
	Qty (t)	Value (‘000)	Qty (t)	Value (‘000)
All Countries	272284	941739	209898	763214
Sri Lanka	208372	633788	156824	479922
Nepal	42810	176758	34074	156810
Maldives	9568	46120	9494	50266
Reunion	8400	32290	6860	28342
Saudi Arabia	-	-	195	9112
Malaysia	157	6015	198	8355
UAE	200	8265	275	6394
Bhutan	758	5076	698	5448
Comoros	19	235	300	3994
Bangladesh	566	3836	469	3740
Other countries	1434	29356	510	10831

Figures rounded off

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**Table – 9: Imports of Cement:Total
(By Countries)**

Country	2017-18 (R)		2018-19 (P)	
	Qty (t)	Value (` 000)	Qty (t)	Value (` 000)
All Countries	2618048	10412285	2261591	9834410
Pakistan	1278862	5046866	1058101	4252901
UAE	87323	508456	347572	1512815
Bangladesh	376502	1715203	239699	1234754
Japan	294376	843384	124201	487993
Thailand	55000	151397	110000	359525
Iran	210686	510439	98793	291535
Bhutan	3641	20176	92396	387290
Vietnam	256912	751133	71107	234795
Turkmenistan	-	-	51700	113745
China	8679	393335	6826	362396
Other countries	46067	471896	61196	596661

Figures rounded off

**Table – 10: Imports of Cement (Portland Grey)
(By Countries)**

Country	2017-18 (R)		2018-19 (P)	
	Qty (t)	Value (` 000)	Qty (t)	Value (` 000)
All Countries	1390672	5529312	1195645	4882591
Pakistan	1272542	4993235	1049732	4182420
Bangladesh	78145	363674	51458	277101
Bhutan	1427	6646	52556	238944
UAE	38045	159024	41498	179053
Germany	513	6669	297	4158
Qatar	-	-	20	402
Seychelles	-	-	56	362
Iran	-	-	28	151
USA	++	60	-	-
China	++	4	-	-

Figures rounded off

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**Table – 11: Imports of Cement (Portland White)
(By Countries)**

Country	2017-18(R)		2018-19 (P)	
	Qty (t)	Value (` 000)	Qty (t)	Value (` 000)
All Countries	72149	321795	62643	500255
UAE	13732	105676	52131	409614
Pakistan	5821	51955	7340	67258
Iran	2897	19871	2342	16118
Egypt	958	7173	588	5047
USA	-	-	186	1896
Marshall Island	-	-	54	303
Italy	-	-	1	12
Korea, Rep. of	-	-	1	7
Japan	48675	136115	-	-
Saudi Arabia	22	589	-	-
Other countries	44	416	-	-

*Figures rounded off***Table – 12: Imports of Cement Clinker
(By Countries)**

Country	2017-18 (R)		2018-19 (P)	
	Qty (t)	Value (` 000)	Qty (t)	Value (` 000)
All Countries	849321	2537022	776413	2638595
UAE	35546	243757	253833	922181
Japan	245700	706725	124200	487756
Thailand	55000	151397	110000	359525
Iran	207789	490568	96423	275262
Vietnam	256911	750289	71107	234795
Turkmenistan	-	-	51700	113745
Hong Kong	-	-	18000	69215
Kuwait	-	-	25785	54638
Bhutan	50	270	15310	52534
Malaysia	2392	16405	4004	28238
Other countries	45933	177611	6051	40706

Figures rounded off

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**Table – 13: Imports of Cement (Others)
(By Countries)**

Country	2017-18 (R)		2018-19 (P)	
	Qty (t)	Value (`000)	Qty (t)	Value (`000)
All Countries	305906	2024154	226891	1812968
Bangladesh	289647	1312456	188241	957653
China	8159	387967	6815	362085
Bhutan	2164	13260	24530	95811
Netherlands	1647	71375	1847	81557
Taiwan	204	57803	221	80900
Singapore	1	104	1760	80539
Croatia	1890	63930	1411	51012
France	953	50566	942	49502
UK	798	49429	493	33930
Korea, Rep. of	29	2150	91	5912
Other countries	414	15114	540	14067

Figures rounded off

FUTURE OUTLOOK

The primacy of Cement Industry would continue as cement remains paramount for the development of infrastructure all over the world and no other material would possibly substitute it in the near future. Infrastructure and industrial activity, real estate business and investment in core sectors mainly drive the demand for cement. Some emerging areas for cement demand are concrete roads, concrete canal lining and rural construction (housing). Over 65% demand for cement arises from Construction Sector.

The Government of India has been laying a massive emphasis on infrastructure development, with 100 smart cities, modernisation of 500 cities, affordable housing for all by 2022, cement concreting of national highways, provision of sanitation facilities, etc. These development projects that are in the pipeline would be the main drivers of growth of Indian Cement Industry.

The country is self-sufficient in terms of cement production. Most of the cement plants in India are operated by state-of-the-art technology and

with advanced production facilities. The liberalisation policies for Cement Industry enabled achievement of strong growth in the Cement Sector. The Cement Industry has presently ushered in modifications and upgradation in technology, particularly in the energy conservation front.

The Working Group on Cement Industry for the 12th Five-Year Plan period has projected a demand growth at the rate of 10.75% per annum during the plan period at an expected 9% GDP growth rate. The Working Group expects that the installed capacity requirement would be 1,035.3 million tonnes by 2027.

Reviewing the technology status of the Indian Cement Industry, the Working Group has observed that although the modern cement plants have incorporated the latest technology, yet there is scope for further improvement in the areas of in-pit crushing and conveying, pipe conveyors, co-processing of waste derived/hazardous combustible wastes as fuel, neurofuzzy expert system, cogeneration of power, multi chamber/dome silos, bulk transport of cement, pelletising and shrink wrapping for packing & despatch.