“24th National Award for Excellence in Energy Management 2023”

HEIDELBERGCEMENT

Zuari Cement Limited, Chennai Grinding Unit

Guided by: Mr S. Venugopal Reddy (Plant Head)

Presenter : Mr S.P. Ramesh babu (Head Production)

Lead Presenter

Heartly Welcome to All

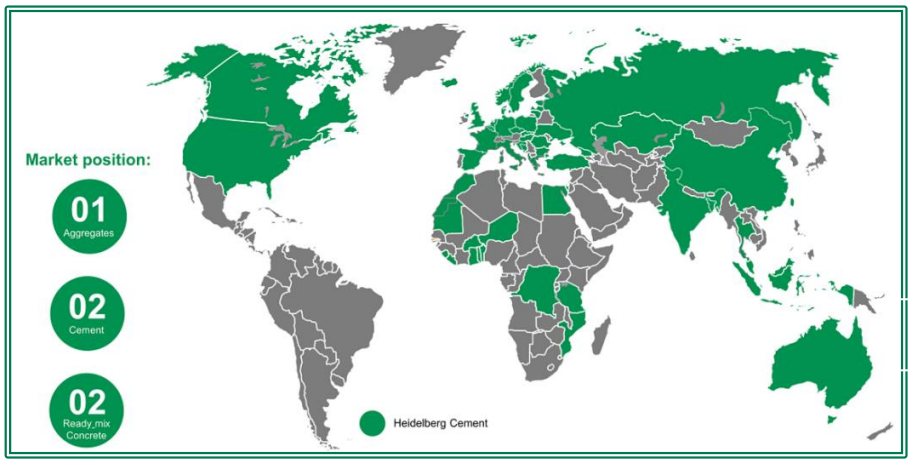
24th National Award for Excellence in Energy Management 2023

Mr. S.P.Rameshbabu

Head Production

Zuari Cement
HEIDELBERGCEMENT Group

ZCL PLANT PROFILE



2011
Plant Commissioned

2011
Italcementi 100% Share holder in Zuari Cement Limited

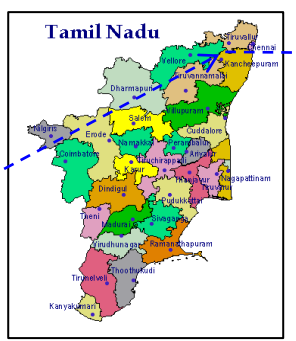
2016
Management took over by Heidelberg Group

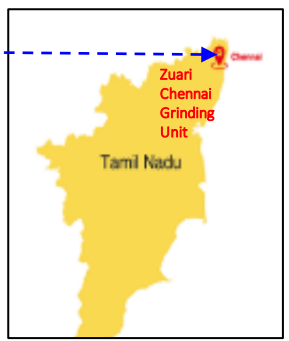
25 May 2023

12.4

YEARS WITHOUT LOST TIME INJURIES SINCE COMMISSIONING

Plant Capacity: Cement : 1 MTPA





Nearest Railway station : Athipattu ,2.3 km from the plant.
Nearest Airport : Chennai, 64.2 km from the plant.

CO_2 Label on Cement bags:

- Global responsibility to keep temperature rise < 2°C
- Reduction on our impacts on air, land and Water

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ZCL CGU PLANT PROFILE

2011
Plant Commissioned

2011
Italcementi 100% Share holder in Zuari Cement Limited

2016
Management took over by Heidelberg Group

- Zuari Cement – Chennai Grinding Unit is the group company of Heidelberg Material which is spread in 62 countries across the globe have been committed to green environment and reduction in CO2 footprint.
- Zuari Cement – Chennai Grinding Unit established starting the commercial Production from 2011 by adopting latest state of art technology.
- Our consistent efforts to increase our green cover followed by weekly temperature monitoring have made our Chennai Grinding Unit achieve a difference of 2.1°C and became the group 1st plant to surpass the target.
- Zuari Cement has signed a Power Purchase Agreement for purchase of wind energy. Wind Energy Generator will supply 17 GWh/a to Chennai plant till 2026. This electricity supply will meet 90% of the annual electricity demand of the Chennai Grinding Plant. This is second manufacturing facility in Heidelberg Cement India to have such high share of Green Electricity. The expected CO2 savings on consumption of electricity would be in the range of 10,000 tonnes to 12,000 tonnes per annum. The Power Purchase Agreement is another step for HC on the way to achieving Carbon Neutrality.

Zuari CGU Plant Key Equipment and Specification of Major sections

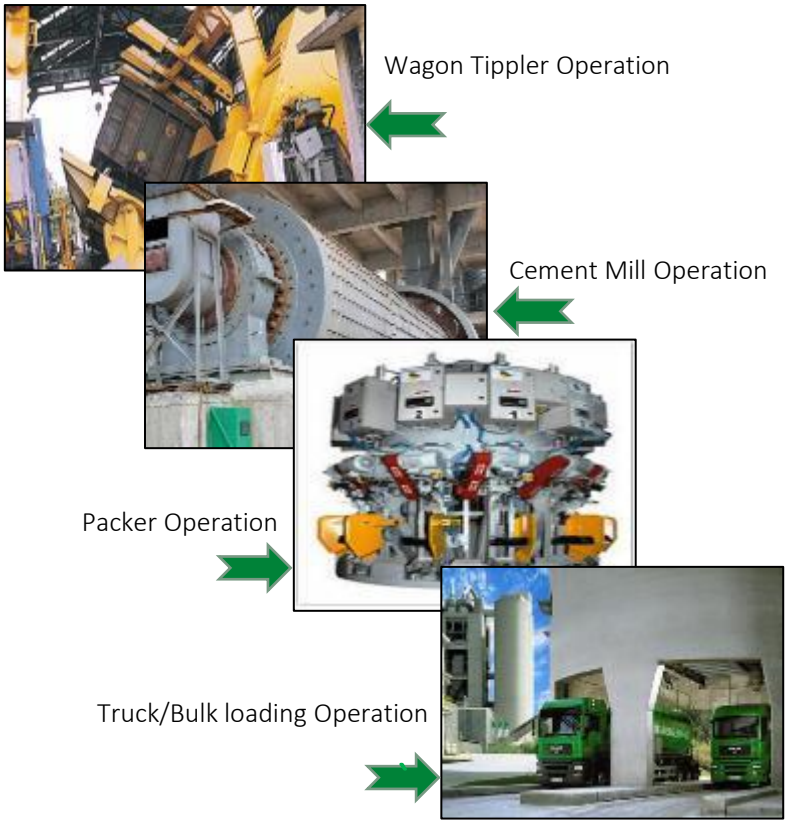
Cement grinding, Wagon Tippler & storage

Equipment	Supplier	Type	Design Capacity (tph)
Wagon Tippler	Elecon India Private Limited	Clinker Unloading	1200 tph
Ball Mill	Walchandnagar Industries	Cement mill 4.4 m Dia * 15 m Length	120 tph
Clinker Silo		Storage Silo	20000 Tons * 1 no
Cement Silos		Storage silos	7500 Tons * 2 no's

Packing and Loading

Equipment	Supplier	Type	Capacity (tph)
Packers 1	FLS - EEL	10 spouts,Roto packer	120 tph
Packers 2	FLS - EEL	10 spouts,Roto packer	120 tph
Bulk loading station	Sartorius weighing India Pvt. ltd	2 loading stations	140 tph (each)

CGU – PROCESS FLOW DIAGRAM



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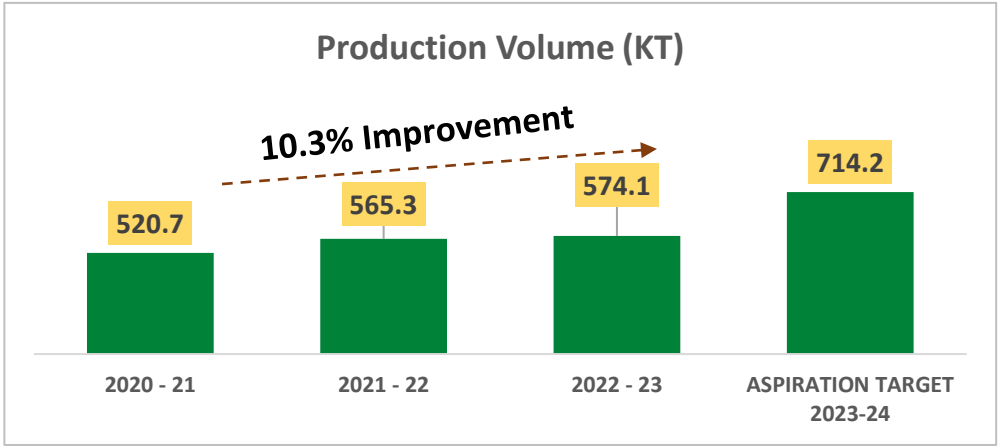
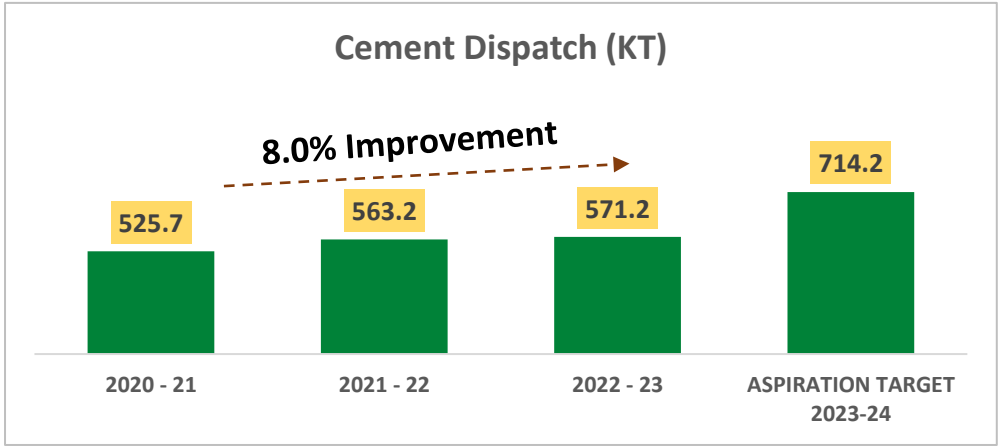
CEMENT PRODUCTION & DISPATCH PERFORMANCE DATA SHEET





FY 22-23

Production

Highest Cement Production achieved, since commissioning

FY 22-23

Dispatch

Highest Cement Dispatch achieved, since commissioning

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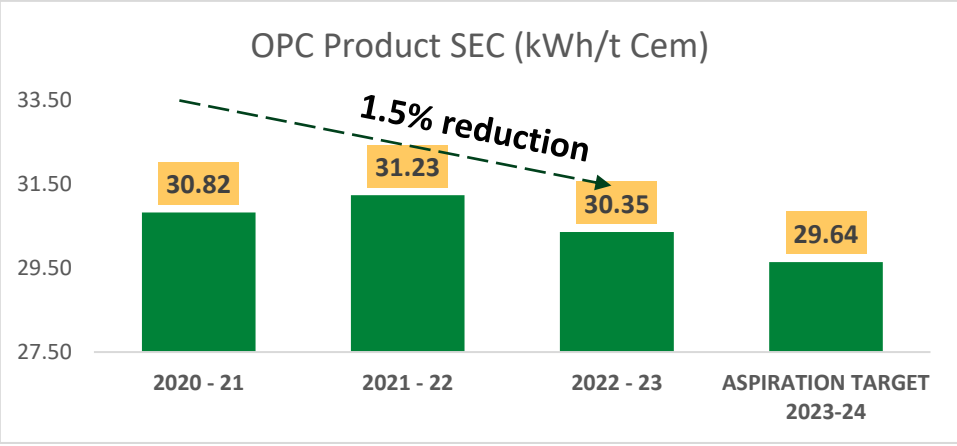
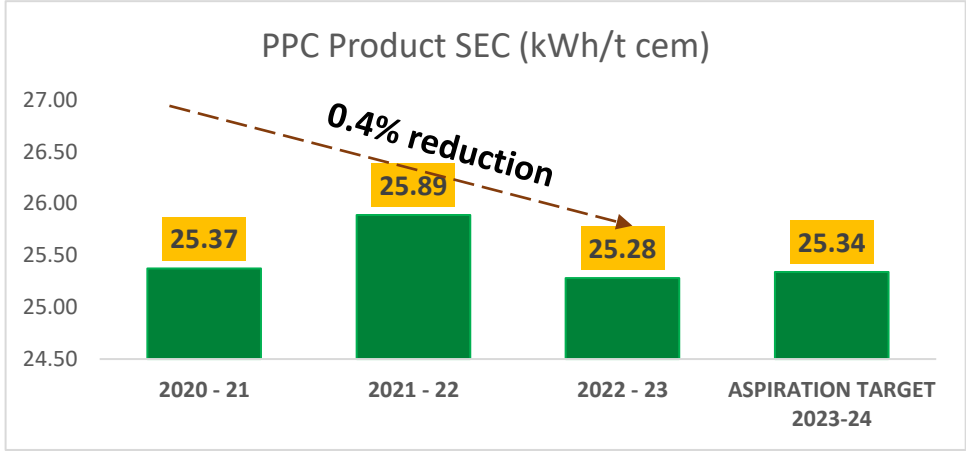
SPECIFIC ENERGY PERFORMANCE DATA SHEET





FY 22-23

OPC Product

Lowest Specific Electrical Energy Consumption Since commissioning

FY 22-23

PPC Product

Lowest Specific Electrical Energy Consumption since commissioning

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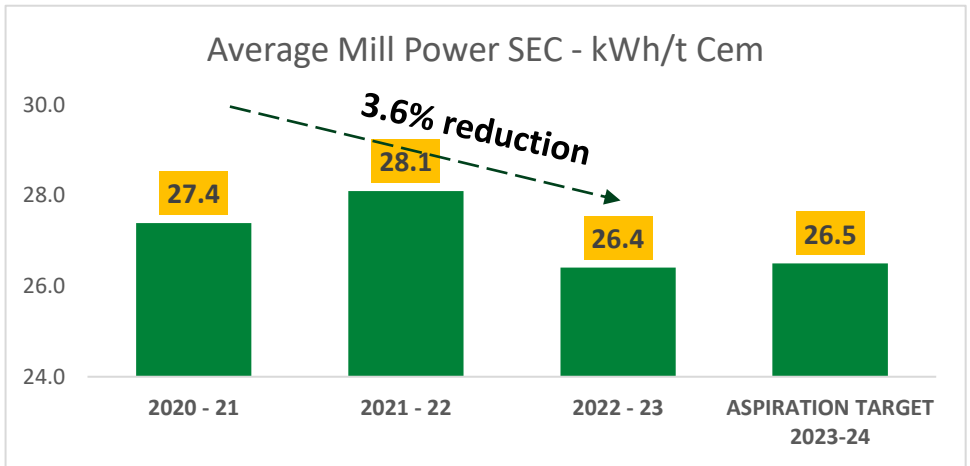
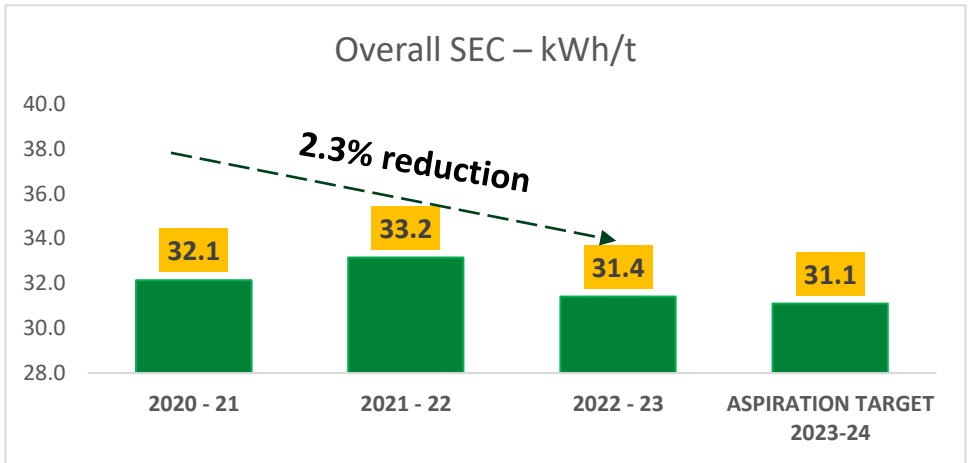
SPECIFIC ENERGY PERFORMANCE DATA SHEET





FY 22-23

Average Mill Main Drive Power

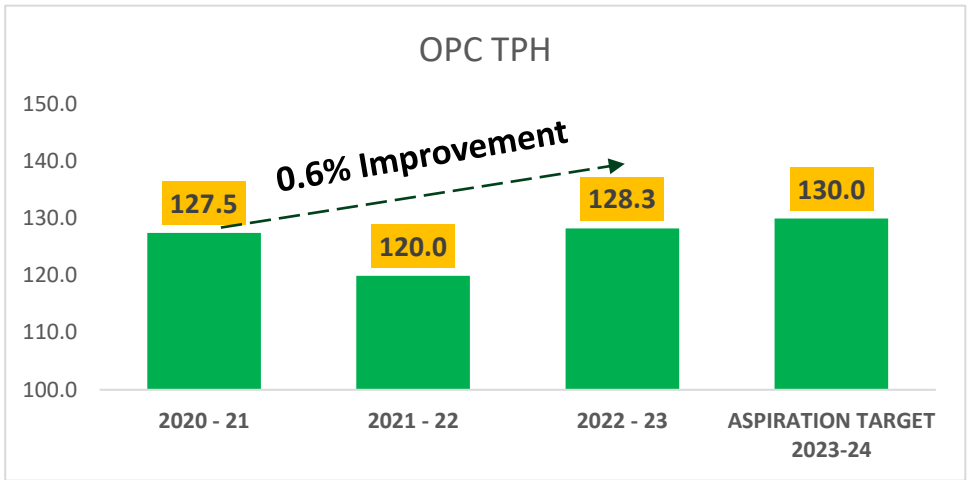
Lowest Specific Electrical Energy Consumption Since commissioning

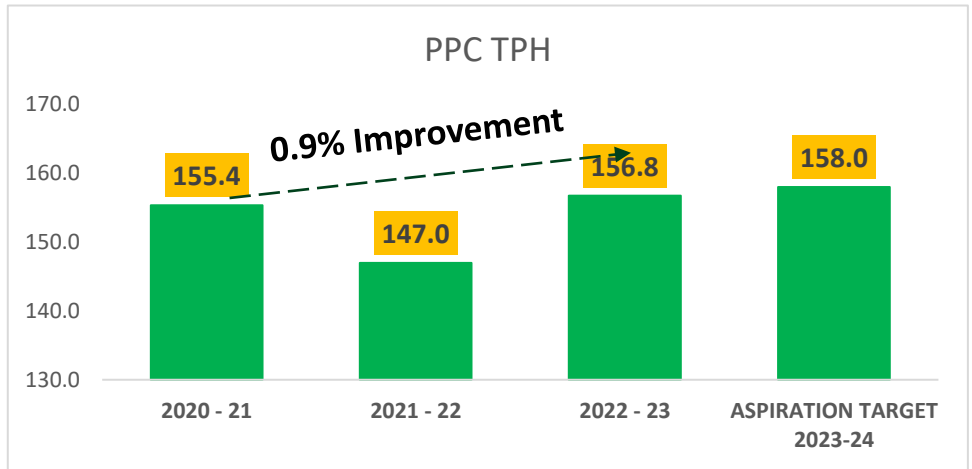
FY 22-23

Overall SEC (incl. Packing & Aux)

Lowest Specific Electrical Energy Consumption since commissioning

SPECIFIC ENERGY PERFORMANCE DATA SHEET





FY 22-23

OPC Productivity (TPH)

OPC - Highest Production Volume

Since commissioning

FY 22-23

PPC Productivity (TPH)

PPC – Highest Production Volume

Since commissioning

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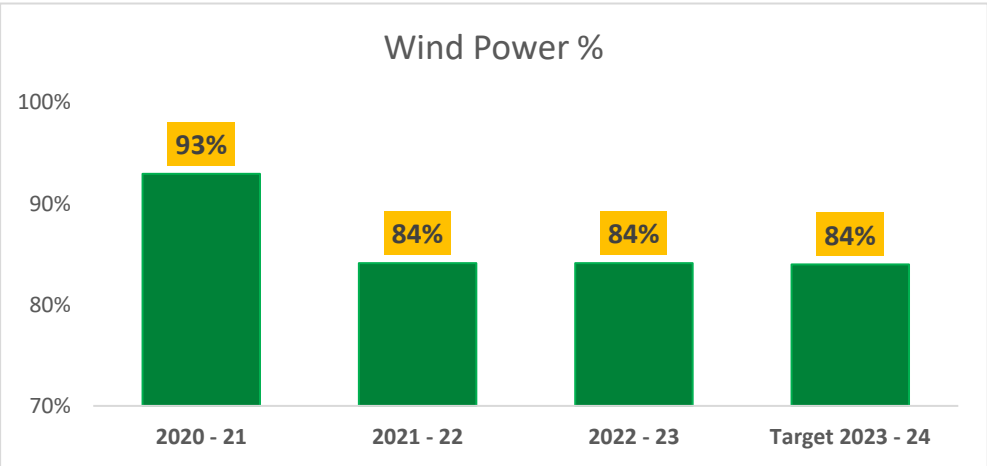
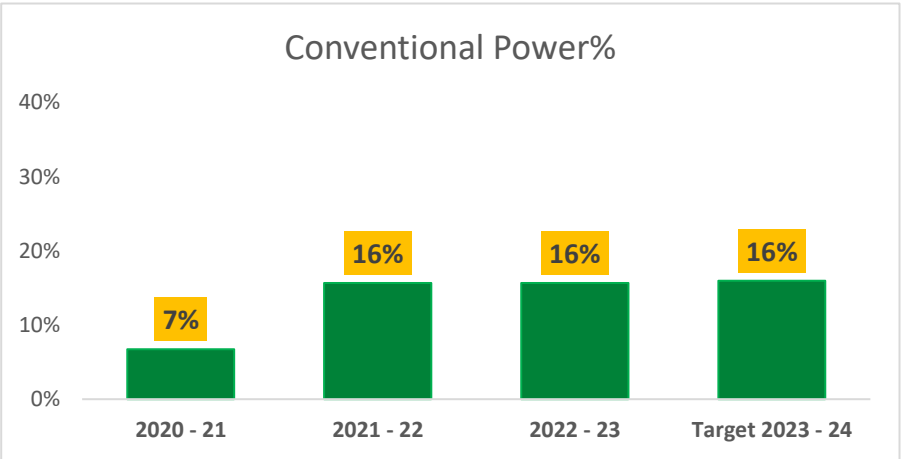
SPECIFIC ENERGY PERFORMANCE DATA SHEET





FY 22-23

Wind Power %

…stently >84% of the total consumption of plant

Is being utilized from wind power since 2016

FY 22-23

Conventional Power %

…Minimizing the conventional power usage to reduce the CO2 emission

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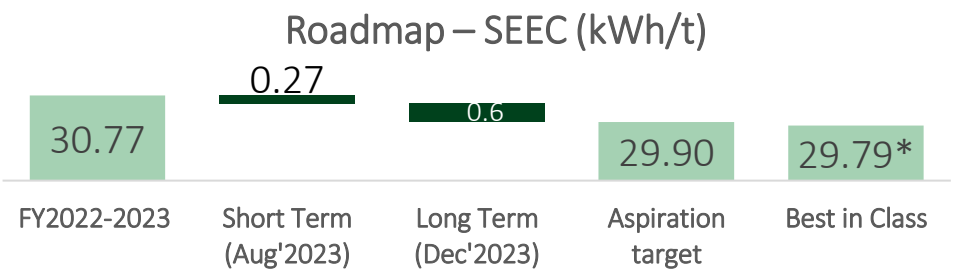
Information on competitors, National & Global benchmark

Grade	Present SEC (kWh/MT)	Internal Benchmark (kWh/MT)
OPC	30.35 (Lowest in ZCL)	30.84
PPC	25.28 (Lowest in ZCL)	25.34

Type	Present SEC (kWh/MT)	External Benchmark (kWh/MT)
CM-1	30.77	29.90

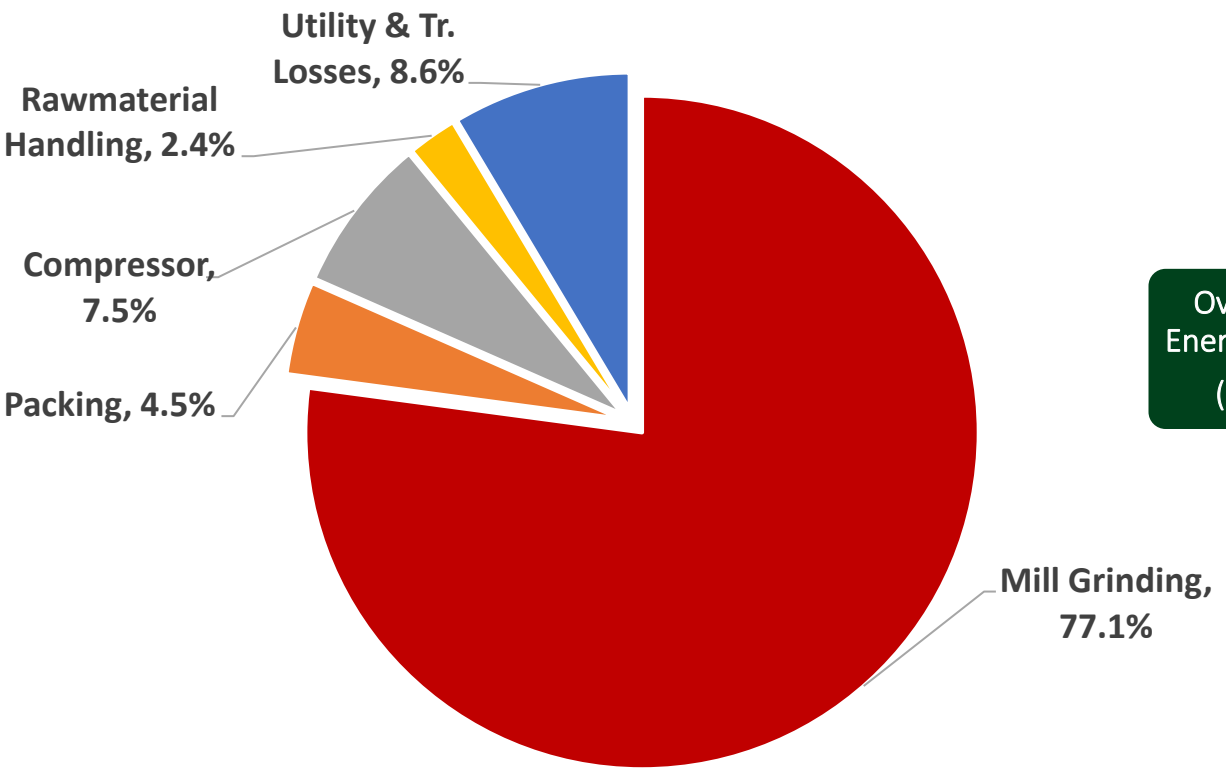
- External Benchmark Source: In reference to CII Energy benchmarking for Indian Cement Industry V6.0

Type	Present SEC (kWh/MT)	Short Term Target (kWh/MT)	Long Term Target (kWh/MT)
CM-1	30.77	32.50	29.90



- Short Term will be completing on before Aug’2023
  - *Replacement of Damper in RC fan circuit and Second Chamber segregation*
- Long term will be completing on before Dec’2023
  - *Optimization with GA and Reduction of Clinker to Cement ratio*

Overall Energy Consumption Details



Overall Electrical Energy Consumption (Grid + Wind)

- Mill Grinding Power
- Compressor
- Utility and Tr. Losses
- Packing
- Raw material Handling

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ENERGY SAVING PROJECTS IMPLEMENTED IN LAST 3 YEARS

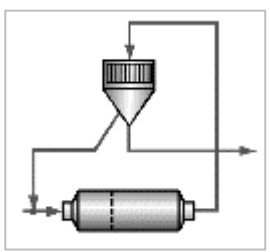
Year	No of Energy Saving Projects	Investment (INR Million)	Electrical Savings (Million kWh)	Power Cost (Rs/kWh)	Total Power Cost Savings (INR Million)	Payback period (Month)
FY 2020 – 21	3	0.85	0.22	7.03	1.52	7
FY 2021 – 22	4	5.24	0.51	7.55	3.87	16
FY 2022 – 23	2	3.70	0.36	9.33	3.35	13

FY 2022 – 2023: (2 Major projects Implemented)

- Process Bag filter product material diverted from Mill outlet to Silo feed bucket elevator
- Installed 7.5 Kw compressor in Girth gear spray system to reduce the compressor air usage from 110 kW Mill compressor

MAJOR INNOVATIVE PROJECTS FOR FY 2022 – 2023

Savings: 1.2 kWh/ t
Cost: 3.8 MINR/annum



Increase Productivity & Reduced SEC

- Earlier, mill main baghouse discharge material was discharged to mill outlet, recycled in the mill circuit and finally fed to cement silos.
- We modified the discharge line connected to final product with the help of diversion gate and project completed in the FY 2022 – 2023 Q3 period.
- Diversion is used only for OPC grinding as we have reached saturation level of PPC grinding.
- Achieved increase in mill output of 5 tph in OPC product.
- Achieved reduction in power consumption of 1.2 kWh/t of OPC.

Before Installation

After Installation

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LIST OF PROJECTS FOR FY 2023 – 2024

Sl No	Project	Responsibility	Completion period	Remarks
1	Optimizing with Grinding Aid dosage from 0.04% to 0.02% with different supplier to improve the productivity.	HOD - Production	FY 2023-2024	2 trials completed
2	Replacement of Gypsum Weigh feeder PAN conveyor to belt conveyor to avoid frequent failure	HOD - Mechanical	FY 2023-2024 (Q3)	Job planned on Oct'2023 1st Week
3	Replacement of Damper in RC fan duct to avoid the damper loss	HOD – Mechanical	FY 2023-2024 (Q3)	Job planned on Oct'2023 1st Week
4	DCS upgradation	HOD – E&I	FY 2023-2024	
5	Mill Second Chamber Segregation planned to remove the de-shaped Grinding Media	HOD – Production	FY 2023-2024 (Q2)	Completed
6	Reduction of Clinker to Cement ratio from 70.4% to 67.9% to increase the blended cement ratio%	HOD - QC	FY 2023-2024	Continuous Monitoring

Utilization of Renewable Energy Sources

Sl No	Year	Type of Energy	Onsite/ Off Site	Renewable Energy Consumption	
				MWH	%overall
1	FY 2020 – 2021	Wind	Off site	15.57	93.0%
2	FY 2021 – 2022	Wind	Off site	15.76	84.0%
3	FY 2022 – 2023	Wind	Off site	15.17	84.1%

- We have made Share holding agreement and power purchase agreement under GCPA scheme with M/s Echanda Urja Pvt Ltd, is subsidy of M/s Nouvus Energy Limited Mumbai. **M/s Nouvus Energy is Limited** having **105MW capacity** of wind turbines in southern part of tamilnadu.
- We are holding 10% of Shares with M/s Echanda Urja Pvt Limited and able to consume **10% of total energy generation** of M/s-Echanda Urja Pvt Limited.
- Share holding agreement and Power purchase agreement will be renewed every five years and next renewal is June 2026

ENERGY MANAGEMENT STRATEGY (5 Years)

PARTICULARS		Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	OP 2023	OP 2024	OP 2025	OP 2026	OP 2027
Month Days		31	28	31	30	31	30	31	31	30	31	30	31	365	366	365	365	365
Cement Mill-1																		
Cement Prodn -OPC	MT	15,424	16,523	17,041	16,711	16,711	16,711	17,375	17,375	17,224	15,067	16,523	17,375	200,059	151,544	103,980	103,980	103,980
-PPC	MT	39,661	42,487	43,819	42,971	42,971	42,971	44,678	44,678	44,291	38,743	42,487	44,678	514,436	598,675	683,750	683,750	683,750
-PSC	MT													-				
No. of Running days		16	17	18	17	17	17	18	18	18	16	17	18	206	206	214	214	214
No. of shutdown days		15	11	13	13	14	13	13	13	12	15	13	13	159	160	151	151	151
Average Production/Hour	"	145	145	145	145	145	145	145	145	145	145	145	145	145	151	154	154	154
Total	MT	**55,085**	**59,010**	**60,860**	**59,683**	**59,683**	**59,683**	**62,053**	**62,053**	**61,515**	**53,810**	**59,010**	**62,053**	**714,495**	**750,220**	**787,731**	**787,731**	**787,731**
Power-Cement Grinding																		
OPC - Mill	Kwh/t	29.64	29.64	29.64	29.64	29.64	29.64	29.64	29.64	29.64	29.64	29.64	29.64	29.64	29.64	29.64	29.64	29.64
PPC - Mill	Kwh/t	25.34	25.34	25.34	25.34	25.34	25.34	25.34	25.34	25.34	25.34	25.34	25.34	25.34	25.34	25.34	25.34	25.34
PSC - Mill	Kwh/t	-	-	-	-	-	-	-	-	-	-	-	-					
Brixment - Mill	Kwh/t	-	-	-	-	-	-	-	-	-	-	-	-					
PLC - Mill	Kwh/t	-	-	-	-	-	-	-	-	-	-	-	-					
Average -Mill 1&2	**Kwh/t**	**26.54**	**26.54**	**26.54**	**26.54**	**26.54**	**26.54**	**26.54**	**26.54**	**26.54**	**26.54**	**26.54**	**26.54**	**26.54**	**26.21**	**25.91**	**25.91**	**25.91**
Cement- Grinding (Average)	Kwh/t	**26.54**	**26.54**	**26.54**	**26.54**	**26.54**	**26.54**	**26.54**	**26.54**	**26.54**	**26.54**	**26.54**	**26.54**	**26.54**	**26.21**	**25.91**	**25.91**	**25.91**
Cement- Grinding	Kwh/t	**26.54**	**26.54**	**26.54**	**26.54**	**26.54**	**26.54**	**26.54**	**26.54**	**26.54**	**26.54**	**26.54**	**26.54**	**26.54**	**26.21**	**25.91**	**25.91**	**25.91**
Power -Cement Packing	Kwh/t	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60
Auxiliary	Kwh/t	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Total Power	Kwh/t	**31.14**	**31.14**	**31.14**	**31.14**	**31.14**	**31.14**	**31.14**	**31.14**	**31.14**	**31.14**	**31.14**	**31.14**	**31.14**	**30.81**	**30.51**	**30.51**	**30.51**

ENERGY MANAGEMENT ROAD MAP PLAN

- Plant Commissioned in 2011
- Plant Running with 80% OPC Grinding with less output
- SEC – 42.44 kWh/t

2011

- Fly Ash feeding system changed from Pneumatic to Mechanical system i.e. Air chamber arrangement
- SEC – 34.03 kWh/t

2016

- Multiple to Single compressor in Operation with common Header line for Mill and Packer Operation
- SEC – 32.15 kWh/t

2020

- Modified Intermediate and Discharge diaphragm slot gap from 12mm gap to 6-8 mm to increase the residence time
- SEC – 31.75 kWh/t

2022

2023

- Process Bag filter product diverted from Mill outlet to silo as final product.
- SEC – 31.14 kWh/t

2024

- Replacement of Intermediate diaphragm plate to increase the residence time and reduce SEC
- SEC – 30.81 kWh/t

2025

- PPC dispatch volume increased to 80% from 72%
- Wet FA feeding system to be installed
- SEC – 30.51 kWh/t

2026

- Replacement of First Chamber Liner plate along with segregation of both chamber
- SEC – 30.12 kWh/t

ENERGY TRAINING PROGRAM CONDUCTED

01

ISO 50001: 2018 - EnMS Refresher training Program

- Importance of ISO50001:2018
- Review the Effectiveness of policy
- Continually improve Energy Management

02

Optimization Cement Mill Operation

- Expert System Usage in Mill Operation
- Trouble Shooting of Mill operation
- Effective usage of classifier

03

Utilization of compressor air system

- Calculation of loading and unloading of compressor
- Effective usage of Variable Flow Speed

04

Optimization of Grinding Aid usage in PPC product

- Productivity with consistent quality
- Improvement in PPC product SEC with less dosage of grinding Aid

05

Optimization Auxiliary Power consumption

- Monitoring & avoiding Ideal Running equipment
- AUTO ON & OFF implementation of Lighting
- Effective usage of Pump and Fan

06

Optimization of Grinding media in Cement Mill

- Particle size analysis check through Chamber Sampling analysis methodology
- Optimize the Grinding Media pattern

GHG inventorization

Year	SPM Value* (Ball Mill Stack Monitor) Mg/NM_3	Scope – 1 * CO_2/t	Scope – 2 ** CO_2/t	Scope – 3 *** CO_2/t
FY 2020 – 2021	11.1	3.7	2.1	645.7
FY 2021 – 2022	10.5	2.7	4.9	610.9
FY 2022 – 2023	10.8	2.7	4.7	560.9

- * Currently we are circulated to publicly and connected to CPCB
- * CO_2 Values calculated from JCB diesel consumption source – Scope1.
- ** CO2 Emission from Grid Power – Scope2.
- *** CO2 Emission from Clinker factor – Scope3.

Initiatives for Carbon capture and reduction.

- ❑ Reducing the clinker to cement ratio
- ❑ Increasing the PPC volume ratio from 60% to 80%
- ❑ Increase Plantation in plant premises
- ❑ Increasing from 3.5% to 5.0% performance improver (flyash) in OPC
- ❑ Implementation of identified energy conservation Project
- ❑ Global responsibility to keep temperature rise < 2 C

Green Supply Chain Management

Material Description	Units	FY 20-21	FY 21-22	FY 22-23
Gypsum	MT	17287	21643	20956
Fly ash	MT	101745	119629	157884
Total recycled Materials	MT	119032	141273	178842
Cement Production	MT	455391	551065	574110
Total recycled Materials	%	26%	26%	31%

Initiatives taken in Supply Chain to reduce Energy Consumption

- To sustain 35% Fly ash in PPC production long term contract agreement made with NTPC and NTECL power plants for lifting dry fly ash.
- 100 % Chemical Phospho Gypsum - Fertiliser plant Waste product for our cement Production.
- 100 % Conversion from paper bag to enviro-friendly BOPP bags.
- Implementation of SAP for paper less procurement procedure
- STP treated Water is used in Plant Gardening

Green Supply Chain – Product Cycle

RAWMATERIAL HANDLING

- New gypsum feeding conveyor installed and commissioned to avoid the reverse operation of JCB for Safety, reduce the JCB run hours and diesel consumption.
- 100% Clinker unloading by Wagons with dust free environment
- All raw materials stored in silos and covered shed – dust free environment.

PROCESS UPGRADATION

- Third Generation classifier for Ball mill operation
- Variable Flow drive for fly ash unloading compressor for Energy Saving
- Natural Resources conserved by using alternative raw material like Chemical Gypsum

WASTE UTILIZATION

- Water consumption in Mill is eliminated completely by optimizing the process as well as increasing the usage of High Moisture gypsum
- Spillage/ Leakage material is reused as a feed if any.
- Reduction on our impacts on air, Water and land

PACKING

- Truck Loader No:1 out of 4, the Reverse movement operation of trucks completely avoided for safety purpose
- Bag filter for truck loading to reduce dust losses.

SALES & DISTRIBUTION

- Increased the bulk ratio to reduce the SEEC.
- Weighment Sensor installed and commissioned to improve the correct Weighment of each trucks and bulker.

CUSTOMER SUPPORT

- Developed and supplied the PRIMO - GreenCem Product

Water Pond Development & Rainwater Harvesting

- Commissioned in June'2011, CGU, is a young plant with basic infrastructure and industry best practices in place.
- Plant is water positive, with neutral water reservoirs development at CGU plant site for rainwater harvesting
- Green belt development since plant commissioning, with annual plantation of 1350 to 1700 saplings

WATER PRIORITY ACTION TAKEN:

- Reduce the demand for freshwater consumption
- Improving Water Capture and Storage
- STP Water is being used for Plant Plantation

ENERGY COMMITTEE TEAM

Rameshbabu SP
Energy Circle Coordinator

STAR Team - 1

Energy Efficiency Improvement

Sam Isaac

Ponnusamy

Prasanna

Paneer

Contract Workman: 5 Nos

DIAMOND Team - 2

Productivity Improvement

Rameshbabu SP

Venkatesan

Raja

Venkatesulu

Contract Workman: 5 Nos

LOTUS Team - 2

Reliability Improvement

Dhandapani

Prasath

Gopal

Bala

Contract Workman: 5 Nos

HEIDELBERGCEMENT
INDIA

ENERGY MONITORING – TEAMWORK & EMPLOYEE INVOLVEMENT

ENERGY MONITORING SYSTEM

Energy Data collection

- EMS
- Multifunction Transducer for total power
- KW Transducer for all MCC's
- Energy Meters for feeders

Energy Review Meeting

- Management review Meeting
- Daily coordination Meeting
- Weekly Energy Circle Meeting
- Quarterly Objective and Targets
- Data Comparison with Benchmark

Energy Reports

- Daily Flash Report
- Daily Power Report
- Open Access Power report

Energy Excellence Performance

- Daily Energy performance review Meeting chaired by Plant Head
- Monthly Energy Performance review Meeting chaired by MD

- Section Covered during Review SEC Meeting: Main Drive Power KPI Product wise, Packing and Utilities

ENERGY MONITORING – TEAMWORK & EMPLOYEE INVOLVEMENT

OPERATING PLAN 2023 TARGET

ZUARI CEMENT LIMITED
CGU
Operating Plan'2023

PARTICULARS		Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	OP 2023
Month Days		31	28	31	30	31	30	31	31	30	31	30	31	365
Cement Mill-1														
Cement Prodn -OPC	MT	15,424	16,523	17,041	16,711	16,711	16,711	17,375	17,375	17,224	15,067	16,523	17,375	200,059
-PPC	MT	39,661	42,487	43,819	42,971	42,971	42,971	44,678	44,678	44,291	38,743	42,487	44,678	514,436
Total	MT	**55,085**	**59,010**	**60,860**	**59,683**	**59,683**	**59,683**	**62,053**	**62,053**	**61,515**	**53,810**	**59,010**	**62,053**	**714,495**
Power-Cement Grinding														
OPC - Mill	Kwh/t	29.64	29.64	29.64	29.64	29.64	29.64	29.64	29.64	29.64	29.64	29.64	29.64	29.64
PPC - Mill	Kwh/t	25.34	25.34	25.34	25.34	25.34	25.34	25.34	25.34	25.34	25.34	25.34	25.34	25.34
Average -Mill 1&2	**Kwh/t**	**26.54**	**26.54**	**26.54**	**26.54**	**26.54**	**26.54**	**26.54**	**26.54**	**26.54**	**26.54**	**26.54**	**26.54**	**26.54**
Power -Cement Packing	Kwh/t	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60
Auxiliary	Kwh/t	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Total Power	Kwh/t	**31.14**	**31.14**	**31.14**	**31.14**	**31.14**	**31.14**	**31.14**	**31.14**	**31.14**	**31.14**	**31.14**	**31.14**	**31.14**

ENCON Methodology

Daily Power Report Circulated to Technical, Finance and Management Team.

ENERGY MONITORING – TEAMWORK & EMPLOYEE INVOLVEMENT

Plant head addressing team to increase awareness towards reduction in energy consumption

Best Practices:

- Monthly energy meeting is being held all technical persons are member of it. Individual suggestions are invited and being implemented to save energy and increase productivity.
- RCA meeting is held monthly.
- Energy saving awareness training programs are being conducted time to time/ weekly basis for technicians and plant workers.
- Maximize the Cement Bulker loading
- Review of Energy consumption on daily basis.

ENERGY SAVING - REWARD AND RECOGNITION

Best Energy Saving award received from Honourable our Heidelberg Materials Managing Director

Implementation of ISO 50001:2018

ENERGY MANAGEMENT SYSTEM


CERTIFICATE

The Certification Body
of TÜV SÜD South Asia Private Limited
certifies that

HEIDELBERGCEMENT
Zuari Cement Ltd
Attipattu - Village Ponneri - Taluk
Tiruvallur – Dist. – 601120, Tamil Nadu, India

has implemented Energy Management System
in accordance with ISO 50001:2018
for the scope of

Grinding and dispatch of Cement

This certificate is valid in conjunction
with the main certificate from 2022-03-01 until 2025-02-28
Subject to successful completion of annual periodic audits

Certificate Registration No. 99 118 0004709
Date of initial certification: 2019-05-03
Issue Date: 2022-02-21 Rev. 00

ISO 50001:2018 Certificate

ZUARI IMS POLICY


safe work healthy life HEIDELBERGCEMENT Group

Integrated Management System Policy

We, at Heidelberg Cement are fully committed towards customer satisfaction, environmental protection, providing healthy & safe work environment, energy conservation, and social responsibility to all concerned and therefore put our best efforts to:

- Produce quality cements that exceed statutory standards and customer expectations and promote use of environment friendly construction products & solutions.
- Deploy energy efficient & eco-friendly technologies, products, services and designs for energy efficiency and performance improvement.
- Contain pollution with increased emphasis on repair, recycle and reuse.
- Proactively address water sustainability issues by minimizing its water footprint.
- Maintain desired water quality during processes and discharges, if any.
- Comply with all applicable legal, social, energy efficiency, energy performance and other stake holder's obligations.
- Conform to the requirements related to Corporate Social Responsibility following the Principles and Guidelines.
- Train human capital with a view to upgrade their skills in all areas including safety.
- Regularly set and review objectives and targets for continuous improvement in areas of quality, productivity, work environment, health & safety performance, energy performance and evaluating voluntary initiatives for social responsibility.
- Ensure availability of necessary resources and relevant information to achieve Objectives and Targets.
- Prevent occupational injuries and ill health, by eliminating hazards and reducing OH&S risks.
- Promote consultative management practices by involving workmen.

This policy has been communicated to all the employees and is available to the public and interested parties on demand.

-sd-

- ISO 5001:2011 Certified from 2014 and upgraded to ISO 50001:2015.
- Reduced the operational and overhead costs lead to increase the profitability;
- Reduced the air emissions, such as greenhouse gases;
- Enhanced overall employee engagement for achieving the operational excellence.

ENCON Project budget allocation %

Total turnover CGU FY 2022-23 (Rs. Million) - 3234

ENCON Projects FY 2022-23 (Rs. Million) - 33

Investment % - 0.9%

GROUP PLANTATION – PLANT PREMISES

Yearwise Tree Plantation Details	
Years	Nos
FY 2012 - 2013	322
FY 2013 – 2014	598
FY 2014 – 2015	624
FY 2015 – 2016	1298
FY 2016 – 2017	4986
FY 2017 – 2018	3188
FY 2018 – 2019	5255
FY 2019 – 2020	7214
FY 2020 – 2021	1848
FY 2021 – 2022	3281
FY 2022 - 2023	4945
Total Plantation	33559

Our consistent efforts to increase our green cover followed by weekly temperature monitoring have made our Chennai Grinding Unit achieve a difference of 2.1°C and became the 1st plant to surpass the target.

Sapling Distribution: -

We have distributed 2986 Saplings in the Attipattu village community

HEIDELBERGCEMENT INDIA

GROUP PLANTATION – PLANT PREMISES

GROUP PLANTATION AT PLANT PREMISES

GREEN BELT DEVELOPMENT



PLANTATION AT PLANT PREMISES



Award & Accolades

Safety Appreciation Award

CII – CGU awarded Best Energy Efficiency Units - 2022

Outstanding Achievement in Promotion of Education

PPC product certificate from GRIHA Council

CSR Education Award

HEIDELBERGCEMENT
INDIA

Thank You

Mr Rameshbabu SP

Head Production

Email: p.rameshbabu2@zcltd.com

Phone No: 8825678714

Safety is our foremost priority

MATERIAL TO BUILD OUR FUTURE