



ULTRATECH CEMENT LIMITED

Unit: Birla White -Katni (M.P.)



"CII National Award for Excellence in Energy Management 2023- Building Sector "

Guided By -

Mr.Anjani Kr.Pandey (Plant Head)

Email id : anjani.k.pandey@adityabirla.com

Contact No.:9938555810

Team Member -

Mr. Vipin Sharma - HOD Technical

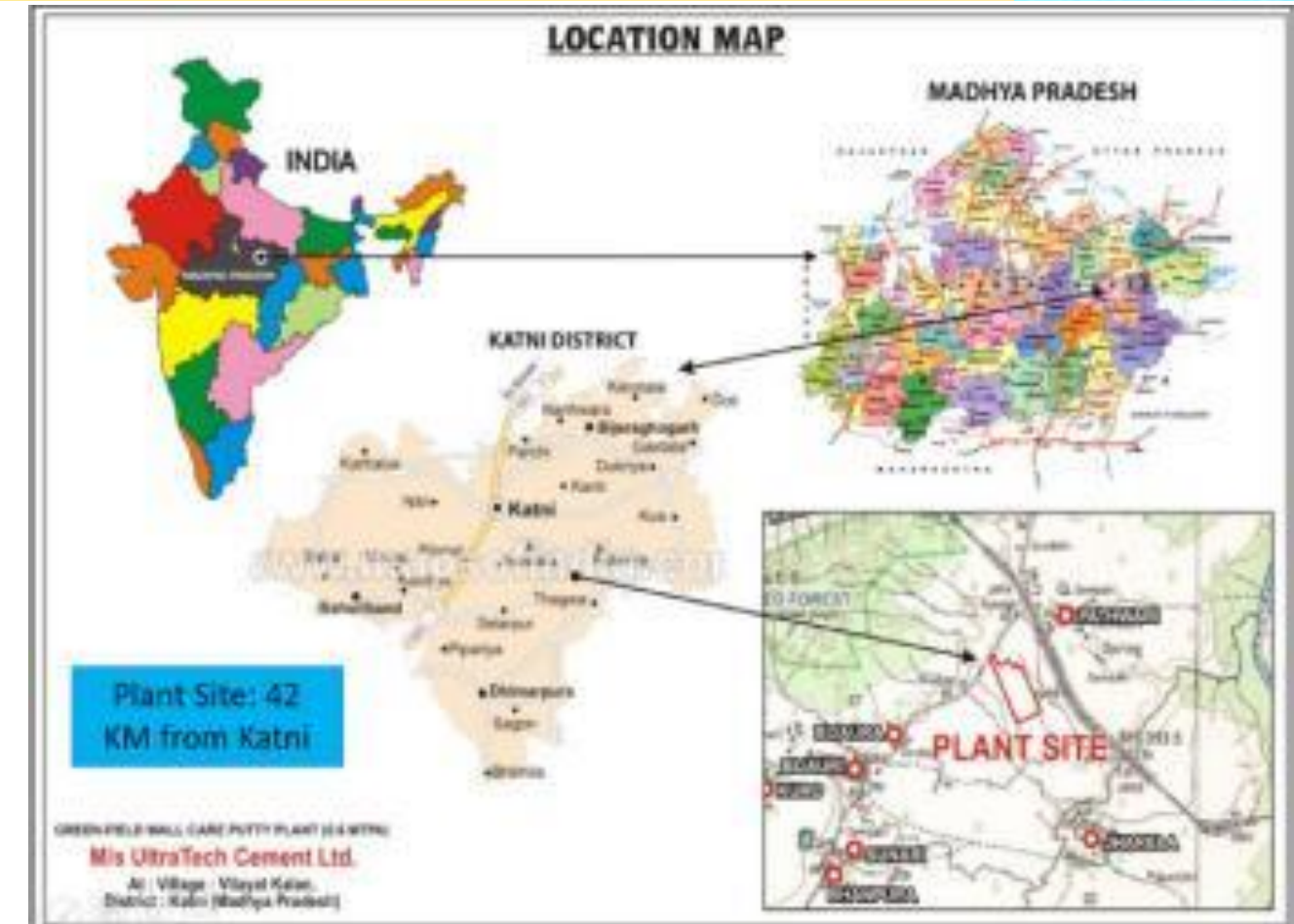
Mr. Jayanta Chaudhary - SH(E&I)

Mr. Rajeev Kumar- SH(QC)

Company profile

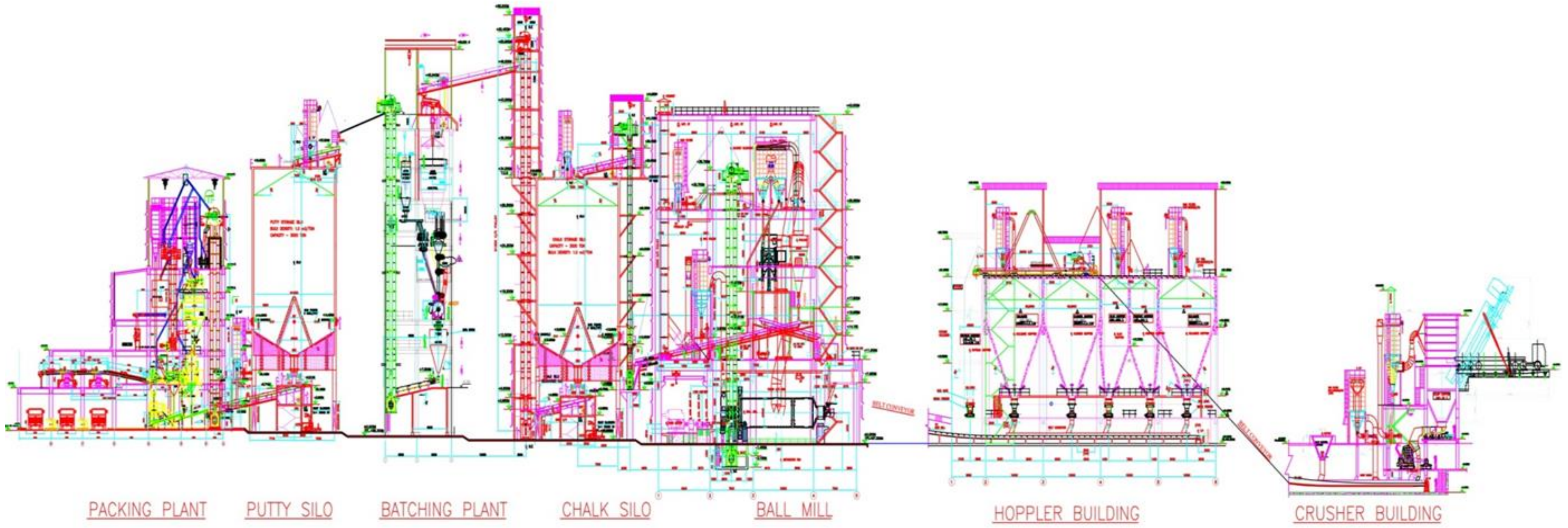
Birla White, Katni is a unit of UltraTech Cement Ltd., Birla White has emerged from a single commodity premium product to a multi-specialty product Organization for decorative and construction applications commanding market leadership in the domestic market. To cater to the growing market, Birla White commissioned a manufacturing facility for WallCare Putty at Katni, Madhya Pradesh, with a production capacity of 0.48 MTPA. With this unit, Birla White will be able to efficiently service the markets in central, west, and south India, improve product availability and create a dominant position in the market.

Birla wall care putty is used as a base coat on cement-plastered walls on which paint is applied the basic feature of the product include providing a smooth finish surface for applying paints, providing strength to the paint surface by blocking moisture, and reducing paint consumption as the paint is not absorbed into the cement.

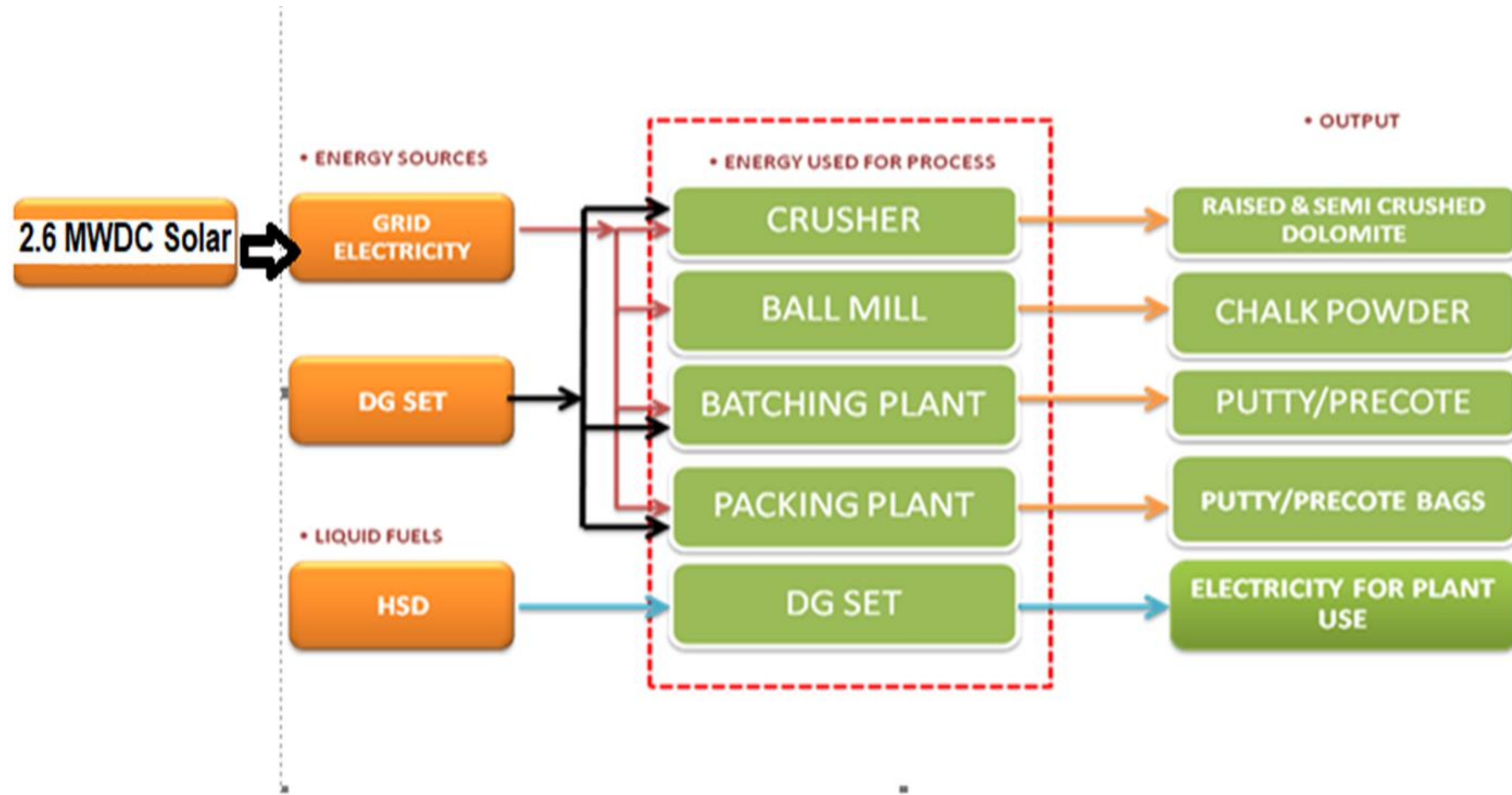


Plant Capacity	: Putty- 485000 TPA VAP- 24000 TPA
Plant commissioned on	: 14 th Mar, 2013
Product Facility	: Wall Care Putty Precoat, Scented- Rose , Lemon , Sandal VAP- water proof and Excel Putty
Plant land area	: 100 acres
Dispatches by	: Truck and off line container loading
Mines	: Captive dolomite Mine

Process Flow



Energy Mapping (location / Circle / site)



BIRLA WHITE-WALL CARE PUTTY

(Product /Technology/specifications of major sections)

PRODUCT



TECHNOLOGY

Ball Mill



Humboldt Wedag. Market leader in supplying of Cement Technology.

Bolt less liner. Low noise level.

Grinding Media :
First Chamber : Hi-chrome.
Second Chamber – Ceramic

Mixer



Mixer, most Critical equipment of the Batching Plant is procured from M/s M-Tec Germany.

Mixing efficiency : 99%.
Safety in operation by safety interlocks.

Automatic Truck Loading Machine



The loading by Fully Automatic Truck Loader is performed without any human interaction while loading into truck, one operator can operate two Auto-packs, No fatigue and safe in operation.

- Capacity 2200 bag/hr
- Require less no. of workmen,
- No ergonomic problem,
- Safe in operation
- Better environment

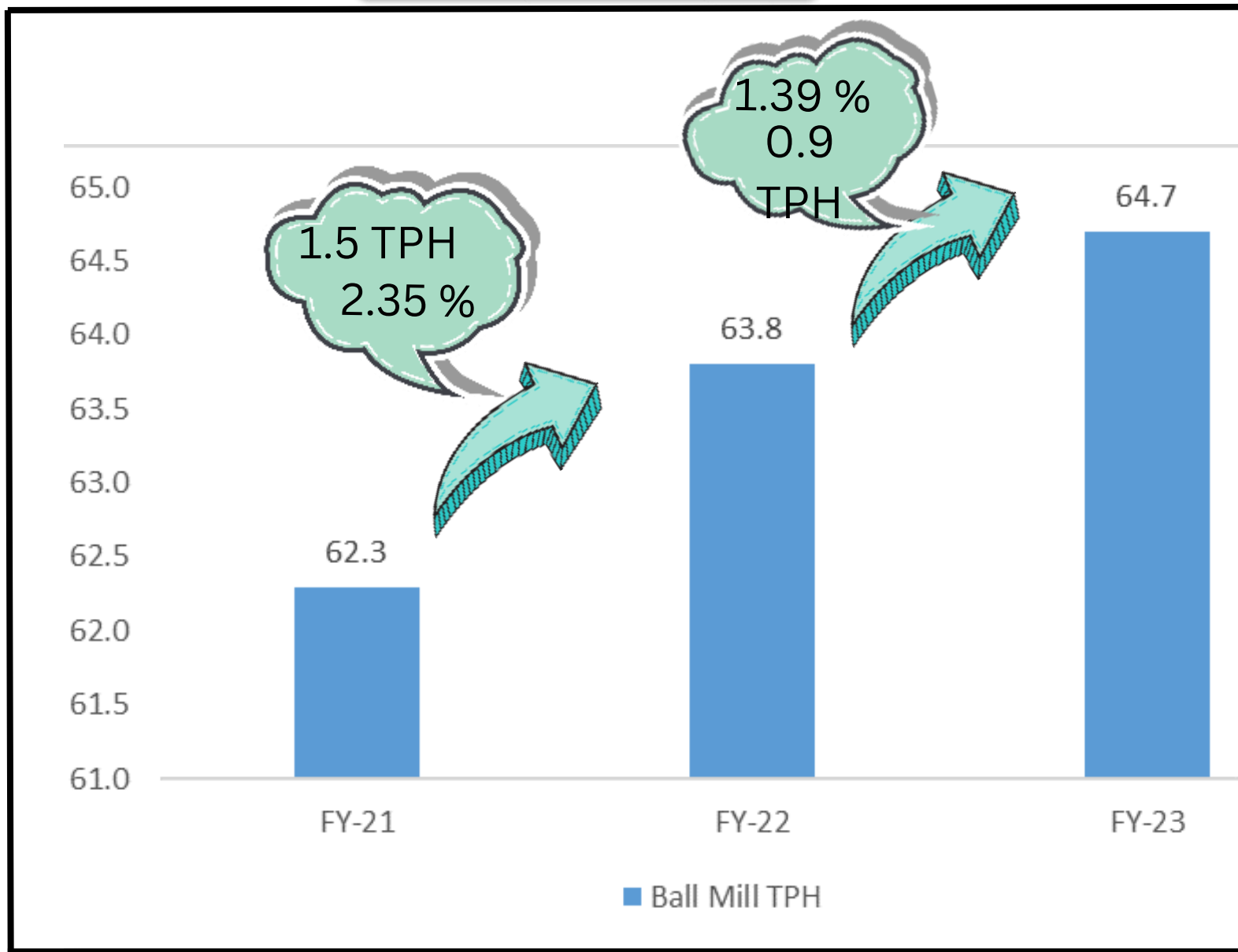
First successful installation in India.

BIRLA WHITE-WALL CARE PUTTY

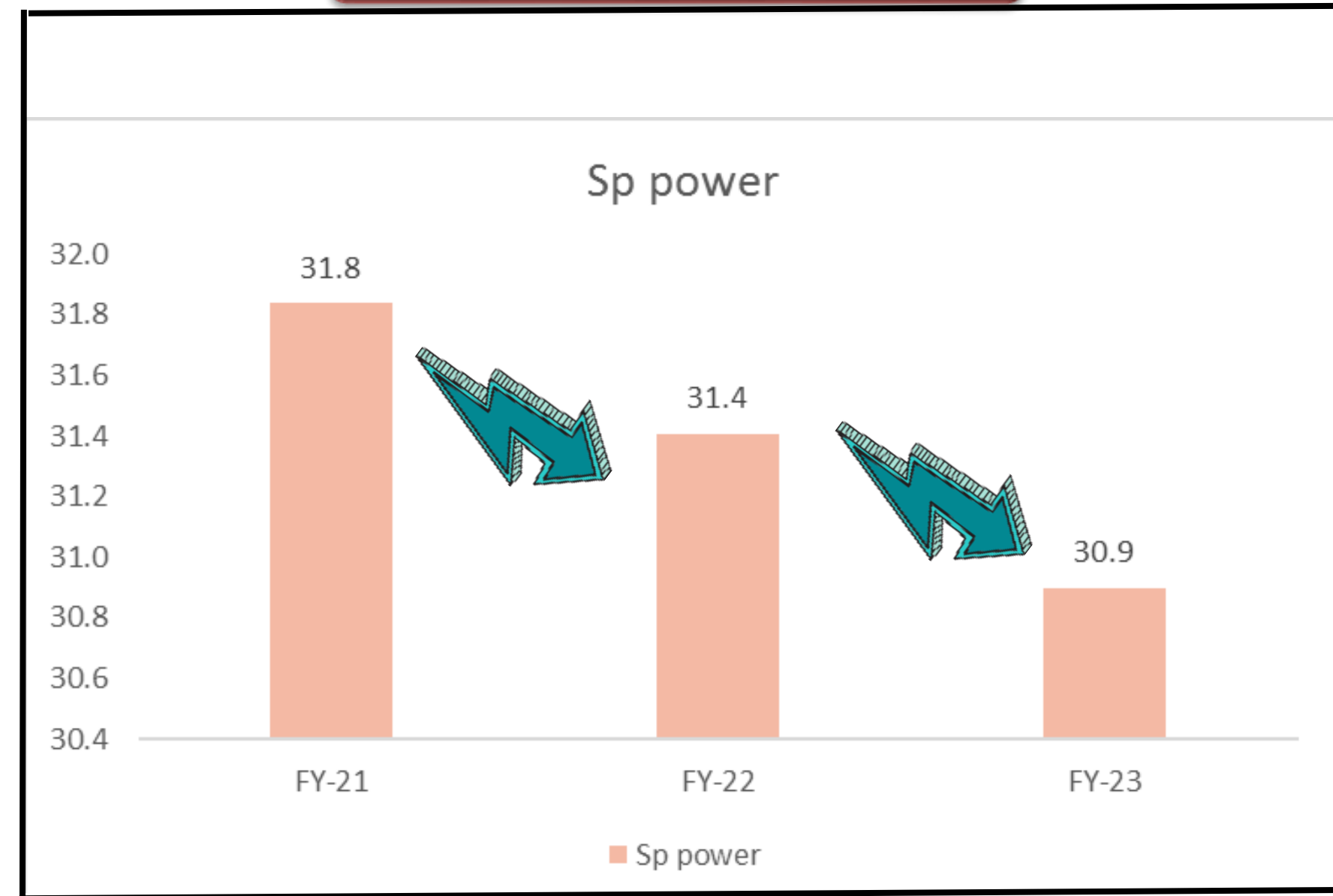
Sp. Energy Consumption in the last 3 years (FY20-21 to FY22-23)

BALL MILL

Output (TPH)



Specific Power (KWh/MT)

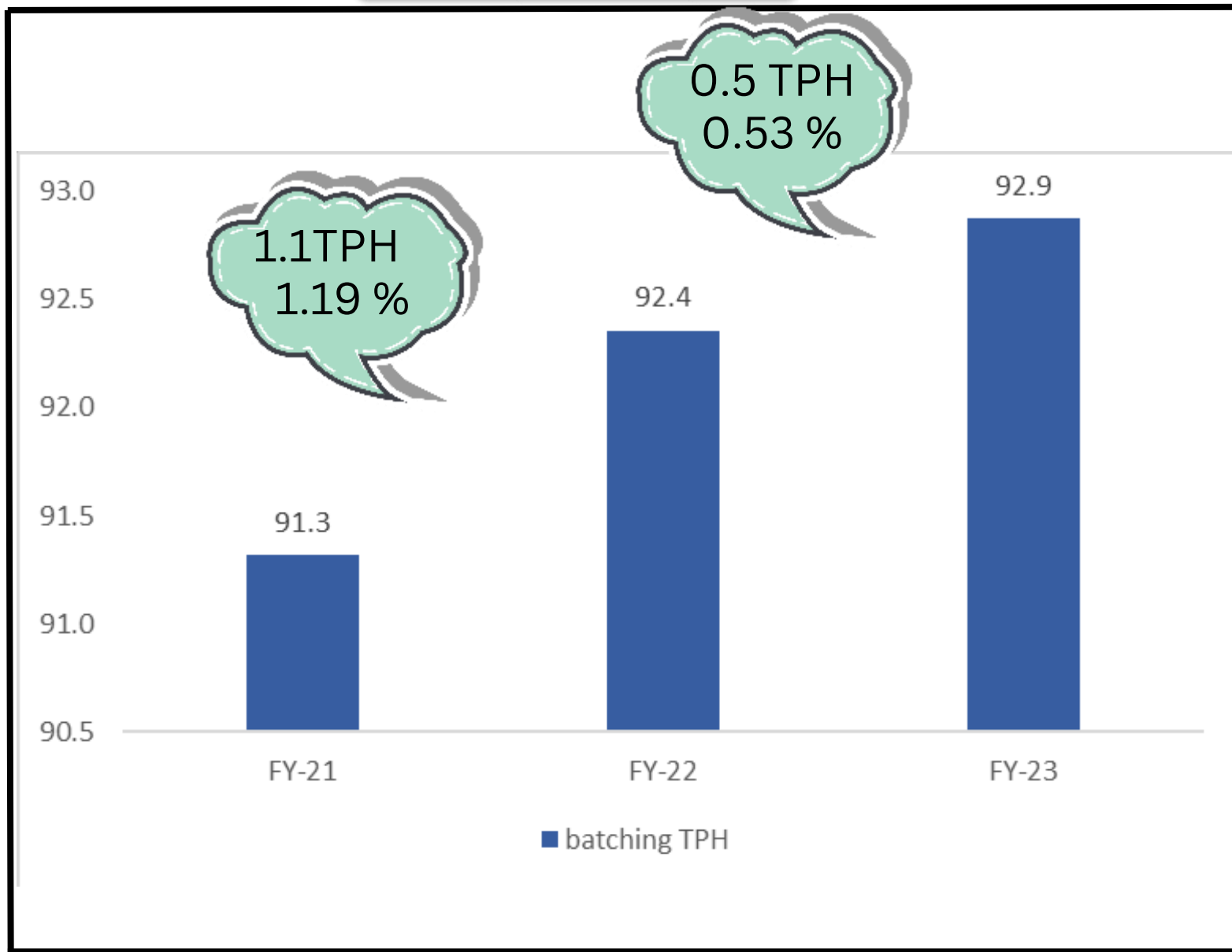


BIRLA WHITE-WALL CARE PUTTY

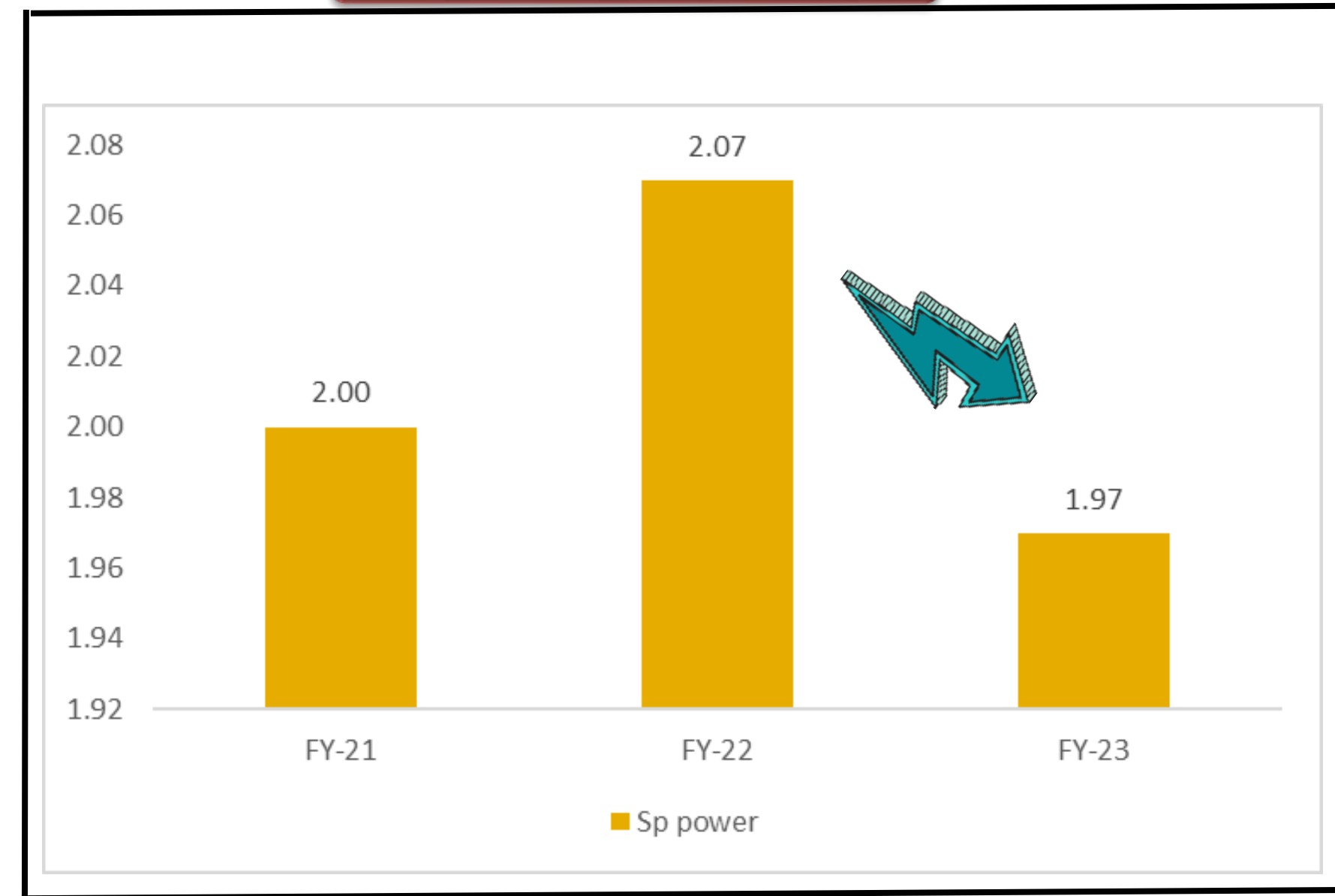
Sp. Energy Consumption in the last 3 years (FY20-21 to FY22-23)

BATCHING SECTION

Output (TPH)



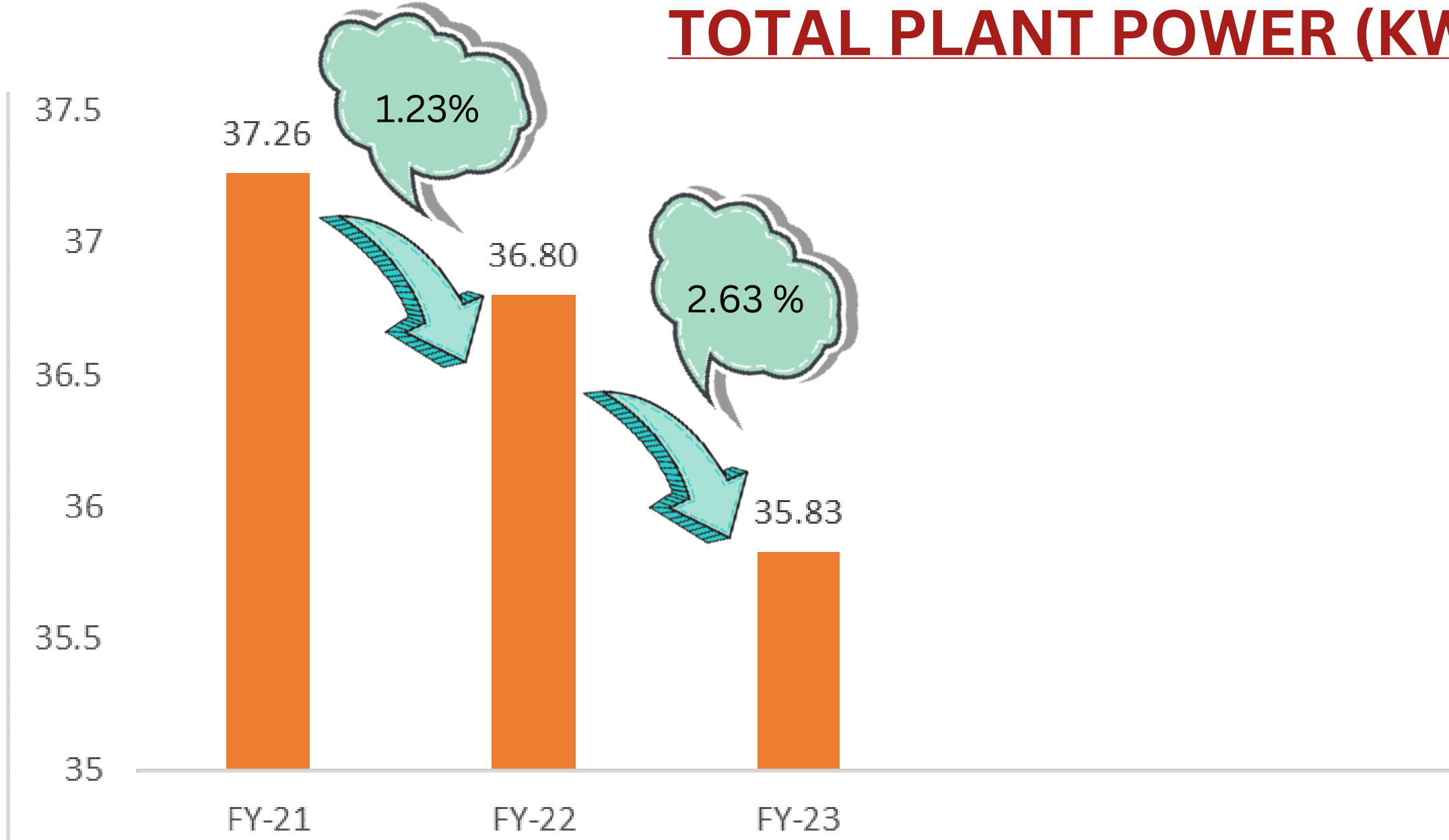
Specific Power (KWh/MT)



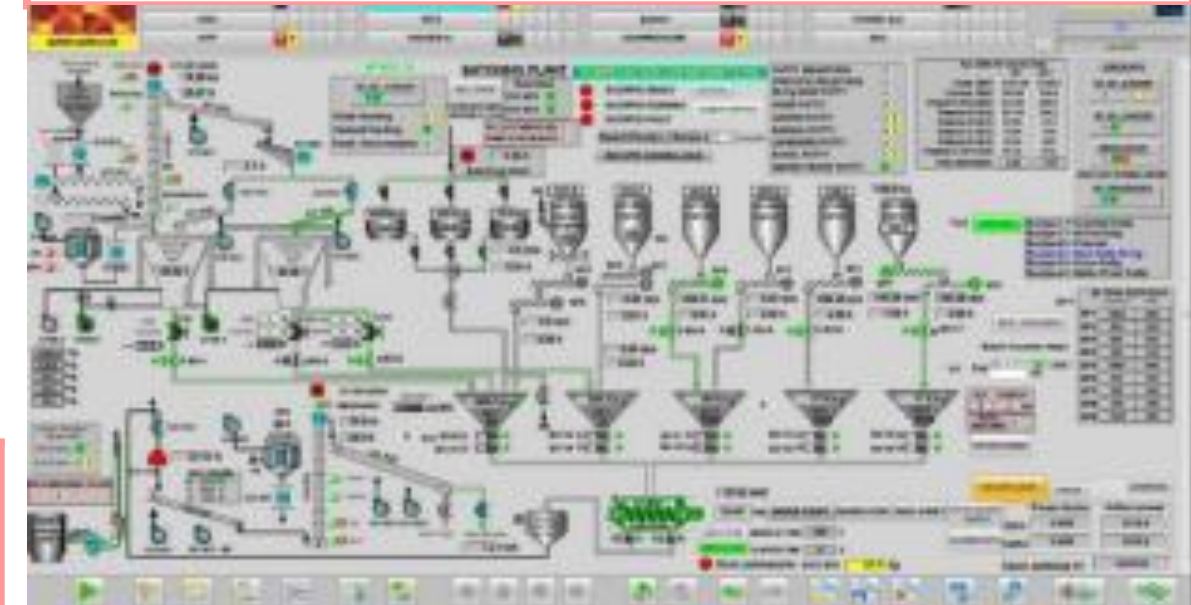
BIRLA WHITE-WALL CARE PUTTY

Sp. Energy Consumption in the last 3 years (FY20-21 to FY22-23)

TOTAL PLANT POWER (KWH/T)



Ball Mill



Batching Plant

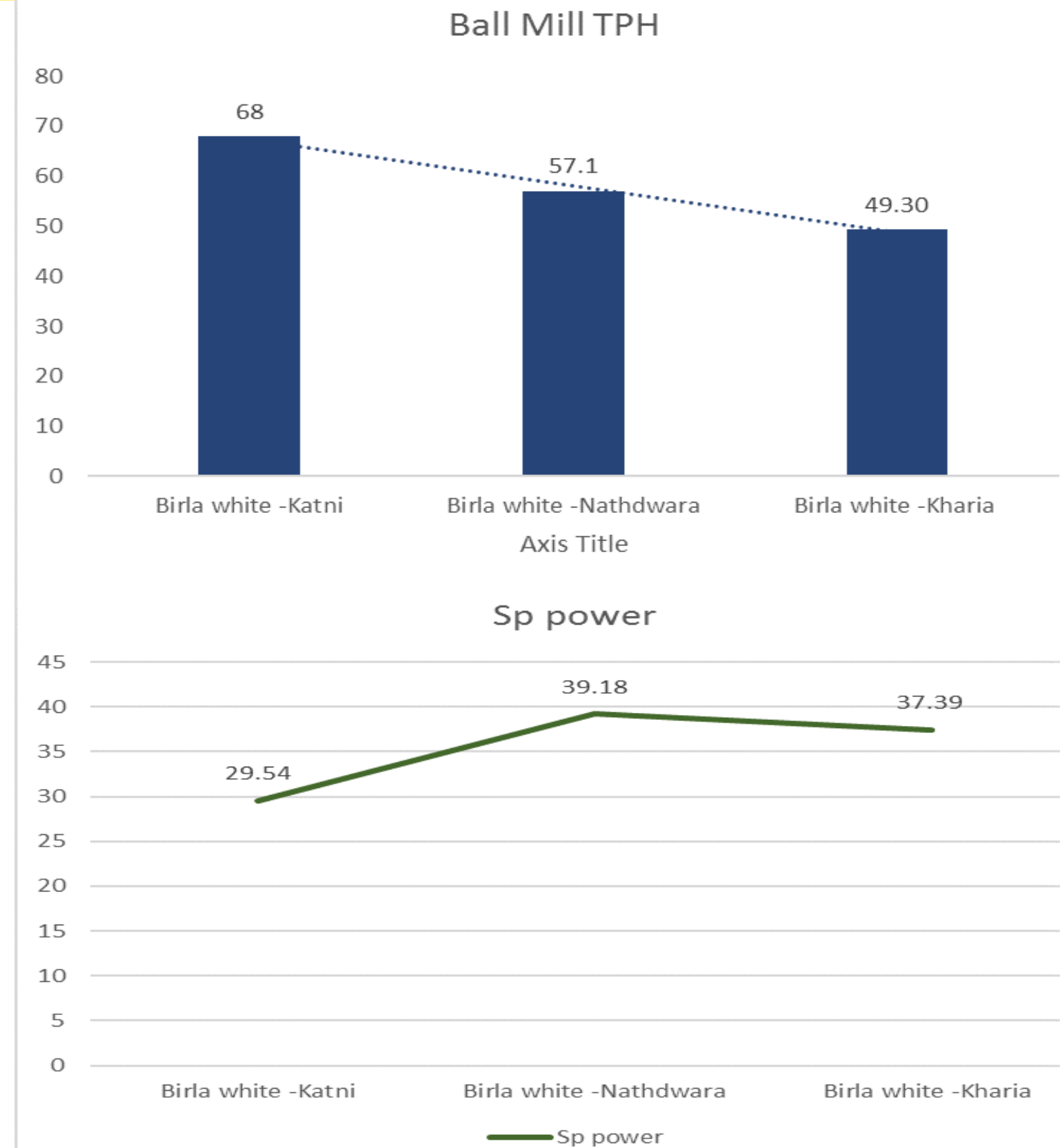
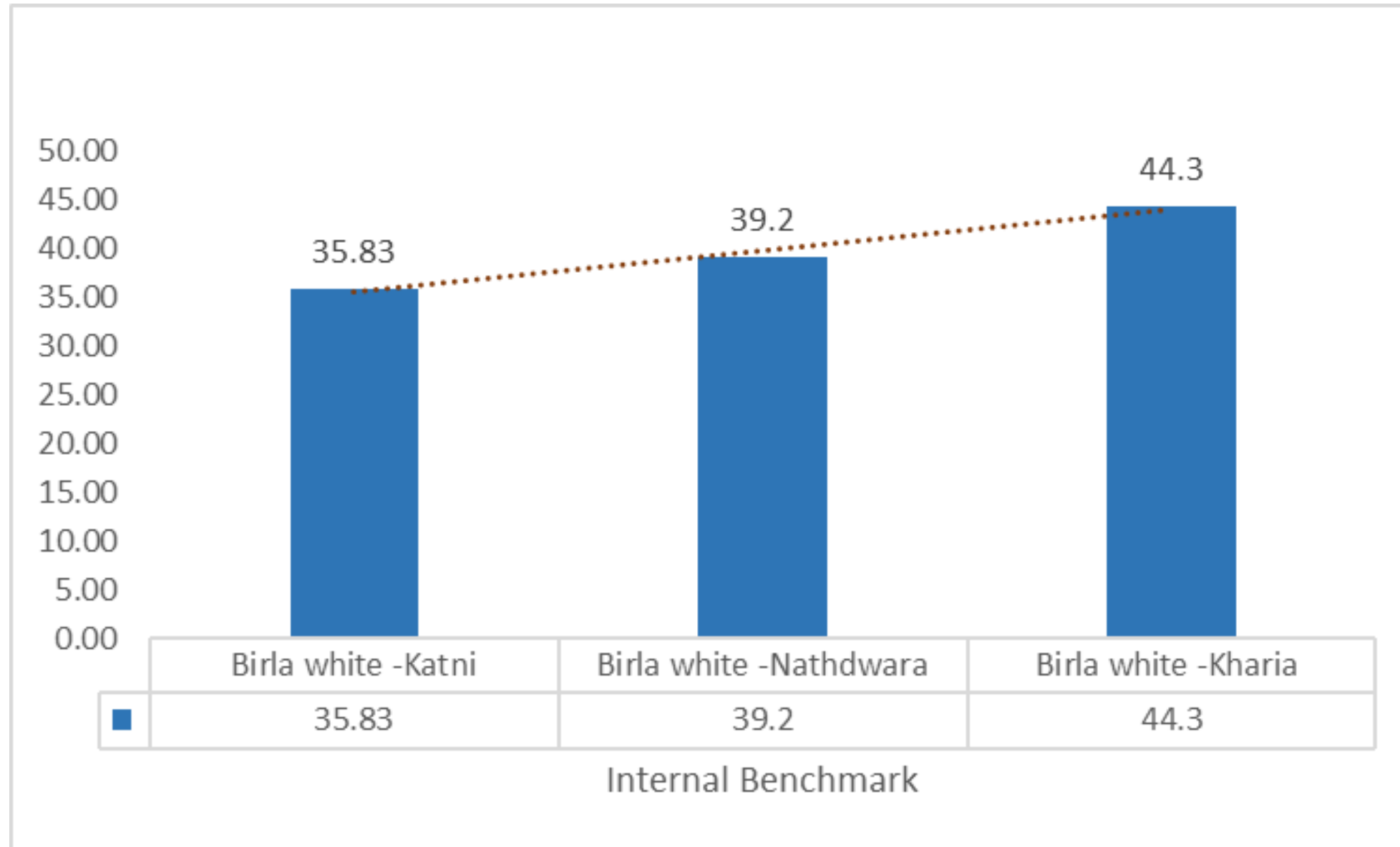
Specific Power (KWH/T) Total Reduction for last 3 Year saving: 3.86 %



BIRLA WHITE-WALL CARE PUTTY

Internal benchmarking

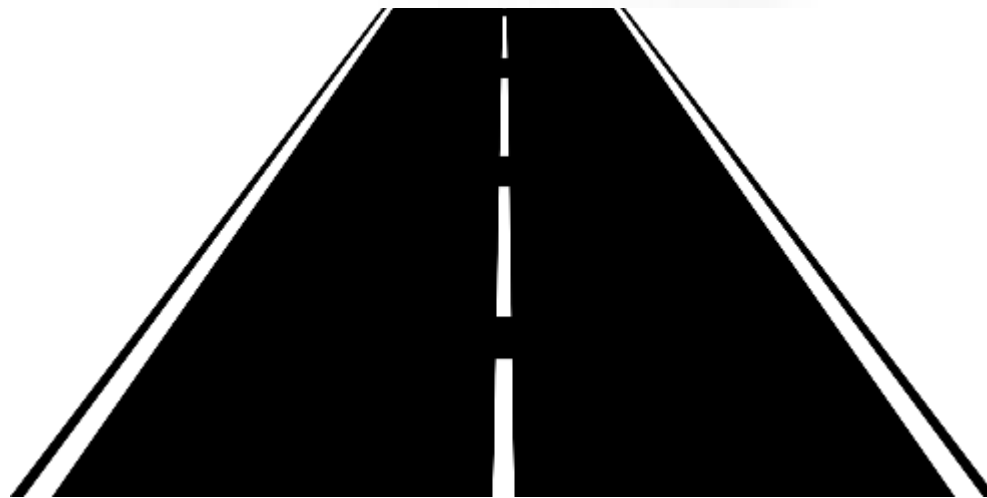
TOTAL PLANT POWER (KWH/T)



BIRLA WHITE-WALL CARE PUTTY

Road map to achieve the target

Mile stone to achieve the Target Next FY 23-24



Target Indicator	Target Parameter	Specific power (Kwh/MT)
Ball Mill	70 TPH	28.5
Batching	95 TPH	1.8
Packing	500000 MT	4

BIRLA WHITE-WALL CARE PUTTY

Major Encon project planned in FY 2023-24

Sr.no	Project Description	Year	Investment (Rs.In Million)
1	Line -II Project for Wall Care Putty (0.2 MTPA)	2023-24	400
2	Launched for New Paint Project	2023-24	200
3	Roof Top Solar project at Mines Offices	2023-24	0.5
4	The secondary crusher Output size Reduce, Grinding Media Pattern was Optimized to increase the Ball Mill output from 68 TPH to 70 TPH	2023-24	25
5	New Dedicated line 33 kv for Power reliability to optimized the DG requirement	2023-24	10



BIRLA WHITE-WALL CARE PUTTY

Summary of 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 2020-21	2	47.5	0.288	-	11.71	Total Specific power reduces per Tonnes Putty by 1.99 %
FY 2021-22	2	0	0.108	-	0.812	Total Specific power reduces per Tonnes Putty by 0.061 %
FY 2022-23	2	2.25	0.019	-	0.142	Total Specific power reduces per Tonnes Putty by 0.009 %



BIRLA WHITE-WALL CARE PUTTY

Energy Saving projects implemented in the last three years



Sr.no	Project Description	FY	Investment (Rs.In Million)	Saving Acheived (KWH)	Saving Achieved (Rs In Million)
1	Reduction in Ball Mill power consumption by process optimization By Installation of Secondary crusher Output size Reduce,	2020-21	40	253560	11.45
2	Batching plant Batch size increased from 9 TPH to 9.5 TPH	2021-22		96000	0.72
3	Installed VFD for Root blower - Putty Silo power saving - (Tag No.-611-BL1) Rating of Motor: 37 kw	2022-23	0.75	14642	0.109



BIRLA WHITE-WALL CARE PUTTY

Energy Saving projects implemented in the last three years



Sr.no	Project Description	FY	Investment (Rs.In Million)	Saving Acheived (KWH)	Saving Achieved (Rs In Million)
4	Installed VFD for Separator Venting Fan power saving -(Tag No.-311 FN3) Rating of Motor: 45 kw	2020-21	0.75	34758	0.26
5	Reduction in generation pressure of the compressor (Loading /unloading Pressure setting from 6.5 to 5.5 bars)	2021-22		12331	0.092
6	Bag Rejecter system removed from Packer (1,2,3)	2022-23		4489	0.033

BIRLA WHITE-WALL CARE PUTTY

Innovative projects



Observation :

Digital batch counter display installed at mixer floor with DCS Communication. Qc lab assistant cannot judge which no. batch is running for sampling.

Action Taken :

- The digital display Board has the facility of Potential free contact .
- FLS (TUC -6) Controller Real time data hook -up with Digital counter.
- DCS Programming for auto reset counter at every 24 Hrs . .

ADVANTAGES :

- Easy Monitoring for sample boy.
- Every batch is recorded and Monitor for Quality check
- Avoid Human mistake during communication between CCR Operator and sample Boy.

Digital batch counter display



DCS counter display



BIRLA WHITE-WALL CARE PUTTY

Innovative projects



Observation :

Bag Stacking Problem in 5 x2 Pattern as per OEM suggestion we have converted Program into “6x2” pattern in our Auto Pac (supplier :Beumer)

Action Taken :

- Remove press element from Autopac.
- By pass the Turning motor.
- Top supply belt remove.
- Programming to be done based on straight pattern

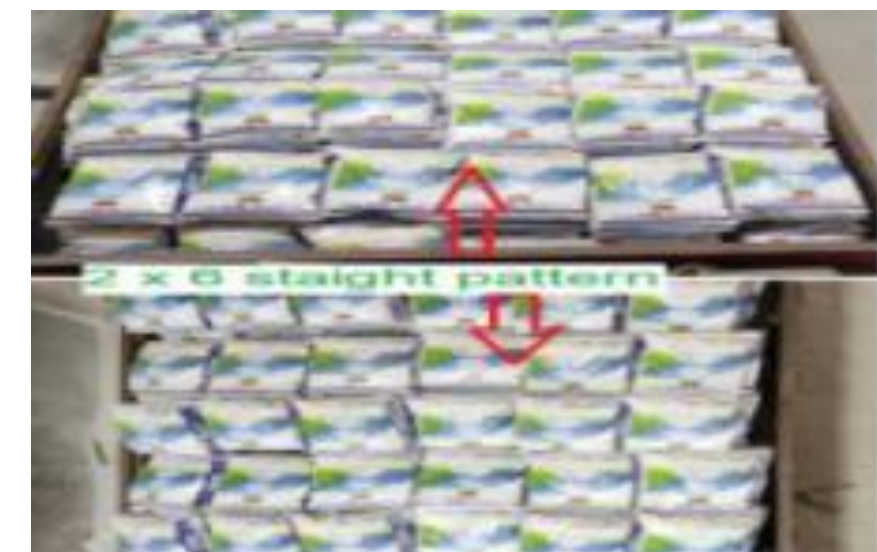
ADVANTAGES :

- Unloading time reduce by 10 %
- Autopac capacity enhance by 2200 bag /Hrs. Actual Rated capacity to 2400 Bag /Hrs.
- Truck valve to loaded bag side Gap reduced
- Safe operation due to sensor adjustment in pusher area and press element.
- Maintenance cost reduce for press element and turning Motor.
- Power saving by removing Pressing Element Motor (0.75 kw) – 2 Nos. & Turning motor (0.37 Kw).
- Loading of 40 /30 kg bag without any bag fall stoppage.

Problem in Bag Stacking



6 X2 Pattern



BIRLA WHITE-WALL CARE PUTTY

Innovative projects



Observation :

Installation of Secondary crusher to reduce Dolomite size : -31 mm: 92 %, +31mm: 8% to - 20mm :100 % to increase the Ball mill TPH By 7%

Action Taken :

- Study Conducted by OEM (M/S KHD)
- Designed & process flow preparation work done .
- Installation of Secondary Crusher (100 TPH)
- Programming as per New Circuit of Ball Mill

ADVANTAGES :

- Increase the Ball mill TPH by 7%.
- Specific power Reduction by 1.5 KWH/T of Chalk
- Higher bond index Dolomite stone is crushed.

Secondary
Crusher



BIRLA WHITE-WALL CARE PUTTY Utilization of Renewable Energy sources

2.6 MW DC -OFF SITE GENERATION

Details of Installed Equipment's

2.6 MW Dc Solar Plant



Sr.no	Description	Quality	Make
1	Solar PV Module	7920	Renosola
2	Power Transformer	1	VoltAmp
3	Power Transformer	1	VoltAmp
4	Extension Panel	1	Siemens
5	Inverter	10	Sungrow
6	IC/OG HT Breaker	2	Siemens

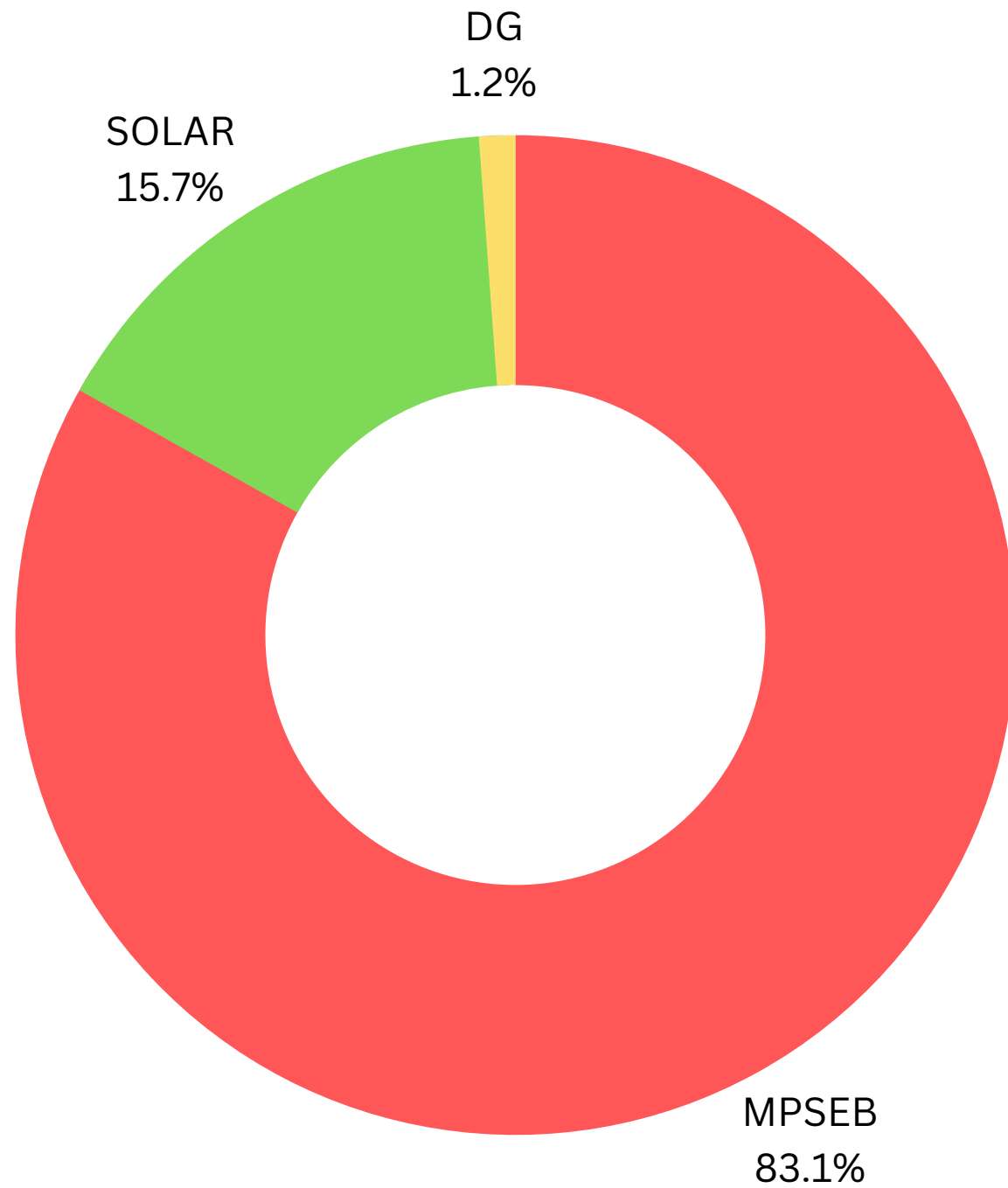
Project Land



BIRLA WHITE-WALL CARE PUTTY

Utilization of Renewable Energy sources

Energy Consumption (% Ratio)



Energy Consumption	FY 20-21 (KWH)	FY 21-22 (KWH)	FY 22-23 (KWH)
MPSEB	13757580	14450010	16223739
SOLAR	615547	3051410	3061232.5
DG	85090	123414	228458

Energy Consumption	FY 20-21 (% Ratio)	FY 21-22 (% Ratio)	FY 22-23 (% Ratio)
MPSEB	95.12	81.99	83.14
SOLAR	4.26	17.31	15.79
DG	0.59	0.70	1.2

BIRLA WHITE-WALL CARE PUTTY

Utilization of Renewable Energy sources

2.6 MW Dc Off site Generation

Year	Technology (solar/wind/biomass etc)	Installed Capacity (MW)	consumption (million kWh) –allotted for your plant	% of overall electrical energy consumption
FY 2020-21	Solar	2.6 MW Dc	615547	4.26
FY 2021-22	Solar	2.6 MW Dc	3051410	17.31
FY 2022-23	Solar	2.6 MW Dc	3061232.5	15.79

BIRLA WHITE-WALL CARE PUTTY GHG Inventorisation

Public Disclosure



- Hazardous waste display board installed at Main Gate.
- Piezo Meter installed for digital water Level Recorder .

BIRLA WHITE-WALL CARE PUTTY GHG Inventorisation



Rain water Harvesting and STP Water Recycle

Sr.no	Description	FY 20-21	FY 21-22	FY 22-23
1	Rain Water Harvested (KL)	17840	23490	27986
2	Rain fall (mm)	974	1100	845
3	STP Water Recycle (KL)	1872	1750	1521
4	Water Positive	1.32	1.48	1.95

BIRLA WHITE-WALL CARE PUTTY GHG Inventorisation

Initiative taken to Reduce Carbon Footprint

- Identification of Energy Saving Project.
- Maximum Utilization for Renewal solar power.
- Increase in Container Loading.
- LED installation in all plants.
- Energy-efficient motor to be used.
- Reduction in specific power for Utility, Ball Mill, and Packing section.

REGIONAL OFFICE
M.P. POLLUTION CONTROL BOARD
P.O. No. 453/416, Vijaynagar, Jabalpur (M.P.)
AIR QUALITY MONITORING REPORT

1. Name of Industry: M/s UltraTech Cement Ltd, Birla White Cement (M.P.)
2. Date of monitoring: 30/03/2022
3. Date of Analysis: 01/04/2022
4. Monitored by: Mr. Anjan Kishor, Scientist, RD Jabalpur & J.P. Nishad, Lab. Katni

1. Station: Analyze No. 11 RDJ
2. Ref. No.

A - STACK EMISSION

S.No.	Monitoring Point	Unit	CHARACTERISTICS		
			TPM	SO ₂	NO _x
1.	Chalk Grinding Mill	mg/Nm ³	24.8	-	-
2.	Crusher		25.8	-	-

COMMENTS:

B - AMBIENT AIR MONITORING

S.No.	Monitoring Point	Distance & Direction	Unit	CHARACTERISTICS		
				RSPM	SO ₂	NO _x
1.	Near Crusher Ramp	400 mts.	ppm ³	88.0	9.8	28.0
2.	Near Triangle	400 mts.	ppm ³	88.40	10.1	19.5
3.	Near Weigh Bridge	400 mts.	ppm ³	89.0	10.8	28.2
4.	Near USE Building	400 mts.	ppm ³	76.81	8.2	21.0

COMMENTS:

C - REMARKS:

- Shows that the parameters exceed the prescribed limit.
- Clear / Cloudy / Windy Weather was prevailing during monitoring.
- The parameters conform to prescribed standard as per M.P. Gazette, March 1999.

[Signature]
Lab. Assistant

[Signature]
Lab. Incharge
RDMPPCB, Jabalpur

REGIONAL OFFICE
M.P. POLLUTION CONTROL BOARD
RD-04, Housing Board Colony, Jhagari Katti (M.P.)
AIR QUALITY MONITORING REPORT

Name of Place: M/s UltraTech Cement Ltd, Joint of Birla White Cement Katni, Grew - Patti Baroda Katti, Dist. Katni (M.P.)
Date of Monitoring: 12-03-2022
Date of Analysis: 12-03-2022
Monitored By: R.P. Shukla Chemist, Haveli Bad Lip, Anwaran
Analyzed Date by: R.P. Shukla Chemist, Haveli Bad Lip, Anwaran

STACK EMISSION

S.No.	Monitoring Point	Distance & Time	Unit	CHARACTERISTICS		
				TPM	SO ₂	NO _x
1.	Wall Mill Stack	45 mts.	Mg/Nm ³	18.42	-	-
2.	Crusher Bag Filter	60 mts.	Mg/Nm ³	21.23	-	-

Equipped With Bag Filter

AMBIENT AIR MONITORING

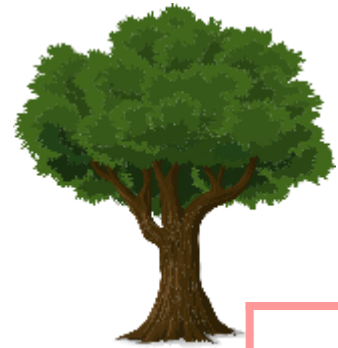
S.No.	Monitoring Point	Unit	CHARACTERISTICS			
			SPM	ASPm	NO _x	
01	In the premises of M/s UltraTech Birla White Cement Katni (Near Entry Gate)	ppm ³	-	86.4	11.4	28.6
02	In the premises of M/s UltraTech Birla White Cement Katni (Crusher Ramp South)	ppm ³	-	94.2	12.3	25.9
03	In the premises of M/s UltraTech Birla White Cement Katni (Near Haveli Near Triangle North)	ppm ³	-	96.3	10.1	27.2

Parameter as per MPPLC Standard

[Signature]
Lab. Assistant

[Signature]
RD Chemist

[Signature]
Chief Chemist
M.P. Pollution Control Board Katni
Lab. Incharge
M.P. Pollution Control Board
KATNI (M.P.)



Development of Green Belt Area

- Rainwater Harvesting pits (550 m2) are provided at Plant.
- Plantation at Mines area.
- Development of Green Park.

Sr.no	Description	FY 20-21	FY 21-22	FY 22-23
1	Number of sampling Plant and Mines area	1200	1250	1325
2	Percentage of cover green belt area	15%	17%	21%



BIRLA WHITE-WALL CARE PUTTY EMS System and other requirements

Monitoring the Real Time Data in Plant DCS



SLD (Single Line Data)



Section wise Power report

BIRLA WHITE-WALL CARE PUTTY Certification and Policies



ISO 14001:2015



ISO 9001:2015

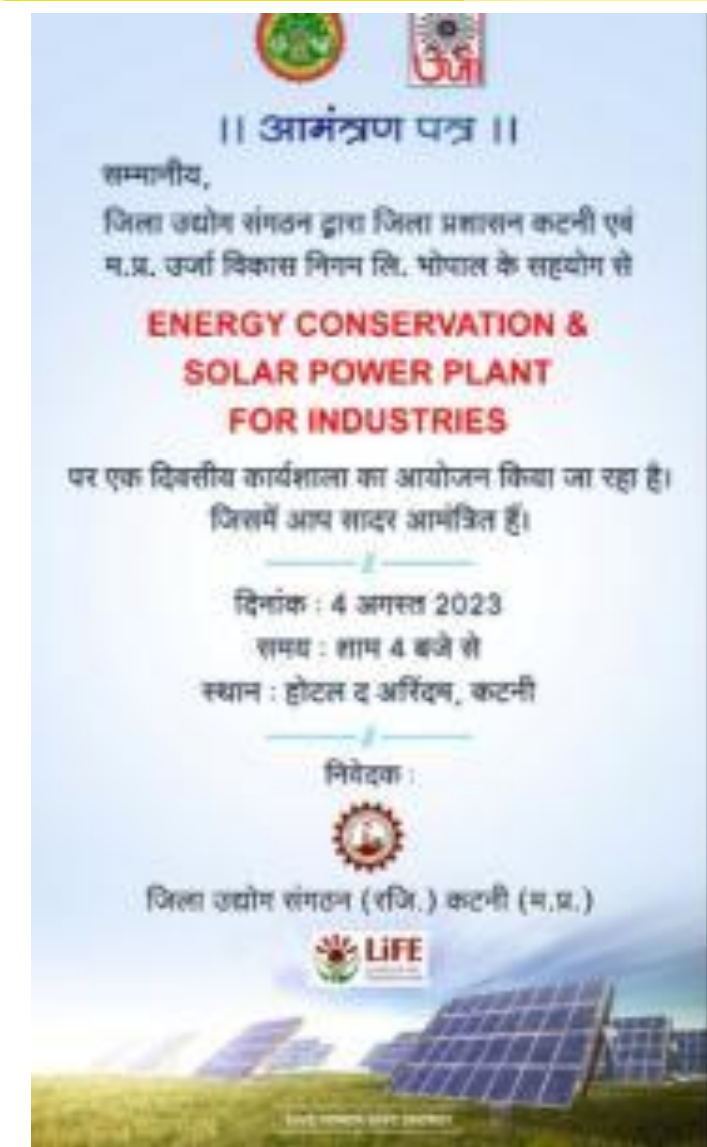


ISO 45001:2018



BIRLA WHITE-WALL CARE PUTTY

NET ZERO commitment



UltraTech commits to Net Zero Concrete Roadmap announced by GCCA

Includes milestone commitment to cut CO2 emissions by a quarter by 2030

9th November, 2021: UltraTech Cement Limited, the largest manufacturer of grey cement, white cement and ready-mix concrete in India, announced its commitment to the GCCA 2050 Cement and Concrete Industry Roadmap for Net Zero Concrete.

The Roadmap also includes a sectoral commitment to cut CO2 emissions by a further 25 per cent by 2030.

The GCCA has published a detailed 'Concrete Future' roadmap which sets out the path that the industry will follow to fully decarbonize by 2050, a target aligned with the Paris Agreement to limit global warming to 1.5°C. "We at UltraTech are fully committed to work together with our partners and stakeholders with the aim of achieving the Net Zero goal.

The 'Concrete Future' roadmap is built around a seven-point plan that relies on ambitious yet achievable actions to reduce the amount of CO2 intensive clinker in cement, significantly reduce fossil fuel use in manufacturing, and accelerate innovation in products, process efficiency and breakthrough technologies including carbon capture.



BIRLA WHITE-WALL CARE PUTTY



Voluntary initiatives commitment(i.eRE100,EP100,SBTi etc)

Championing Climate Action

UltraTech's commitment to GCCA's Net-zero Concrete Roadmap is in line with its ambitious sustainability targets and efforts to accelerate the decarbonisation of its operations. UltraTech has taken a holistic approach and has integrated low carbon strategy into its business conduct. It is scaling up investments in the development of innovative products and services, improving energy efficiency, increasing the share of renewable energy.

As part of its RE100 commitment led by the Climate Group in partnership with CDP, the Company aims to meet 100 per cent of its electricity requirement through renewables sources by 2050. Part of its EP100 initiative, UltraTech targets to double energy productivity by FY35, from the base year of FY10

UltraTech is leveraging Green Energy as a key enabler for decarbonisation. The Company aims to scale up its green energy mix to 34 per cent of its total power requirement by 2024. It is doing this by continuously improving energy productivity, scaling up use of renewable energy and reusing heat from its own operations

BIRLA WHITE-WALL CARE PUTTY Award and Recognition



Achievement



Best Energy and Environment
Conservation by district
Administration, Katni (M.P)
Date: 7 Nov 2022



Best International Customs Day
2023 by Commissioner of
Customs



BIRLA WHITE-WALL CARE PUTTY

Thank You



Mr.Anjani Kr.Pandey (Plant Head)

✉ anjani.k.pandey@adityabirla.com

☎ Contact No.:9938555810

Mr.Vipin Sharma - HOD Technical

✉ Vipin.sharma@adityabirla.com

☎ Contact No.:7976292081

Mr.Rajeev Kr - SH (QC)

✉ Rajeev.kr@adityabirla.com

☎ Contact No.:7726830551

Mr.Jayanta Chaudhary - SH (E&I)

✉ jayanta.chaudhary@adityabirla.com

☎ Contact No.:9669914819

