

CEMENT



Indian Minerals Yearbook 2021

(Part- III : MINERAL REVIEWS)

60th Edition

CEMENT

(ADVANCE RELEASE)

GOVERNMENT OF INDIA
MINISTRY OF MINES
INDIAN BUREAU OF MINES

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December, 2022

5 Cement

The Cement Industry in India is among the Eight 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 195 kg when compared with the developed world or world average which stands at about 500 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, Housing for all concrete Highways, Dedicated freight corridors, clean India Mission, ultra Mega power Projects, waterways, development of smart cities are expected to provide a major boost to the sector.

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 2020-21, the total installed capacity of cement plants has been placed at 537 million tonnes among which there are more than 350 mini cement plants with an estimated capacity of 11.10 million tonnes per annum. During 2020-21, the production of cement was 299.94 million tonnes which showed a slight decrease of 1% as compared to the year 2019-20 which reported a production of 334.37 million tonnes.

Three cement plants, having a total capacity of 1.338 mtpa 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 2020-21 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, 2020-21

(In million tonnes)

Company/ Plant Name	Capacity	Production
ACC Ltd		
Bargarh, Bargarh, Odisha	2.50	-
Chaibasa, Singhbhum, Jharkhand	1.20	0.95
Chanda, Chandrapur, Maharashtra	3.80	2.63
Damodar (G), Purulia, West Bengal	0.70	0.62
Gagal-I & II, Bilaspur, Himachal Pradesh	4.40	2.94
Jamul, Durg, Chhattisgarh	3.00	2.27
Kudithini (G), Ballari, Karnataka	3.00	1.10
Kymore, Katni, Madhya Pradesh	2.72	-
Lakheri, Bundi, Rajasthan	1.50	2.02
Madukkarai, Coimbatore, Tamil Nadu	1.00	-
Sindri (G), Dhanbad, Jharkhand	3.00	0.53
Thondebhavi (G), Chikballapur, Karnataka	1.66	-
Tikaria (G), Sultanpur, Uttar Pradesh	2.64	2.67
Vizag (G), Vizag, Andhra Pradesh	0.30	-
Wadi & Wadi New, Wadi, Karnataka	5.45	2.73
Aditi Industries, Assam		
ACL, Jaypee Group		
Durga Cement Works, Guntur, Andhra Pradesh	2.31	0.40
Vishaka Cement Works, Vizag, Andhra Pradesh	0.54	-
Ambuja Cement Ltd		
Ambujanagar I & II, Kodinar, Junagadh, Gujarat	5.70	4.06
Bathinda (G), Bhatinda, Punjab	1.20	-
Bhatapara, Raipur, Chhattisgarh	3.50	2.61
Dadri- (G), G B Nagar, Uttar Pradesh	1.50	1.90
Darlaghat, Solan, Solan, Himachal Pradesh	6.8	5.45
Farakka (G), Murshidabad, West Bengal	1.25	1.18
Magdalla (G), Surat, Gujarat	1.56	-
Maratha Cement, Chandrapur, Maharashtra	4.75	3.55
Nalagargh, Solan (G), Solan, Himachal Pradesh	1.50	0.98
Rabriyawas, Pali, Rajasthan		
Aditya Cement, Rajasthan		
Agarwal min chem Ltd,Rajasthan		
Alkon Cement Pvt.Ltd, Goa.		
Allwin Industries, Tamilnadu.		
Ambuja Cement Ltd, Rauri.		
Asntech India Ltd Karnataka.	3.60	2.27
Roorkee (G), Haridwar, Uttarakhand	1.00	0.84
Ropar (G), Ropar, Punjab	3.00	2.63
Sankrail (G), Howrah, West Bengal	2.40	-
Suli,Rauri Himachal Pradesh	1.60	0.94
Amrit Cement		
Jaintia Hills, Jaintia Hills, Meghalaya	3.00	-

(contd)

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(Table-1 contd)

Company/ Plant Name	Capacity	Production
Andhra Cement Ltd.		
Durga Cement Works, Guntur, Andhra Pradesh	2.31	0.37
Anjani Portland Cements		
Anjani Portland Cements, Nalgonda, Telangana	1.92	0.83
Asian CCPL		
Asian Cement, Solan, Himachal Pradesh	1.30	-
Asian FCPL		
Asian Cement, Patiala, Punjab	1.50	-
Bagalkot Cement & Ind Ltd		
Bagalkot Cement, Bijapur, Karnataka	0.60	-
Barak Valley Cement		
Karimganj, Karimganj, Assam		
Bhagya Lakshmi Ind. Andhra Pradesh		
Bharti Cement Corpn Pvt Ltd. Telangana	0.33	-
Bharathi Cement		
Kadapa, Kadapa, Andhra Pradesh	5.00	3.68
Bhavya Cement		
Bhavya Cement, Guntur, Andhra Pradesh	1.40	0.80
Bheema Cement (Earlier Coromandel Cements)		
Bheema Cement, Nalgonda, Telangana	0.90	-
Binani Cement		
Sikar (G), Sikar, Rajasthan	1.40	2.70
Birla Corp. Ltd		
Chandera, Chittorgarh, Rajasthan	4.00	3.57
Durgapur and Durga Hitech Cement (G), Bardhaman, West Bengal	2.30	-
Raebareli (G), Raebareli, Uttar Pradesh	1.30	-
Satna, Satna, Madhya Pradesh	2.20	-
Birla Corp. Ltd (erstwhile Reliance Cement)		
Butibori (G), Nagpur, Maharashtra	0.50	-
Kundanganj (G), Raebareli, Uttar Pradesh	2.00	-
Maihar, Satna, Madhya Pradesh	3.00	2.74
BMM Cement, Anantpur, Andhra Pradesh		
	0.95	0.86
BJCL, Jaypee Group		
Bhilai Jaypee (G), Durg, Chhattisgarh	2.20	-
Bhilai Jaypee, Satna, Madhya Pradesh	1.30	0.80
Burnpur Cement		
Asansol, Burdwan, West Bengal	0.30	-
Patratu, Ramgargh, Jharkhand	0.30	-
C.C.I. Ltd		
Bokajan, Karbi, Assam	0.20	0.10
Rajban, Sirmaur, Himachal Pradesh	0.25	-
Tandur, Rangareddy, Telangana	1.00	-

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(Table-1 contd)

Company/ Plant Name	Capacity	Production
(In million tonnes)		
Century Cement, Raipur, Chhattisgarh	2.40	1.74
Maihar Cement I & II, Satna, Madhya Pradesh	4.20	3.21
Manikgarh Cement I & II, Chandrapur, Maharashtra	6.00	3.81
Sonar Bangla (G), Murshidabad, West Bengal	1.50	-
Chettinad Cement		
Ariyalur, Ariyalur, Tamil Nadu	5.50	2.50
Dachepalli works, Guntur, Andhra Pradesh	3.50	0.61
Kallur, Gulbarga, Karnataka	2.50	1.25
Karikkali, Dindigul, Tamil Nadu	4.50	2.24
Puliyur, Karur, Tamil Nadu	1.70	1.01
Dalmia Cement (Bharat) Ltd		
Adhunik Cement Ltd, Jaintia Hills, Meghalaya	1.50	0.90
Ariyalur, Ariyalur, Tamil Nadu	3.40	2.10
Belagavi, Belagavi, Karnataka	4.00	1.60
Kadapa, Kadapa, Andhra Pradesh	4.00	1.84
Dalmiapuram, Trichy, Tamil Nadu	3.40	2.10
Calcom Cement India Ltd, Noagoan, Assam	1.72	-
Dalmia Cement (Bharat) Ltd (erstwhile Jaypee Group)		
Bokaro (G), Bokaro, Jharkhand	2.10	-
DCM Shriram Cement		
Shriram Cement Works, Kota, Rajasthan	0.40	-
Deccan Cement		
Nalgonda, Nalgonda, Telangana	1.80	1.77
Dhandapani Cement Ltd.		
Manachanallur, Tamil Nadu	0.02	0.01
ECO Cement		
Durgawati, Bhabhua, Bihar	1.00	-
Emami Ltd		
Panagarh, Burdwan, West Bengal	2.00	-
Risda, Baloda Bazaar, Chhattisgarh	3.00	2.45
Green Valley Industries		
Green Valley Industries, Jowai, Meghalaya	1.00	-
Grey gold Cement		
Grey gold Cement, Nalgonda, Telangana	0.05	0.04
Gujarat Siddhi Cement Ltd Junagad, Gujarat		
	2.01	1.15
Heidelberg Cement		
Ammasandra, Tumkur, Karnataka	0.51	-
Imlai (G), Damoh, Madhya Pradesh	3.00	2.80
Jhansi (G), Jhansi, Uttar Pradesh	2.70	-
Hi-Bond Cement		
Hi-Bond cement, Gondal, Gujarat	1.20	-
Hills Cement Company		

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(Table-1 contd)

(In million tonnes)

Company/ Plant Name	Capacity	Production
Hills Cement, Jaintia Hills, Meghalaya	1.00	-
Hemadri Cement Ltd Andhra Pradesh		
Hemadri Cement,Vedadri, Krishna, Andhra Pradesh	0.49	0.23
India Cements Ltd		
Chilamkur Works, Kadapa, Andhra Pradesh	1.00	0.30
Dalavoi, Ariyalur, Tamil Nadu	2.16	1.30
Malkapur, Rangareddy, Telangana	2.90	1.07
Parli (G), Beed, Maharashtra	1.10	-
Sankaridurg, Salem, Tamil Nadu	1.39	0.65
Sankarnagar, Tirunelveli, Tamil Nadu	2.05	1.00
Banswara Works, Banswara, Rajasthan	1.80	1.25
Vallur (G), Chennai, Tamil Nadu	1.10	-
Vishnupuram, Nalgonda, Telangana	3.50	1.19
Yerraguntla, Kadapa, Andhra Pradesh	1.00	0.40
Andaman Nicobar Islands	1.65	0.81
J&K Cement Ltd		
Khrew, Pulwama, J & K	0.40	-
Samba, Jammu, J & K	0.10	-
J.K. Cement Ltd		
Gotan White, Nagaur, Rajasthan	0.61	0.58
Jharli(G), Jhajjar, Haryana	1.50	-
Mangrol, Chittorgarh, Rajasthan	2.50	1.71
Muddapur, Bagalkot, Karnataka	3.00	2.02
Nimbahera, Chittorgarh, Rajasthan	3.30	2.12
JAL, Jaypee Group		
Chunar (G), Mirzapur, Uttar Pradesh	2.50	-
Churk, Mirzapur, Uttar Pradesh	1.50	-
Rewa, Rewa, Madhya Pradesh	2.50	-
Sadva Khurd (Blending), Allahabad, Uttar Pradesh	0.60	-
JCCL, Jaypee Group		
Shahabad Cement, Shahabad, Karnataka	1.20	-
JK Lakshmi Cement Ltd		
Durg, Durg, Chhattisgarh	2.40	2.10
Jhajjar (G), Jhajjar, Haryana	1.30	-
Kalol (G), Gandhinagar, Gujarat	1.00	-
Sirohi, Sirohi, Rajasthan	8.70	3.40
Surat, Surat, Gujarat	1.35	-
JPVL, Jaypee Group		
Jayprakash Power Ventures (G), Singrauli, Madhya Pradesh	2.00	-
JSPL		
Raigarh, Raigarh, Chhattisgarh	0.85	-
JSW (erstwhile Heidelberg Cement (I) Ltd)		

(contd)

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(Table-1 contd)

(In million tonnes)

Company/ Plant Name	Capacity	Production
Dolvi (G) , Raigad, Maharashtra	1.00	-
JSW Cement		
Nandyal, Kurnool, Andhra Pradesh	4.80	1.44
Salboni, P Medinipur, West Bengal	2.40	-
Vijayanagar, Bellary, Karnataka	3.20	-
JUD Cements		
Jaintia Hills, Jaintia Hills, Meghalaya	0.50	-
Kalburgi Cement		
Gulbarga, Gulbarga, Karnataka (formerly Virat Sagar Cement Pvt Ltd)	3.60	2.07
Kakatiya Cement & Sugar Ind.Ltd. Telangana		
Kakatiya Cement & Sugar Ind. Ltd Telangana	0.30	0.26
Kalyanpur Cement		
Kalyanpur Cement, Rohtas, Bihar	1.00	-
Kanodia Cement		
Kanodia Cement, Bulandsahar, Uttar Pradesh	0.33	-
Kanodia Infra, Bhabhua, Bihar	1.20	-
KCP Ltd		
Unit II, Jaggayyapeta, Krishna Andhra Pradesh	3.52	2.11
Guntur, Andhra Pradesh	0.82	0.45
Keerthi Industries (Formerly Suvarna Cement)		
Keerthi Industries, Nalgonda, Telangana	0.59	0.51
Kesoram Industries		
Kesoram Cement, Karimnagar, Telangana	1.50	1.09
Vasvadatta Cement, Kalaburagi, Karnataka	8.65	4.23
Khyber Industries (P) Ltd		
Khyber Cement, Srinagar, J & K	0.33	-
KJS Cement		
KJS Cement, Satna, Madhya Pradesh	2.20	1.75
Nuvoco Vistas Corp Ltd., Lafarge Cement		
Arasmeta, Janjgir, Chhattisgarh	1.80	-
Chittorgarh, Chittorgarh, Rajasthan	2.60	2.08
Jojobera (G), Singhbhum, Jharkhand	4.60	-
Mejia (G), Bankura, West Bengal	1.65	1.54
Sonadih, Raipur, Chhattisgarh	1.00	0.54
Mawmluh Cherra Cements Ltd		
Mawmluh Cherra Cements Ltd, Garo (east), Meghalaya	0.18	0.01
Maa Chandi Cement		
Bamunara, Burdwan, West Bengal	0.33	-
Malabar Cements		
Cherthala (G), Alappuzha, Kerala	0.20	-
Walayar, Palakkad, Kerala	0.66	0.40

(contd)

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(Table-1 contd)

(In million tonnes)		
Company/ Plant Name	Capacity	Production
Mancherial Cement		
Mancherial Cement, Adilabad, Telangana	0.33	-
Jalgaon (G), Jalgaon, Maharashtra	2.00	-
Mangalam Cement Ltd		
Aligarh(G), Aligarh, Uttar Pradesh	0.75	-
Mangalam Cement I & II, Kota, Rajasthan	3.25	2.83
Megha Technical & Engineers Pvt. Ltd		
MTEPL-Lumshong, Jaintia Hills, Meghalaya	0.70	-
Meghalaya Cements Ltd		
Jaintia Hills, Jaintia Hills, Meghalaya	0.86	0.57
Mehta Group		
Gujarat Sidhee Cement, Junagadh, Gujarat	1.20	1.10
Saurashtra Cement, Porbandar, Gujarat	3.06	1.30
Murli Industries		
Murli Cement, Chandrapur, Maharashtra	3.00	-
My Home Industries Ltd		
Mellacheruvu, Nalgonda, Telangana	3.20	2.04
Mulakalapalli (G), Vizag, Andhra Pradesh	2.00	-
Ottapidaram, Thoothukudi, Tamil Nadu	1.50	-
NCL Industries		
Kondapalli (G), Krishna, Andhra Pradesh	0.99	-
Simhapuri, Nalgonda, Telangana	2.00	1.40
Nirma Ltd.		
Nirma Cement, Pali, Rajasthan	2.28	1.62
OCL India Ltd		
Bengal Works, Midnapore, West Bengal	1.35	-
Kapilas (G), Cuttack, Odisha	1.35	-
Rajgangpur, Sundargarh, Odisha	4.00	-
Orient Cement		
Chittapur, Kalaburagi, Karnataka	3.00	1.99
Devapur, Adilabad, Telangana	5.00	2.40
Jalgaon (G), Jalgaon, Maharashtra	2.00	-
Panyam Cement		
Panyam Cement, Kurnool, Andhra Pradesh	1.00	-
Parasakti Cement		
Parasakti Cement, Guntur, Andhra Pradesh	1.26	0.80
Penna Cement Industries Ltd		
Boyareddypalli, Anantapur, Andhra Pradesh	2.00	-
Ganeshpahad, Nalgonda, Telangana	1.20	1.60
Talaricheruvu, Anantapur, Andhra Pradesh	2.20	0.94
Tandur, Rangareddy, Telangana	2.00	-
Prism Cement Ltd		
Prism Cement-I & II, Satna, Madhya Pradesh	6.60	-

(contd)

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(Table-1 contd)

Company/ Plant Name	Capacity	Production
(In million tonnes)		
Prism Johnson Ltd.		
Karnool, Andhra Pradesh	4.80	-
Purbanchal Cement		
Sonapur, Kamrup, Assam	0.36	-
Rain Cements Ltd		
Kurnool Cem. Plant, Kurnool, Andhra Pradesh	2.77	1.62
Ramapuram Cem. Plant, Nalgonda, Telangana	1.50	0.75
Ramco Cements Ltd		
Alathiyur Works I & II, Perambalur, Tamil Nadu	3.05	1.33
Ariyalur, Perambalur, Tamil Nadu	3.50	2.60
Changelpet (G), Kancheepuram, Tamil Nadu	0.50	-
Jayantipuram, Krishna, Andhra Pradesh	3.85	1.47
Kolaghat (G), P Medinipur, West Bengal	0.95	-
Methodu, Chitradurga, Karnataka	0.29	-
Ramasamyraja Nagar, Virudhnagar, Tamil Nadu	2.00	1.67
Salem (G), Salem, Tamil Nadu	1.60	-
Vizag (G), Vizag, Andhra Pradesh	0.95	-
RCCPL Pvt.Ltd,Maihar,Satana	3.60	2.76
RNB Cement		
East Khasi Hills, East Khasi, Meghalaya	0.40	-
Sagar Cement Ltd		
BMM Cement, Anantapur, Andhra Pradesh	1.00	0.90
Sagar Cements		
Bayyavaram, Vizag, Andhra Pradesh	0.20	-
Mattampally, Nalgonda, Telangana	3.30	1.40
Pedaveedu, Nalgonda, Telangana	0.35	-
Sanghi Industries Ltd		
Sanghi Cement, Kachchh, Gujarat	4.10	2.00
Saurarashtra Cement		
Porbandar, Gujarat	3.00	1.39
Shree Cements		
Baloda Bazar, Raipur, Chhattisgarh	3.00	1.99
Bangur Cement (G), Aurangabad, Bihar	3.60	2.00
Bangur Cement , Suratgarh, Rajasthan	3.60	2.14
Beawar I & II, Ajmer,Rajasthan Unit-III Andheri Deori	3.60	1.10
Bulandsahar (G), Sikandrabad, Uttar Pradesh	2.00	2.12
Jaipur (G), Jaipur, Rajasthan	1.50	0.55
Khushkhera (G), Alwar, Rajasthan	3.50	2.50
Karnataka Cement Project, Sedam	3.00	1.50
Karnataka Cement Project, Gulbarga, Karnataka	3.00	1.53
Shree Cements		
New Bihar Cement Plant, Aurangabad, Bihar	2.00	1.56

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(Table-1 contd)

(In million tonnes)		
Company/ Plant Name	Capacity	Production
Ras, Pali, Rajasthan	3.00	2.80
Roorkee (G), Haridwar, Uttrakhand	1.80	-
Ras New Cement Unit, Ras Rajasthan	4.00	2.79
Shree Jharkhand, Saraikela, Jharkhand	2.27	0.57
Suratgarh (G), Sriganganagar, Rajasthan	1.80	0.42
Shree Cements (erstwhile Jaypee Group)		
Panipat (G), Panipat, Haryana	1.50	1.14
Shree Digvijay Cement Co.		
Shree Digvijay-Sikka, Sikka, Gujarat	1.20	1.02
Shristi Cement		
Mangalpur, Burdwan, West Bengal	0.36	-
Sparta Cements & Infra Ltd		
Sparta Cements, Bhuj, Gujarat	1.00	-
Sri Chakra Cements		
Annamarajupet Grinding Unit (G), Vizianagaram, Andhra Pradesh	0.26	-
Narasimhapuri Cement Unit, Guntur, Andhra Pradesh	0.31	-
Sri JayaJothi Cements Pvt. Ltd		
Sri JayaJothi Cement Plant, Kurnool, Andhra Pradesh	3.20	1.31
Sri Lalita		
Matampally, Nalgonda, Telangana	1.00	-
Star Cement Ltd		
CMCL-Lumshong, Jaintia Hills, Meghalaya	1.00	0.80
CMCL-Sonapur (G), Guwahati, Assam	2.00	-
Swasata Cements Ltd		
Swasata Cements, Purulia, West Bengal	1.50	-
Tamil Nadu Cement		
Alangulam, Virudhunagar, Tamil Nadu	0.29	-
Ariyalur, Ariyalur, Tamil Nadu	0.50	-
Tata Chemicals Limited		
Tata Chemicals Cement Division, Mithapur, Gujarat	0.50	-
Tamil Nadu Newsprint & Papers Limited		
Tamil Nadu Newsprint & Papers Limited	0.33	0.25
The K.C.P. Ltd		
Macherla, Guntur, Andhra Pradesh	0.82	0.30
Muktyala, Krishna, Andhra Pradesh	3.52	1.70
Topcem		
Gauripur, Kamrup, Assam	0.66	-
Udaipur Cement		
Udaipur Cement, Udaipur, Rajasthan	1.60	1.15
UltraTech Cement Ltd		
Aditya, Chittorgarh, Rajasthan	8.00	4.17
Aligarh(G), Aligarh, Uttar Pradesh	1.30	-

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(Table-1 conclud)

(In million tonnes)

Company/ Plant Name	Capacity	Production
Anantapur, Andhra Pradesh Cement Works	9.00	3.70
Arakkonam (G), Vellore, Tamil Nadu	1.10	-
Awarpur, Chandrapur, Maharashtra	6.00	2.34
Bhatinda (G), Bhatinda, Punjab	1.75	-
Dadri (G), G B Nagar, Uttar Pradesh	1.30	-
Dankuni, Hooghly, West Bengal	1.60	-
Dhar, Madhya Pradesh (Nagda)	3.50	2.15
Ginigera (G), Koppal, Karnataka	1.30	-
Gujarat Cement Works, Amreli, Gujarat	6.40	4.80
Hirmi, Raipur, Chhattisgarh	1.90	2.36
Hotgi, Solapur, Maharashtra	4.00	2.40
Maihar Cement		
Jafrabad, Amreli, Gujarat	1.45	1.25
Jhajjar (G), Jhajjar, Haryana	1.60	-
Jharsuguda (G), Jharsuguda, Odisha	2.60	-
Kotputli, Jaipur, Rajasthan	4.00	2.37
Magdalla (G), Surat, Gujarat	0.75	-
Nagpur, Nagpur, Maharashtra	2.00	-
Panipat(G), Panipat, Haryana	1.30	-
Nathdwara Cement Ltd.,(earlier Binani Cement Sirohi)	4.85	2.69
Patliputra, Patna, Bihar	1.90	-
Rajashree, Kalaburagi, Karnataka	6.10	4.10
Ratnagiri (G), Ratnagiri, Maharashtra	0.48	-
Rawan, Raipur, Chhattisgarh	2.50	2.05
Reddipalayam, Ariyalur, Tamil Nadu	1.40	1.22
Sirohi, Sirohi, Rajasthan	4.85	-
Sewagram, Kachchh, Gujarat	2.40	2.30
Vikram, Neemuch, Madhya Pradesh	3.60	2.10
Wanakbori (G), Kheda, Gujarat	2.40	-
WBCW (G), Burdwan, West Bengal	1.40	-
Bara Allahabad, Uttar Pradesh	4.00	-
Birla White, Katni, Madhya Pradesh	0.40	0.37
Birla White, Jodhpur, Rajasthan	0.68	0.56
UltraTech Cement Ltd (erstwhile Jaypee Group)		
Ayodhya (G), Ambedkar Nagar, Uttar Pradesh	1.00	-
Baga, Solan, Himachal Pradesh	2.54	1.17
Bagheri (G & B), Solan, Himachal Pradesh	2.00	-
Balaji Cement, Krishna, Andhra Pradesh	5.00	2.90
Bela, Rewa, Madhya Pradesh	2.60	-
Dalla, Sonebhadra, Uttar Pradesh	0.50	0.44
Roorkee (G), Haridwar, Uttarakhand	1.10	-
Sidhi, Sidhi, Madhya Pradesh	3.50	1.59
Sikandrabad, Bulandsahar, Uttar Pradesh	1.00	-
Vadraj Cement		
Mora, Surat, Gujarat	6.00	-
Vijay Cements		
Vijay Cements, Trichy, Tamil Nadu	0.10	0.27
Vinay Cement		
Vinay Cement, Dima Hasao, Umrangshu, Assam	1.80	1.00
Wonder Cement		
Wonder Cement, Chittorgarh, Rajasthan	12.00	6.26
Zuari Cement Ltd		
Chennai (G), Chennai, Tamil Nadu	0.90	-
Sitapuram, Nalgonda, Telangana	1.40	0.94
Solapur, Solapur, Maharashtra	1.20	-
Yeraguntla, Kadapa, Andhra Pradesh	3.80	2.30

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

Table –2: Capacity, Production and Growth in Cement Industry, 2019-20 to 2020-21

Year	Annual Capacity (In million tonnes)	Production (In million tonnes)
2019-20	537	334.37
2020-21	537	299.94

Source: DIPP, Annual Reports

A large number of mega plants with capacity of one million tonnes 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 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 India Ltd 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, 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 120.40 million tonnes cement in 2020-21, an increase from 110.10 million tonnes of cement transported in 2019-20, 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. 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. Leading companies operating in the RMC market of India include UltraTech Cement Ltd, ACC Ltd, Nuvoco Vistas Corp. Ltd, The India Cement Ltd, Godrej Construction. The Ramco Cement Ltd, etc. Indian RMC market is expected to grow at 9% during 2021–2026.

POLICY

The Export & Import Policy 2015-20, incorporated in the FTP for cement is free. The import of cement viz. portland cement, white 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 2020 was estimated at 4,100 million tonnes which is constant as compared to 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 (340 million tonnes) 8%, Vietnam (96 million tonnes) and USA (90 million tonnes) 2%, each (Table-3).

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

(In million tonnes)		
Country	2020	2021
World : Total (rounded)	4,200,000	4,400,000
United States (includes Puerto Rico)	89,000	92,000
Brazil	61,000	65,000
China	2,400,000	2,500,000
Egypt	42,000	40,000
India*	295,000	330,000
Indonesia	65,000	66,000
Iran	68,000	62,000
Japan	51,000	52,000
Korea, Rep. of	48,000	48,000
Mexico	48,000	50,000
Russia	56,000	56,000
Saudi Arabia	53,000	55,000
Turkey	72,000	76,000
Vietnam	98,000	100,000
Other countries	760,000	810,000

Source: USGS, Mineral Commodity Summaries, 2022

* : India's production of cement in 2018-19; 2019-20 and 2020-21 was 337.32 million tonnes, 334.37 million tonnes and 299.94 million tonnes, respectively.

FOREIGN TRADE

Exports

Export of cement (total) decreased by 1% to 2.80 million tonnes in 2020-21 from 2.84 million tonnes in 2019-20. In 2020-21, exports of portland grey cement at 1.52 million tonnes and cement clinker at 1.09 million tonnes. Exports of portland white cement and other cements were 18,384 tonnes and 1,66,359 tonnes, respectively. Exports of cement total in 2020-21 were mainly to Sri Lanka (58%), Nepal (27%), Bangladesh (5%), Maldives (2%) and Bhutan (1%) (Tables - 4 to 8).

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

Country	2019-20 (R)		2020-21 (P)	
	Qty (t)	Value (₹'000)	Qty (t)	Value (₹'000)
All Countries	2840277	9539871	2806874	8761533
Sri Lanka	1841183	5722780	1635909	4602601
Nepal	551552	2139850	770363	2745464
Bangladesh	146974	388193	151656	376077
Maldives	100846	438767	65156	293991
Cote D'Ivoire	-	-	104530	271903
Mauritius	6481	30394	30631	138768
Bhutan	87819	446594	27752	134224
UAE	482	10167	4480	107238
Nigeria	2535	29417	4713	43668
Reunion	15484	67521	4060	18551
Other countries	86921	266188	7624	83048

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

Country	2019-20 (R)		2020-21 (P)	
	Qty (t)	Value (₹'000)	Qty (t)	Value (₹'000)
All Countries	1892277	6173135	1528080	4528743
Sri Lanka	1720408	5377981	1422910	4040146
Maldives	85612	363168	57071	252502
Mauritius	5680	26580	27447	120805
Nepal	42037	228015	7419	44910
Bhutan	12628	77716	6661	41852
Seychelles	7868	28571	3549	13405
Reunion	11004	49078	2660	12360
China	22	219	192	1730
Kenya	-	-	108	410
Uganda	-	-	5	249
Other countries	7018	21807	58	374

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

Country	2019-20 (R)		2020-21 (P)	
	Qty (t)	Value (₹'000)	Qty (t)	Value (₹'000)
All Countries	18164	176655	18384	179863
Nepal	12561	122997	14085	136320
Nigeria	2535	29417	1598	19358
Qatar	1673	10030	1974	12603
Malawi	187	2487	159	2107
Ethiopia	82	956	162	2010
Maldives	18	295	50	1989
Mozambique	42	499	92	1256
Bhutan	391	3767	88	1146
Saudi Arabia	10	104	10	789
Togo	28	396	56	759
Other countries	637	5707	110	1526

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

Country	2019-20 (R)		2020-21 (P)	
	Qty (t)	Value (₹'000)	Qty (t)	Value (₹'000)
All Countries	800076	2709413	1094051	3410629
Nepal	491979	1759074	747356	2549445
Bangladesh	146680	384241	151405	374645
Cote D'Ivoire	-	-	10450	217903
Sri Lanka	18445	50309	69920	179052
Bhutan	74662	364274	20838	89545
Qatar	-	-	1	24
Germany	3	13	1	13
Seychelles	18	367	++	2
Mozambique	68233	150212	-	-
Malawi	28	425	-	-
Other countries	28	498	-	-

Figures rounded off

CEMENT

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

Country	2019-20 (R)		2020-21 (P)	
	Qty (t)	Value (₹'000)	Qty (t)	Value (₹'000)
All Countries	129760	480668	166359	642298
Sri Lanka	102321	294221	143079	393403
UAE	426	9670	4480	107205
Maldives	15216	75304	8035	39500
Nigeria	-	-	3115	24310
Mauritius	779	3539	3130	17273
Nepal	4975	29764	1503	14789
Saudi Arabia	399	22043	245	13986
USA	++	10	245	12473
Malaysia	199	5027	448	9873
Reunion	4480	18443	1400	6191
Other countries	965	22647	679	13295

Figures rounded off

Imports

Imports cement increased marginally in 2020-21 by 6% to 2.35 million tonnes from 2.21 million tonnes in 2019-20. Imports of portland grey cement were 0.39 million tonnes. Similarly, imports of cement

clinker were 1.49 million tonnes, other cements 0.29 million tonnes and portland white cement about 0.17 million tonnes. The main suppliers in 2020-21 were UAE (43%), Iran (17%), Bhutan (10%), Oman (18%), and Bangladesh (8%) and (Tables- 9 to 13).

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

Country	2019-20 (R)		2020-21 (P)	
	Qty (t)	Value (₹'000)	Qty (t)	Value (₹'000)
All Countries	2214478	9003784	2350442	9302473
UAE	691409	2996046	1023987	4282567
Bangladesh	217012	1133104	209448	1176076
Bhutan	301542	1295244	255234	1171694
Oman	261459	741898	444963	1082915
Iran	526771	1384942	404141	1013290
China	6654	377689	4639	256239
Netherlands	2458	122915	2833	149272
Croatia	1407	51961	945	34979
Taiwan	225	78644	63	25800
France	383	17098	571	24880
Other countries	205158	804243	3618	84761

Figures rounded off

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

Country	2019-20 (R)		2020-21 (P)	
	Qty (t)	Value (₹'000)	Qty (t)	Value (₹'000)
All Countries	372431	1757397	393959	1851543
UAE	121599	556016	184517	824420
Bhutan	165721	762276	116445	544386
Bangladesh	81672	425992	50622	298557
Oman	-	-	40399	176919
Iran	-	-	1676	7161
Singapore	-	-	++	75
Spain	-	-	++	17
Japan	-	-	++	8
Netherlands	++	++	++	++
Pakistan	3439	13113	-	-

Figures rounded off

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

Country	2019-20 (R)		2020-21 (P)	
	Qty (t)	Value (₹'000)	Qty (t)	Value (₹'000)
All Countries	148098	1115330	174241	1321486
UAE	142275	1077299	168352	1283571
Iran	4764	28479	4539	29280
Oman	216	1350	794	3921
Egypt	840	6836	420	3658
USA	-	-	54	467
Bhutan	-	-	81	346
Spain	3	1332	1	239
Malaysia	-	-	++	4
Italy	-	-	++	++
Brazil	++	34	-	-

Figures rounded off

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

Country	2019-20 (R)		2020-21 (P)	
	Qty (t)	Value (₹'000)	Qty (t)	Value (₹'000)
All Countries	1462999	4208354	1491411	4061781
UAE	416654	1292653	628895	1896954
Iran	522007	1356463	397926	976849
Oman	261243	740538	403770	902075
Bhutan	66650	210560	58873	244012
China	11	305	498	18267
Singapore	86	3508	360	15567
Ukraine	-	-	550	4002
Malaysia	312	2187	520	3813
USA	++	166	19	237
Zimbabwe	-	-	++	3
Other countries	196036	601974	++	2

Figures founded off

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

Country	2019-20 (R)		2020-21 (P)	
	Qty (t)	Value (₹'000)	Qty (t)	Value (₹'000)
All Countries	230950	1922703	291131	2067663
Bangladesh	135340	707112	158826	877519
Bhutan	69171	322408	79835	382950
UAE	10881	70078	42223	277622
China	6643	377384	4141	237972
Netherlands	2458	122915	2833	149272
Croatia	1407	51961	945	34979
Taiwan	225	78644	63	25800
France	383	17098	571	24880
Korea, Rep. of	380	26382	322	20013
UK	102	9351	134	12217
Other countries	3960	139370	1238	24439

Figures founded 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 housing and real estate, 25% from public infrastructure.

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.

As per IBEF India, cement production is expected to rise between 5 and 7% backed by demands from roads, urban infrastructure and commercial real estate segments. Cement consumption is expected to grow at 6.83%. The demand for cement is expected to touch 550–600 million tonnes per annum by 2025.

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.