JSW CEMENT LTD., JAJPUR
Capacity 1.2 MTPA

Better Everyday

Presented By :
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About the Group

The JSW Group is known across the country as “strategic first mover”. It is a $21 billion leading conglomerate, with a presence across all the vital sectors of the Indian economy. The company occupies a pivotal part of the O. P. Jindal Group that has emerged as an undisputable world leader in a short span of three decades.

Some of the key elements that define the JSW Group are:

- It has a strong foothold across India, South America, South Africa & Europe
- JSW Group is spearheading initiatives in core sectors like Steel, Energy, Cement, Infrastructure, Ventures & Sports.
- It has a diverse workforce of over 40,000 individuals.
- The Group has proven to play a significant role in the growth of the country.

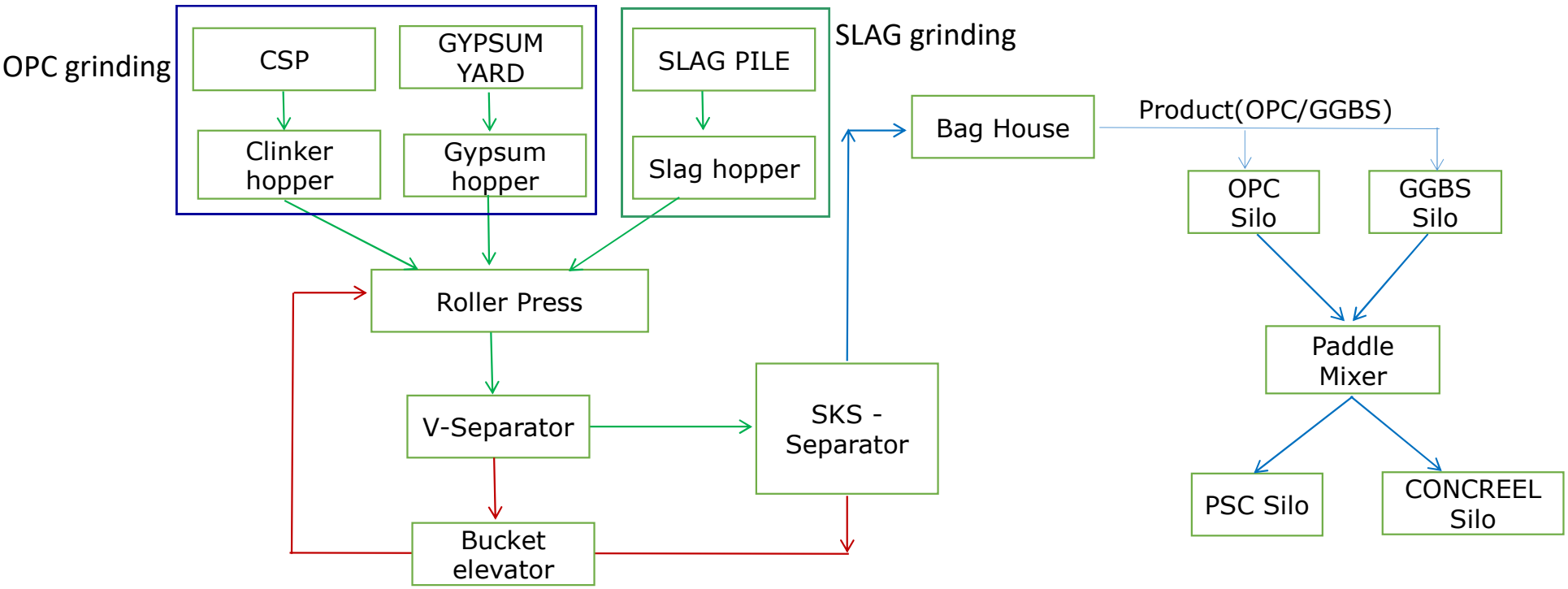
Ranked among India's top business houses, JSW's innovative and sustainable ideas cater to the core sectors of Steel, Energy, Cement and Infrastructure. The Group continues to strive for excellence with its strength, differentiated product mix, state-of-the-art technology, excellence in execution and focus on sustainability.

From its humble beginnings in steel, the JSW Group has expanded its presence across India, South America, South Africa & Europe. Through its CSR projects, it also continues to participate in and initiate activities that assist in improving those areas of our country that lack resources. JSW is known to be the “strategic first mover” to venture away from status quo, have the conviction to make fundamental changes and drive operational excellence on its quest to become better everyday..

About JSW Cement

- Since its inception in 2009, JSW Cement entered the market with a vision to ensure a sustainable future for the country by producing eco-friendly cement.
- JSW Cement produces three varieties of cement: Portland Slag Cement (PSC), Ordinary Portland Cement (OPC), and Ground Granulated Blast Furnace Slag (GGBF). At Vijayanagar (Karnataka), Nandyal (Andhra Pradesh) and Dolvi (Maharashtra), JSW Cement utilizes slag from the JSW Steel plants to produce **green cement**.
- JSW Cement's flagship plant in Nandyal uses world-class technology (including the advanced Combi Finish Mode Roller Press Circuit and automated loading system) to manufacture cement. It also won prestigious awards for its energy-saving processes. With key markets in Telangana, Andhra Pradesh, Karnataka, Tamil Nadu, Kerala, Maharashtra, Orissa, and Goa, JSW Cement has been delivering high-quality products to several prestigious and large infrastructural projects in the southern and western regions of the country.

GRINDING CIRCUIT(BLOCK DIAGHRM)



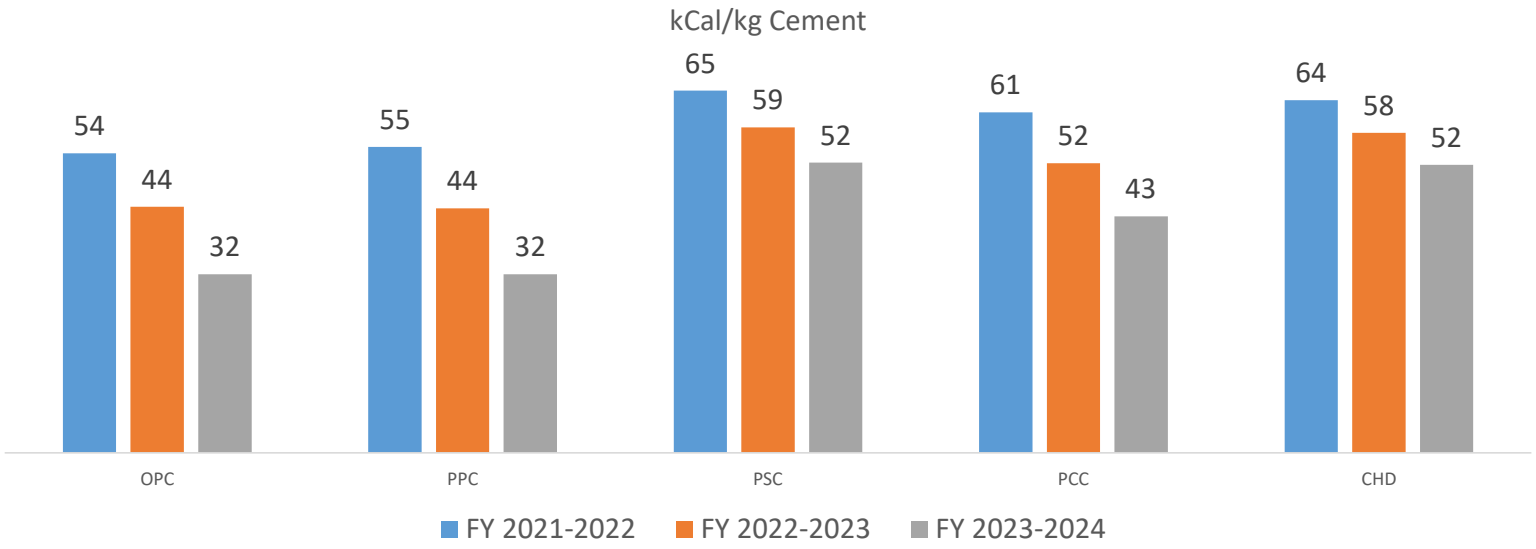
RP DESIGN

- Roller Press

•Specification	: RP 16 170/180
•Roller force	: 16 MN
•Roller dia	: 1700 mm
•Roller width	: 1800 mm
•Feed chute	: Gravity/ Feed regulating gate
•Static gap	: 10 mm
•Rated power	: Twin-1450 KW
•Roller speed	: 1.7 m/s

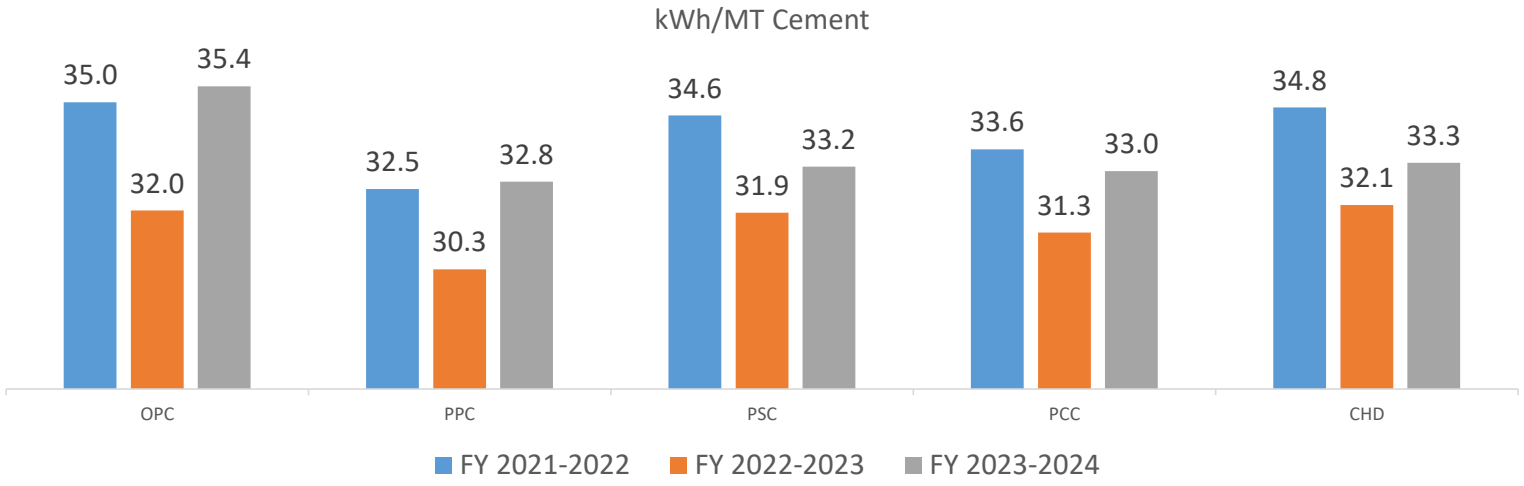
2. Sp. Energy Consumption in last 3 years (Kcal/MT cement)

Product	UNIT	FY 2021-2022	FY 2022-2023	FY 2023-2024	% Reduction
OPC	Kcal/kg	54.11	44.43	32.26	40
PPC	Kcal/kg	55.24	44.14	32.27	42
PSC	Kcal/kg	65.41	58.79	52.43	20
PCC	Kcal/kg	61.48	52.28	42.71	31
CHD	Kcal/kg	63.68	57.79	51.99	18



2. Sp. Energy Consumption in last 3 years(KWH/MT Cement)

Produt	UNIT	FY 2021-2022	FY 2022-2023	FY 2023-2024	% Reduction
OPC	kWh/MT	34.95	31.95	35.39	-1.3
PPC	kWh/MT	32.54	30.32	32.75	-0.6
PSC	kWh/MT	34.58	31.89	33.16	4.1
PCC	kWh/MT	33.64	31.34	33.04	1.8
CHD	kWh/MT	34.8	32.1	33.27	4.4



4. Energy Saving projects implemented in last three years

Year	No of Energy saving projects	Investment (INR Million)	Electrical savings (Million kWh)	Thermal savings (Million Kcal)	Total Savings (INR Million)	Impact on SEC/ SHC (Electrical kWh /MT cement or Kcal/Kg cement)
FY 2021-22	0	0	0	0	0	0
FY 2022-23	8	0	1.39	4.73	31.16	2.52(KWH/MT) 10.42(Kcal/Kg)
FY 2023-24	3	0	0	4.32	11.55	7.47(Kcal/Kg)

4. Energy Saving projects implemented in last three years

FY 2022-23	Name of Energy saving projects	Investment (INR Million)	Electrical savings (Million kWh)	Thermal savings (Million Kcal)	Total Savings (INR Million)	Impact on SEC/ SHC (Electrical kWh /MT cement or Kcal/Kg cement)
1	HT capacitor installation	0	0.19	0	1.4	0.35(KWH/MT)
2	Compressed air optimization	0	0.35	0	5.4	0.65(KWH/MT)
3	RP GGBS SPC reduction by Process Optimization	0	0.56	0	4.06	1.01(KWH/MT)

4. Energy Saving projects implemented in last three years

FY 2022-23	Name of Energy saving projects	Investment (INR Million)	Electrical savings (Million kWh)	Thermal savings (Million Kcal)	Total Savings (INR Million)	Impact on SEC/ SHC (Electrical kWh /MT cement or Kcal/Kg cement)
3	RP OPC SPC reduction by Process Optimization	0	0.27	0	1.9	0.05(KWH/MT)
4	RP PPC SPC reduction by Process Optimization	0	0.25	0	1.86	0.46(KWH/MT)
5	GGBS thermal energy reduction by Process Optimization	0	0.0	2.15	7.52	9.69(Kcal/Kg)

4. Energy Saving projects implemented in last three years

FY 2022-23	Name of Energy saving projects	Investment (INR Million)	Electrical savings (Million kWh)	Thermal savings (Million Kcal)	Total Savings (INR Million)	Impact on SEC/ SHC (Electrical kWh /MT cement or Kcal/Kg cement)
7	RP OPC thermal energy reduction by Process Optimization	0	0.0	1.08	3.78	9.68(Kcal/Kg)
8	RP PPC thermal energy reduction by Process Optimization	0	0.00	1.50	5.24	11.1(Kcal/Kg)

4. Energy Saving projects implemented in last three years

FY 2023-24	Name of Energy saving projects	Investment (INR Million)	Electrical savings (Million kWh)	Thermal savings (Million Kcal)	Total Savings (INR Million)	Impact on SEC/ SHC (Electrical kWh /MT cement or Kcal/Kg cement)
1	GGBS thermal energy reduction by Process Optimization	0	0.0	1.36	3.63	4.45(Kcal/Kg)
2	OPC thermal energy reduction by Process Optimization	0	0.0	1.36	3.63	12.17(Kcal/Kg)
3	PPC thermal energy reduction by Process Optimization	0	0.0	1.6	4.29	11.87(Kcal/Kg)

5. Innovative Projects implemented

- Slag conveyor installation from steel plant to JSW cement (Project underway, expected to be completed by Dec-2024).
- At present Slag is being transported from TATA steel via trucks , so the proposal is to install a slag belt so that can directly come to slag pile from nearby steel plant. Cost of road transport will be reduced to ZERO , also carbon emission will come down.
- Cost and operational improvement, savings expected per year : 640 Lakh.

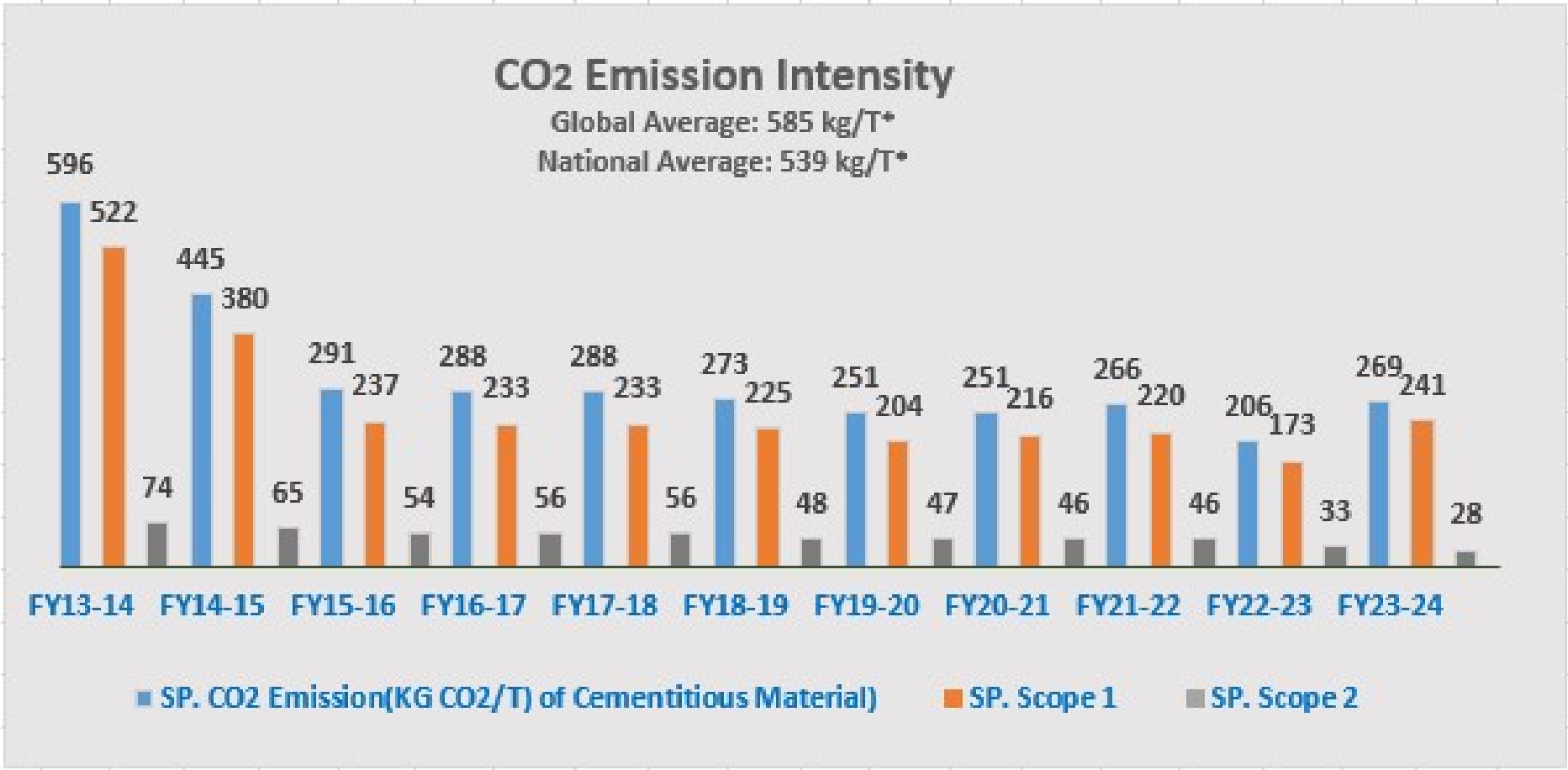
6. Utilisation of Renewable Energy Sources

- RE is not available at Jajpur (Both SOLAR and WIND)

7. GHG Inventorisation

Parameters		FY 2020-2021	FY 2021-2022)	FY 2022-2023	FY 2023-2024
Scope 1 Emission (direct emission from fuels used)	Kg CO2/Equivalent Product	37.4	36.4	35	29
Scope 2 Emission (indirect emission from grid electricity)	Kg CO2/Equivalent Product	28.6	30	23	21
Scope 3 Emission (employee commuting, business travel, purchased goods)	Kg CO2/Equivalent Product	7	6	5	5
Total Emission	Kg CO2/Equivalent Product	73.00	72.40	63.00	55.00

7. GHG Inventorisation



7. GHG Inventorisation

The categories considered for Scope 3

- Category 1 - Purchased goods and services
- Category 2 - Purchased capital goods and Category
- Category 3 - Fuel- and energy-related activities
- Category 4 - Upstream transportation and distribution
- Category 5 - Waste generated in operations
- Category 7 - Employee commuting

Company's short term and long term GHG emission reduction plan

- For JSW Cement Limited, Jajpur shot term GHG emission reduction plan is to use alternative fuel and increase the percentage of GGBS for manufacturing green cement without compromising the quality.
- The long term GHG Emission to shift towards renewable energy to achieve net zero.

7. GHG Inventorisation

Clinker factor	FY 2021-2022	FY 2022-2023	FY 2023-2024
OPC	0.93	0.90	0.88
PPC	0.62	0.58	0.56
PSC	0.36	0.29	0.27
PCC	0.39	0.36	0.36
CHD	0.45	0.33	0.28

8. EMS System and Other Requirements

IRCLASS
SYSTEMS AND SOLUTIONS PRIVATE LIMITED

CERTIFICATE OF APPROVAL

Issued by Indian Register Quality Systems
(A Division of IRCLASS Systems and Solutions Private Limited)

This is to certify that the Energy Management Systems of

Organisation:	JSW Cement Limited Jajpur
Address:	Kalinganagar Industrial Complex, Vill- Jakhapura, Danagadi, Jajpur (Odisha) - 755026

has been assessed and found conforming to the following requirement

Standard:	ISO 50001:2018
Scope:	Manufacture of Portland Slag Cement, GGBS & Composite Cement by Grinding and Blending
Certificate No.:	IRQS/221000077
Original Certification Date :	14/01/2022
Current Date of Granting :	14/01/2022
Expiry Date :	13/01/2025

Indian Register Quality Systems NABCB EN 001

Shashi Nath Mishra
Head IRQS

This approval is subject to continued satisfactory maintenance of the Energy Management Systems of the organization to the above standard which will be monitored by IRQS. The use of the Accreditation Mark indicates accreditation with respect to activities covered by the certificate with accreditation no. EN 001. Condition Overleaf

Head Office: 52A, Adi Shankaracharya Marg, Opp.Powai Lake, Powai, Mumbai - 400 072, India.

8. EMS System and Other Requirements

9. Net Zero Commitment

Cement is one of the most widely used substances on earth after water. However, the cement industry is also one of the highest contributors of carbon dioxide that is approximately **8%** of the total CO2 emission. As a member of the Global Cement and Concrete Association (GCCA), we are committed to GCCA's visionary roadmap for achieving Net Zero concrete by 2050.

We demonstrate our commitment towards net zero through following :

•The first company in the global sector to have committed to all the three campaigns of The Climate Group i.e. **RE100, EP100 and EV100** in one go.

•Committed to **Science Based Targets initiative (SBTi)** in July 2022.

•Signatory to the **Global Framework Principles** for Decarbonizing Heavy Industry, which provides clear steps to reduce emissions in heavy industries across the world to limit global warming to 1.5°C.

•Signatory to the **UN Energy Compact,** a voluntary commitment of action with specific targets and timelines to achieve SDG7 in line with the Paris Agreement on Climate Change.

•Member of **UNIDO's Industrial Deep Decarburization Initiative's (IDDI)** advisory group since 2022.

•Member of **Development Council for Cement Industry (DCCI),** set up by Government of India in 2021.

•Signed the **Confederation of Indian Industry's** (CII) Climate Charter and became a member of CII Climate Council in 2022.

Thank You

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