WELCOME

THE SUPREME INDUSTRIES LTD
JADCHERLA T.S

PLOT NO 24, 26 TO 40, 43 TO 45, 41(P), 42(P), 47(P) AND 48(P),
GREEN INDUSTRIAL PARK, JADCHERLA MANDAL, VILLAGE POLEPALLY,
DISTRICT- MAHABUBNAGAR, TELANGANA – 509301

CII National Award For Excellence In Energy Management 2023 (General Sector)

Team Member

1) Mr. Vasudev Sharma(Sr. G.M ENERGY & ENVIRNOMENT)
2)Jayant Sawant (Plant Head)
3)Mr. Lakshamane Gowda KR (HOD- Maintenance)
4)Siddharth Srivastava(Manager – Energy)

THE SUPREME INDUSTRIES LTD - OVERVIEW

KEY FIGURES AT A GLANCE

FOUNDED IN
1942

PLANTS
28

OFFICES
8

5400+ WORKFORCE GENERATED

INR 9200 CRORES

3155.38
LAKHS -TOTAL KWH CONSUMED

194220 TCO_2
TOTAL EMISSION

TRIPLE
CERTIFICATION
ISO 14001, 45001, 50001

120.01
LAKHS KWH

95395 TCO_2
EMISSION SAVED FROM
2019-20 ONWARDS

324.66
LAKHS KWH

28.04
MWP

GROUP'S BUSINESS VERTICALS

Plastic Piping Division

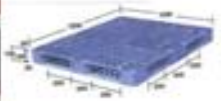
Consumer Products

Packaging Products

- Specialty Films
- Protective Packaging Products
- Cross Laminated Film Products

Industrial Products

- Industrial Components
- Material Handling Division
- Composite LPG Cylinders



GROUP'S VISION AND MISSION

Vision

- **Energy Efficiency Improvement**
- Decarbonization by increase share of **Renewable energy**
- **Carbon Neutral**
- **Moving towards Circularity**
- **Sustainable** Sourcing
- **Zero Liquid Discharge**-Stop the drain
- Improving water table by recharging ground water

Mission

- Certification of all units ISO 50001:2018 by year 2024-25
- All plants to be certified ISO 14001, , ISO 45000 by year **2023-24.**
- Increase the usage of renewable energy from **12% -25% by year 2024-25.**
- **RE 100: Chennai and Hosur Plants by 2024**
- **Energy Efficiency improvement 2 % to 3% YoY.**
- **Water Positive**

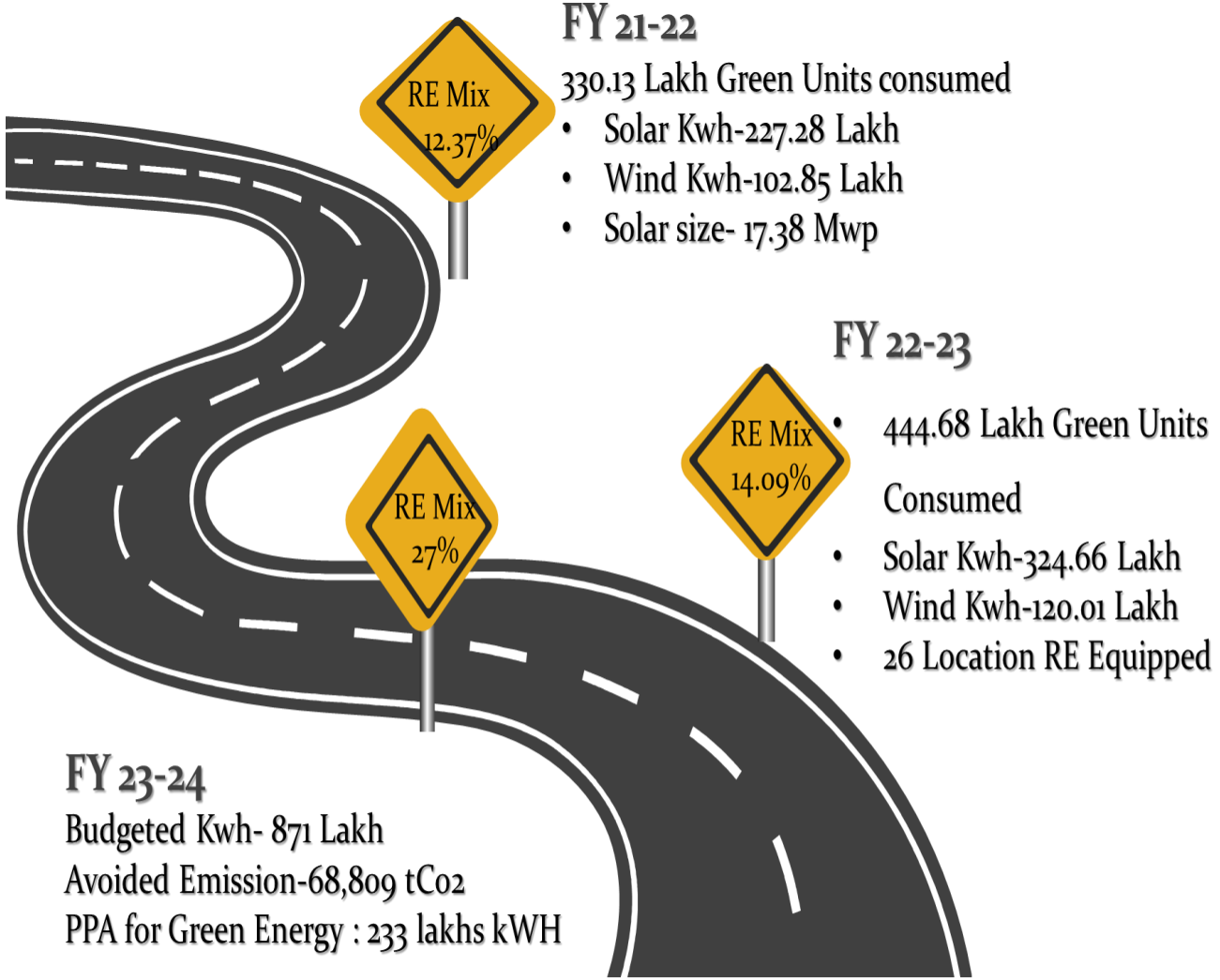
SAVE RESOURCES FOR FUTURE GENERATIONS

ORGANIZATION LAKSHYA & ROAD MAP

All 28 Units RE presence by FY 23-24*

Towards RE 100 : Chennai and Hosur

25% Green Units Mix by FY 2024-25*



FY 21-22

330.13 Lakh Green Units consumed

- Solar Kwh-227.28 Lakh
- Wind Kwh-102.85 Lakh
- Solar size- 17.38 Mwp

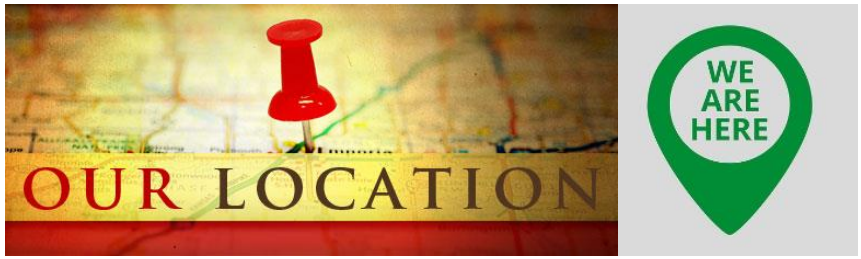
FY 22-23

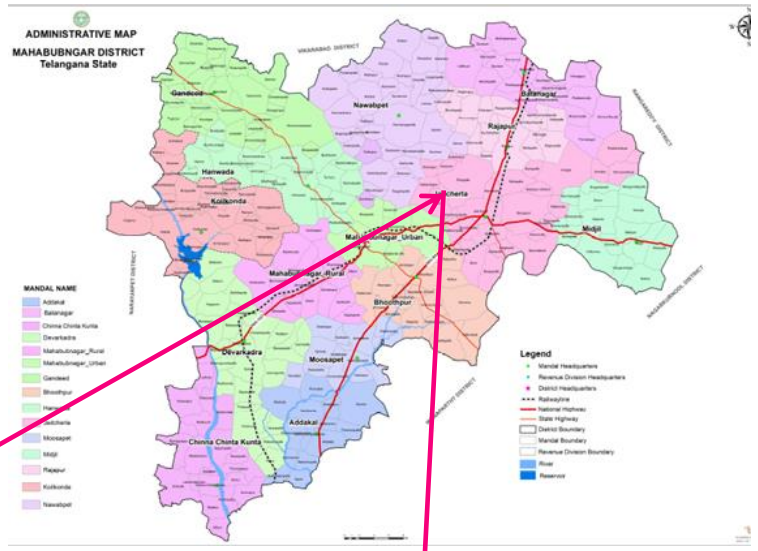
- 444.68 Lakh Green Units Consumed
- Solar Kwh-324.66 Lakh
- Wind Kwh-120.01 Lakh
- 26 Location RE Equipped

FY 23-24

Budgeted Kwh- 871 Lakh
Avoided Emission-68,809 tCo2
PPA for Green Energy : 233 lakhs kWH

THE SUPREME INDUSTRIES LTD –
JADCHERLA , TELANGANA



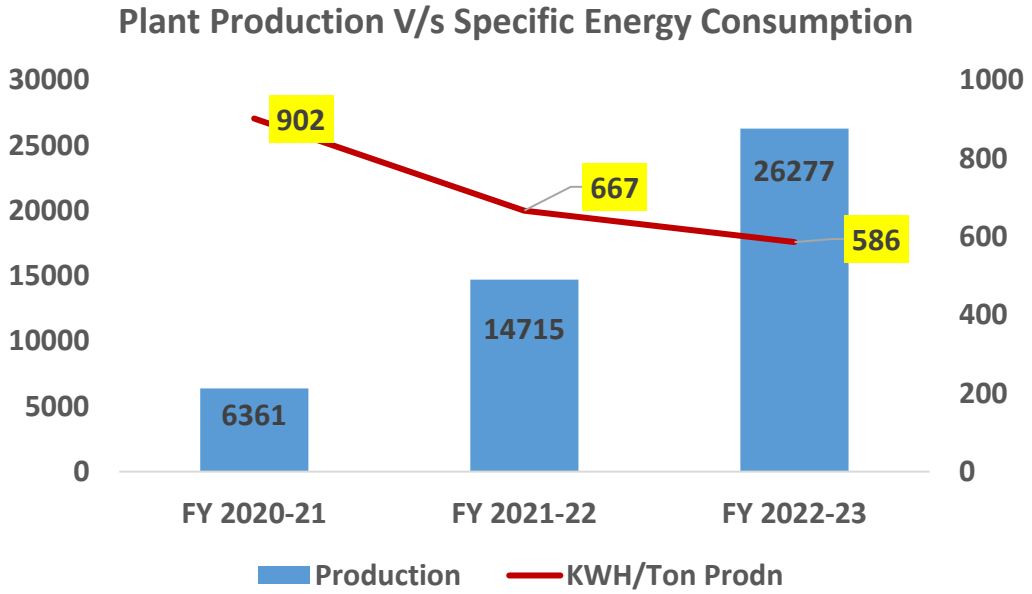


PLANT OVERVIEW – TSIL JADCHERLA

- Pipe Division Products : PVC Pipes, Fittings, Furniture, Material Handling & Water storage tanks
- Machine : 14 Extruder For Pipe Making
- Mixer : 2 Nos For Raw Material Mixing And Compounding
- Grinder: 5 Nos, Pulverizer : 4nos, Shredder 1no
- Furniture And Crate Injection Molding Machine – 6 Nos
- PE Fittings Injection Molding Machine – 27 Nos
- Rotational Molding : 2 *Machines For PVC Tank Manufacturing
- Transformer : 4 * 2500 Kva Each
- DG Set : 2* 1500 Kva Each
- Compressor : 300CFM 1no, 130CFM 7nos,110cfm 1no & 65CFM 1no
- Chiller : 200TR * 2 Nos, 100TR 2 Nos, 50TR 1no, 29TR 1 No, 10TR 1no, 5TR 2nos
- Cooling Tower : 260CMH 1no, 180CMH 2nos, 120CMH 3nos, 15CMH 2nos

JADCHERLA - SPECIFIC ENERGY CONSUMPTION

THE SUPREME IND. LTD Jadcherla PERFORMANCE			
FY	UNIT CONSUMPTION IN KWH	PRODUCTION IN MT	KWH/MT
2020-21	57,34,853.00	6,361.18	901.54
2021-22	98,07,586.85	14,714.59	666.52
2022-23	1,53,98,951.00	26,277.00	586.02

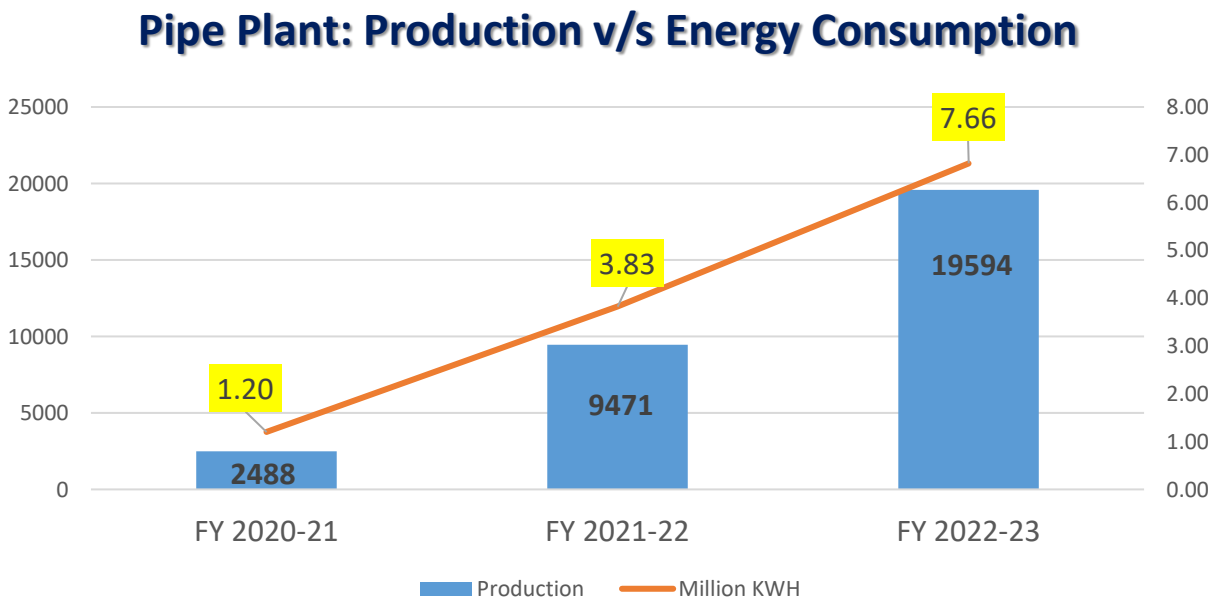


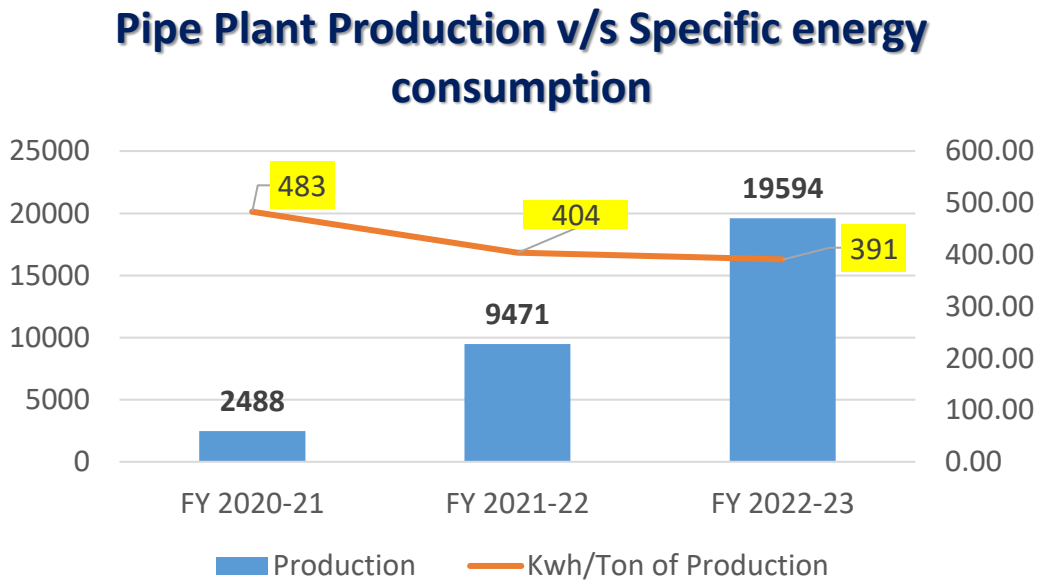
Manufacturing –

1. PVC PIPES,
2. FITTINGS,
3. FURNITURE,
4. MATERIAL HANDLING
5. WATER STORAGE TANKS

JADCHERLA - SPECIFIC ENERGY CONSUMPTION (PIPE PLANT)

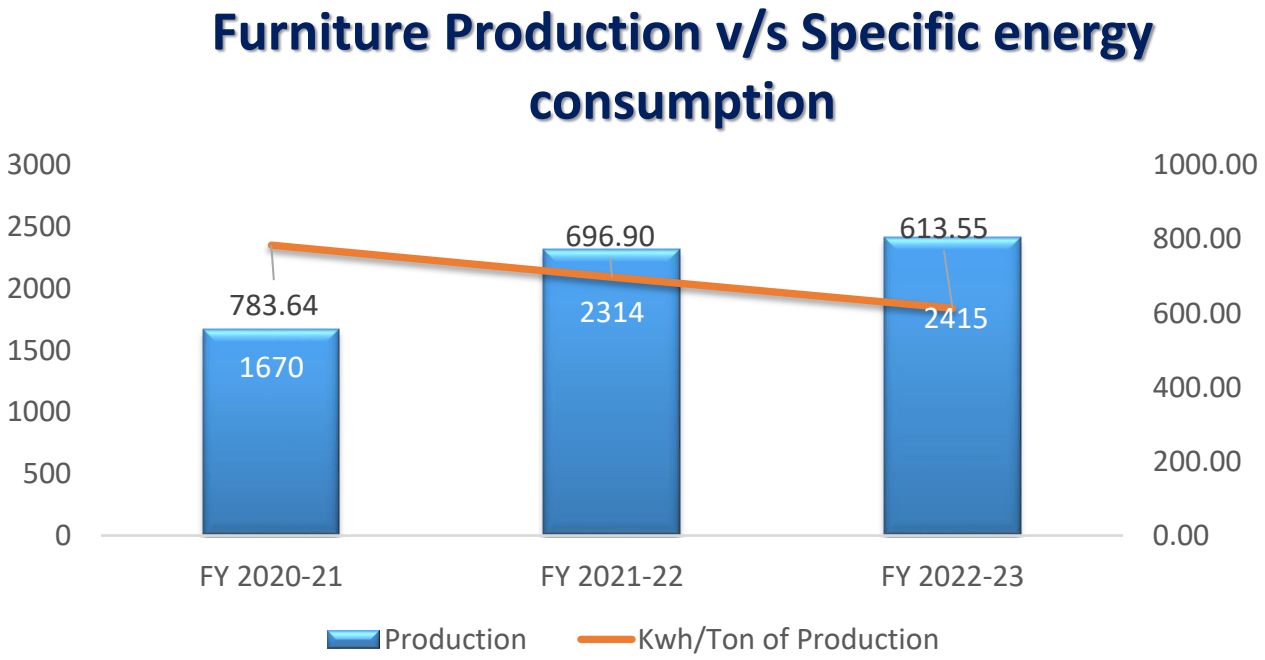
PIPE PLANT PLANT			
FY	UNIT CONSUMPTION IN KWH	PRODUCTION IN MT	KWH/MT
2020-21	12,02,525.2	2,488.1	483.3
2021-22	38,25,166.0	9,471.0	403.9
2022-23	76,58,476.0	19,594.3	390.9





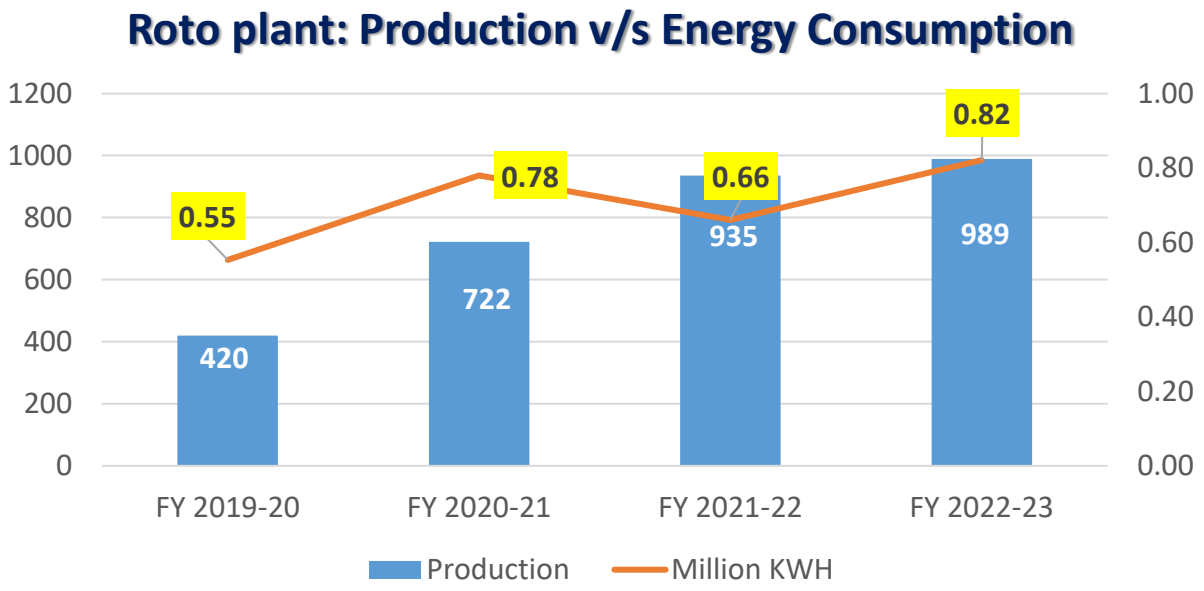
JADCHERLA - SPECIFIC ENERGY CONSUMPTION (FURNITURE)

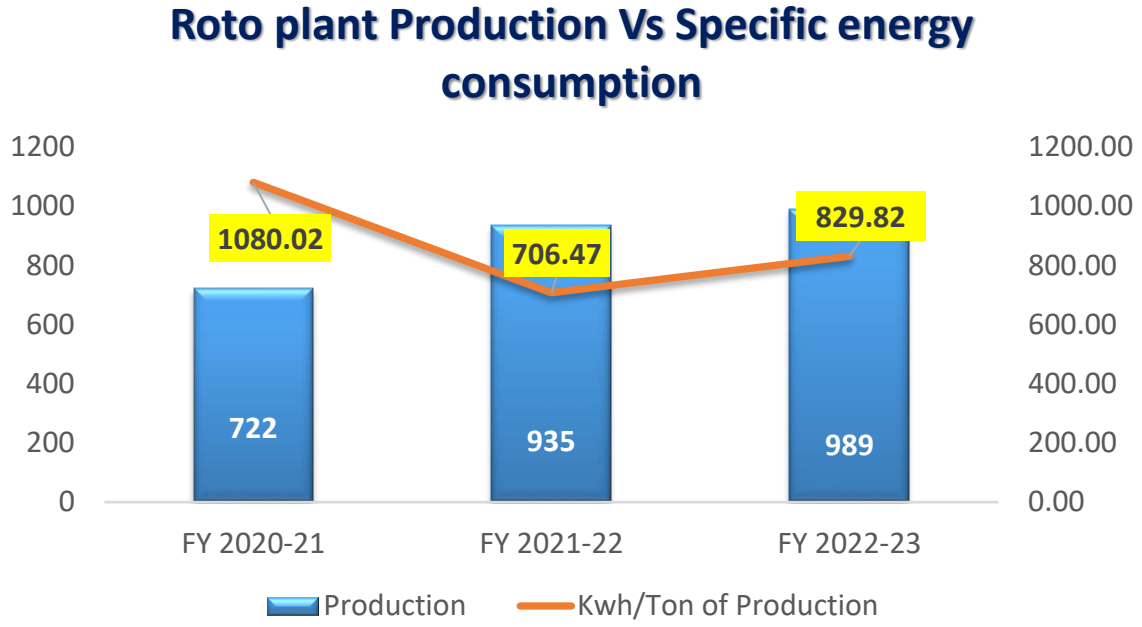
FURNITURE PLANT			
FY	UNIT CONSUMPTION IN KWH	PRODUCTION IN MT	KWH/MT
2020-21	13,08,527.78	1,669.80	783.64
2021-22	16,12,391.20	2,313.65	696.90
2022-23	14,81,947.78	2,415.38	613.55



JADCHERLA - SPECIFIC ENERGY CONSUMPTION (ROTO PLANT)

ROTO PLANT PLANT			
FY	UNIT CONSUMPTION IN KWH	PRODUCTION IN MT	KWH/MT
2020-21	7,79,776.00	722.00	1,080.02
2021-22	6,60,550.00	935.00	706.47
2022-23	8,21,103.23	989.49	829.82

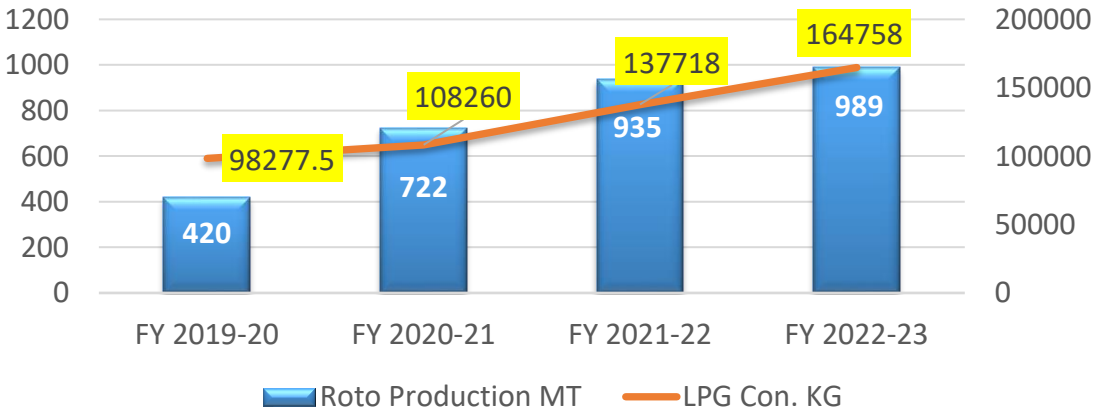




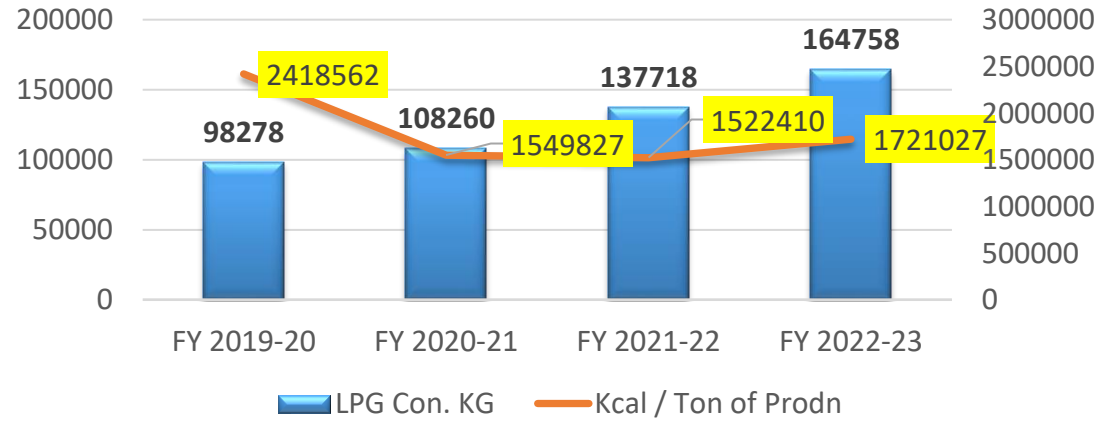
JADCHERLA - THERMAL SPECIFIC ENERGY CONSUMPTION

Year	Roto Production MT	LPG Con. KG	LPG KG/MT Production	Kcal/MT Of Production
FY 2019-20	420	98278	234	2418562
FY 2020-21	722	108260	150	1549827
FY 2021-22	935	137718	147	1522410
FY 2022-23	989	164758	167	1721027

Roto Plant Production Vs LPG Consumption



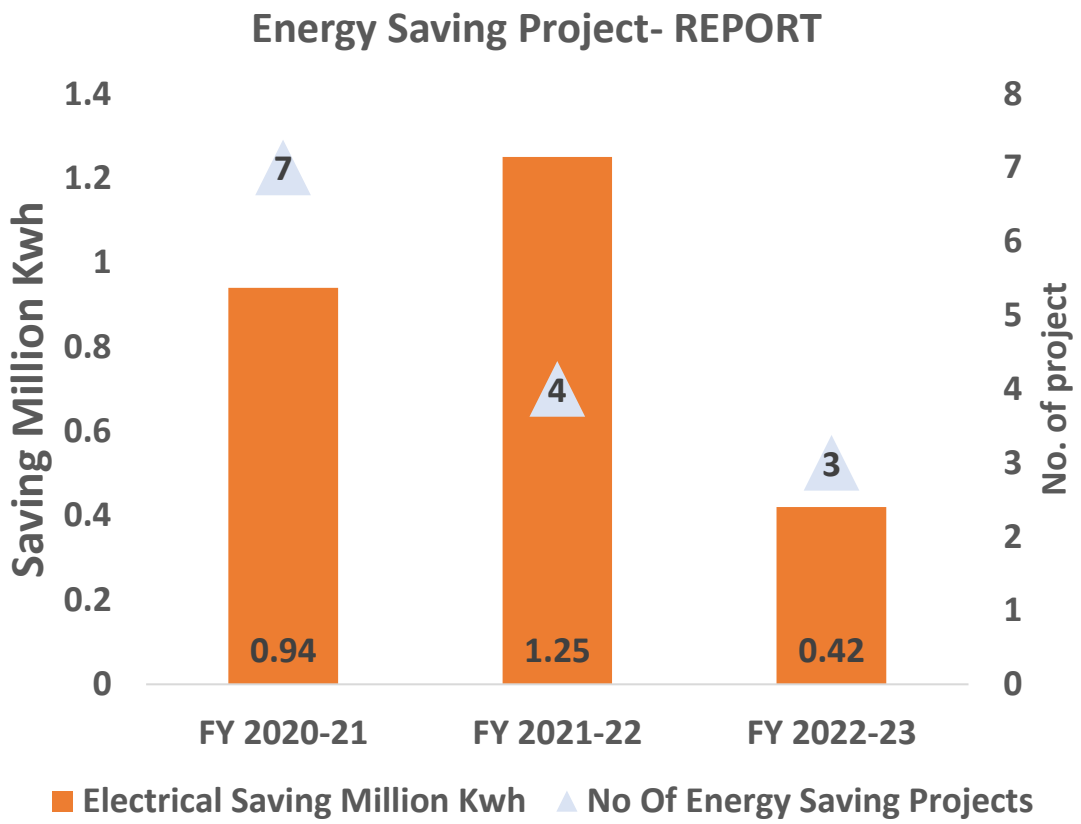
Roto Plant Production Vs Thermal SEC



JADCHERLA - ENERGY SAVING PROJECT (2020-23)

Energy Saving Project Last Three Years			
Year	No Of Energy Saving Projects	Electrical Saving Million Kwh	Total Saving(INR Millions)
FY 2020-21	7	0.94	8.26
FY 2021-22	4	1.25	9.08
FY 2022-23	3	0.42	3.28

SUCESSFULLY COMPLETED – 14 MAJOR PROJECTS



JADCHERLA - ENCON SAVING PROJECT (2020-21)

ENERGY SAVING PROJECT FY-2020-21					
Sr. No.	**Project description**	**INVESTMENTS INR MILLION**	**ELECTRICAL SAVING MILLION KWH**	**TOTAL SAVING INR MILLION**	**PAY BACK PERIOD IN MONTHS**
1	Cooling System Conversion From Induced Draft To Natural Mist Cooling	1.55	0.091	0.8	19
2	Pump Selection Design Optimisation	0.4	0.042	0.37	10
3	Power Optimisation Of Chiller Through Vfd	1.36	0.172	1.52	9
4	Energy Efficient Transformer Selection	2	0.048	0.174	13
5	Energy Efficient Lighting System With Timer & Occupancy Base Control	3	0.481	2.37	12
6	Motor Efficiency Optimisation -Ie3 Motor Installation	3.1	0.364	28.30	12
7	33 Kv Independent Feeder Installation For Good Power Quality & System Improvement	15	0.200	1.7	64

JADCHERLA - ENCON SAVING PROJECT (2021-22)

ENERGY SAVING PROJECT FY-2021-22					
Sr. No.	**Project Description**	**Investments Inr Million**	**Electrical Saving Million Kwh**	**Total Saving Inr Million**	**Pay Back Period In Months**
1	Compressor Utilisation Through Feedback Control Vfd	0.90	2.16	**1.57**	**6**
2	Reactive Power Management (Maintain Unity Power Factor To Reduce Energy Distribution Loss)	7	6.21	**7**	**15**
3	Energy Efficient Lighting System With Timer & Occupancy Base Control	3	4.81	**3**	**13**
4	Power Saving With Implementing Vfd For Process Water Pumps	0.28	0.88	**0.64**	**4.5**

JADCHERLA - ENCON SAVING PROJECT (2022-23)

Energy Saving Project Fy-2022-23					
Sr. No.	**Project Description**	**Investments Inr Million**	**Electrical Saving Million Kwh**	**Total Saving Inr Million**	**Pay Back Period In Months**
1	Process Optimisation With Servo Control System & Multiple Stage Pump Designing	15	0.38	3.5	38
2	Temperature Feedback Control On Cooling Tower	0.04	0.0063	0.049	8
3	5 Star Inverter Ac System	0.22	0.114	0.22	5

OVERVIEW ACTION TAKEN FOR ENERGY SAVINGS

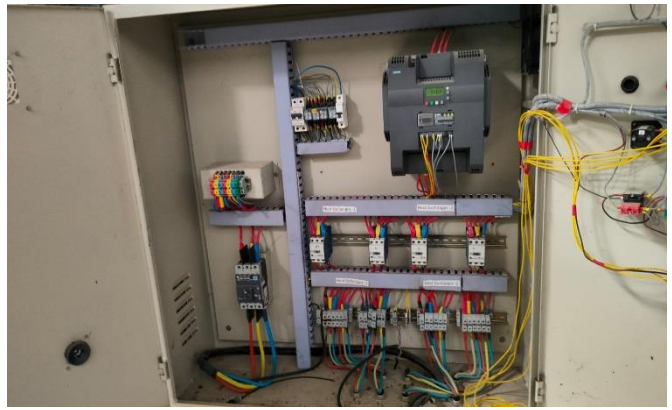
- Using high efficiency motors IE3
- 100% LED Lamps are used in the plant,
- Auto operational external lightings operation
- Solar power plant installed
- Servo motor based injection moulding machine commissioned in the plant
- Energy management system used for analysis
- Installed the reactive energy management (capacitor Bank) & hybrid system
- Inverter 5star rating Air condition installed
- Turbo vent installed at all building roof tops
- Natural lights utilization for production area and office area considered in building design stage itself

JADCHERLA - KAIZEN

MIST COOLING TOWER

VFD BASED CHILLER

IE3 MOTORS



VFD OPTIMISATION

JADCHERLA - KAIZEN

EXPRESS FEEDER

HT & LT POWER FACTOR COMPENSATOR SYSTEM

JADCHERLA - KAIZEN

VFD OPERATED COMPRESSOR SYSTEM

NEW 5 STAR INVERTER ENERGY EFFICIENT AC SYSTEM

33 Kv Independent Feeder Installation For Good Power Quality & System Improvement

Sl.No	Description	UOM	
1	Average Power consumption / Day	KWH	40000
2	Unit consumption / Hr	KWH	1667
3	One interuption - 2 changer over avg 1 hrs waste of power	KWH	1667
4	Expected interuption without Dedicated feeder avg./Month	No	10
5	Power Loss / Month	KWH	16667
	Unit saved / Annum	**KWH**	**200000**

Unit Rate
₹ 8.14

Energy Cost saving
₹ 16.28 Lac

Cooling System Conversion From Induced Draft To Natural Mist Cooling

Description	UOM	Value
Mist Cooling tower size	TR	500
Fan Capacity required for the cooling tower size	KWH	15
RUNNING Fan Capacity required KW	KWH	14
Unit consumption / day	KWH	345
Units consumption / Annum	KWH	107520
Net unit consumption / Annum	**KWH**	**107520**

Unit Rate

₹ 8.14

Energy Cost saving

₹ 8.75 Lac

ENERGY SAVINGS PLAN FOR FY 23-24

Plan Energy Saving Project Fy-2023-24					
Sr. No.	**Project Description**	**Investments Inr Million**	**Electrical Saving Million Kwh**	**Total Saving Inr Million**	**Pay Back Period In Months**
1	Energy Management system Upgradation	0.00	Enhancing Energy monitoring system	00	00
2	Barrel heater replaced with IR heaters	0.09	0.022	0.17	6
3	Addition Hydro-Pneumatic system for process water pumps(HDPE and CPVC)	3.00	0.14	1.08	32
4	Chiller plant manager - Chillers optimum utilization	1.00	0.105	0.82	14
5	Centralized vacuum system for Extruders	3.50	0.11	0.87	44
6	Modification / Replacement of BLDC Ceiling fans	0.25	0.011	0.08	13
7	VFD based pumping for Mixer process water pumps with optimum utilization	0.10	0.016	0.12	8
	Total	**7.94**	**0.404**	**3.14**	

TSIL ROOF-TOP SOLAR CAPACITY ACROSS PAN INDIA

Year	Cumulative Capacity (Kwp)
Upto 2019-20	**6,423.52**
2020-21	**8,907.82**
2021-22	**17,388.46**
2022-23	**28,054.95**

INSIGHTS : RE – JADCHERLA

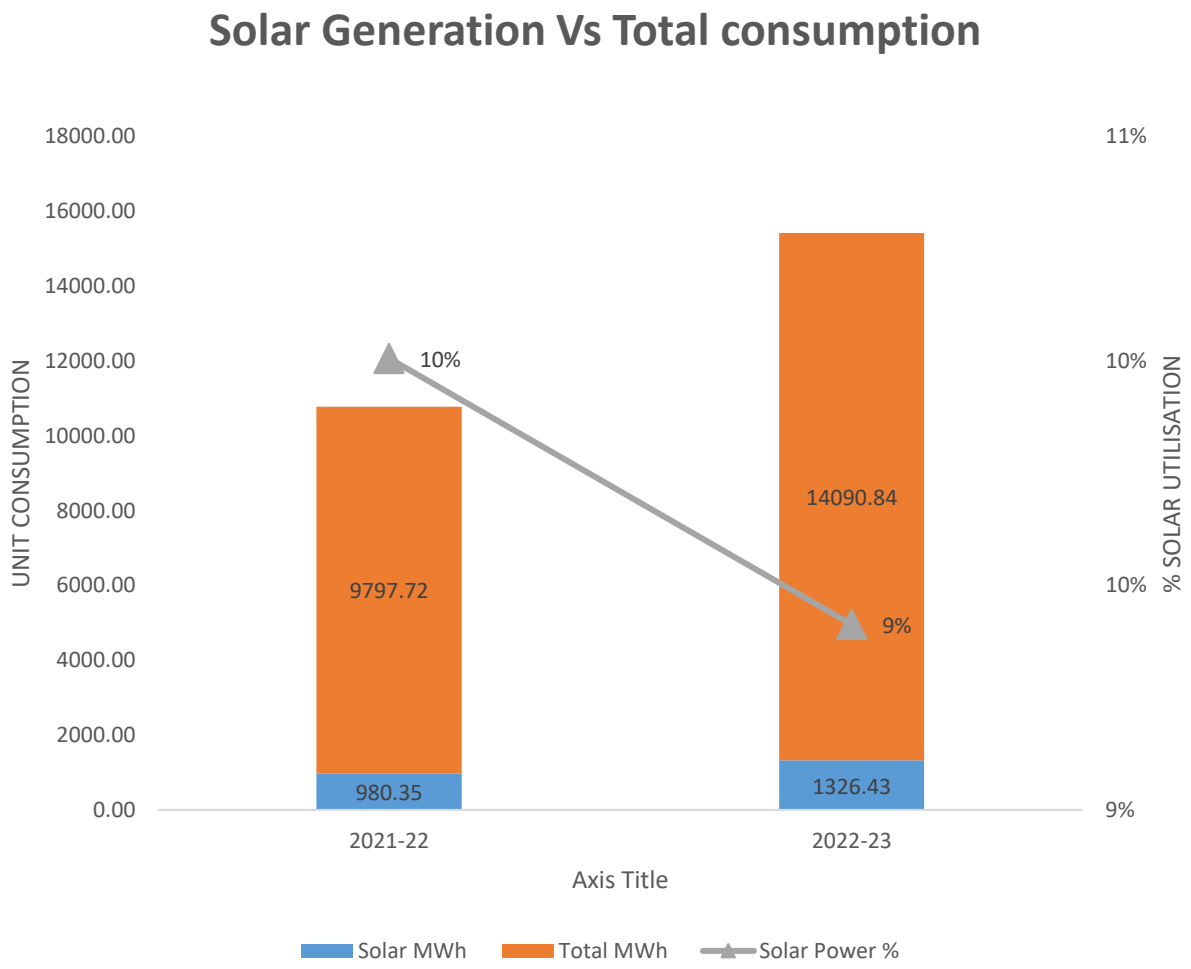
1 MWp Onsite Solar Power Plant

INSIGHTS : RE – JADCHERLA

MONTH	ENERGY KWH	DG KWH	SOLAR POWER KWH	TOTAL KWH	Solar Power %	Solar Power % without DG
2021-22	8808930	8433	980353.85	9797717	10%	11%
2022-23	12755260	9147	1326434	14090841	**9%**	**10%**

Installed Capacity **1MW (978 Kw DC/836 Kw AC)**

Type **Onsite generation**



COMMISSION OF RENEWABLE ENERGY PROJECT -1 MW DC SYSTEM

Description	UOM	Total
Solar plant Capacity	KWp	1000
Solar Power Unit generation	KWH	980354
Solar energy cost	4.28	4195914
TSSPDCL Energy Cost	7.29	7146780
Amount Saving		**2950865**

TSSPDCL ₹ 8.14

Solar: ₹ 4.28

Annual energy cost saving

₹ 29.50 Lac

GAINS ACHIEVED : RE – JADCHERLA

Approx. 13.26 lakhs onsite generation
Green kWh consumed (approx. 9~10% of total requirement)

986 tCO2 avoided emission

INNOVATION - JADCHERLA

- Reactive Power Management (Maintaining Unity Power Factor To Reduce Energy Distribution Loss)

	Without Reactive power manager				With Reactive power managed PF		
FY	KWH	PF	KVA	KVAR	With Reactive power managed PF	KVA(@0.999)	KVAR(@0.999)
2021-22	88,08,930	0.9800	89,88,704	1,79,774.1	0.9999	8809811	881
					Saved Units	KVA	178893

Unit Rate
₹ 7.29

Energy Cost saving
₹ 13.04 Lac

WASTE MANAGEMENT SYSTEM - JADCHERLA

S.No	Financial Year	Type of Waste	UOM	Quantity	Disposal Method
1	2019-20	Plastic waste (Woven Sack)	KG	8155	Sold to Government Authorized Vendor
2	2019-20	Wooden (Packing Material)	KG	6890	
3	2019-20	Metal Scrap	KG	11210	
4	2019-20	Waste Oil	LTR	0	
Net Quantity of Year 2019-20				26255	
5	2020-21	Plastic waste (Woven Sack)	KG	28461	Sold to Government Authorized Vendor
6	2020-21	Wooden (Packing Material)	KG	19735	
7	2020-21	Metal Scrap	KG	1360	
8	2020-21	Waste Oil	LTR	32	
Net Quantity of Year 2020-21				49588	
9	2021-22	Plastic waste (Woven Sack)	KG	55856	Sold to Government Authorized Vendor
10	2021-22	Wooden (Packing Material)	KG	70825	
11	2021-22	Metal Scrap	KG	10670	
	2021-22	Waste Oil	LTR	3000	
Net Quantity of Year 2021-22				140351	
9	2022-23	Plastic waste (Woven Sack)	KG	107225	Sold to Government Authorized Vendor
10	2022-23	Wooden (Packing Material)	KG	45320	
11	2022-23	Metal Scrap	KG	8705	
	2022-23	Waste Oil	LTR	1800	
Net Quantity of Year 2022-23				443752	

INSIGHTS : WASTE MANAGEMENT

Plastic Waste	E-waste	Spent Oil	Horticulture Waste	Other Wastes
• During the FY 2022-23, approx. 26435 MT of plastic waste was generated during the manufacturing process. • Grinding equipment is installed • With this we achieve **100 % recycling** of the plastic waste thereby reducing the improving the resource efficiency	• Separate yard collection provided • Handed over to the authorized vendor	• Generated from machine operations, DG sets, forklifts and compressors. • Form X Manifest is submitted to the regularly • CTO Authorization for storage • Handed over to authorized vendor	• Vermin-composted within the unit • Used as manure in the landscaping	• Metal scrap, idle wooden box , empty sack bags are sold to the third party vendor • Food waste from canteen is being send to the nearby piggeries

HOW DO WE RECYCLE THE PLASTIC WASTE

Grinder Machine

Plastic Waste

Uniform Sizing

Mixing with Virgin Raw Material

Used in Manufacturing

Process – Slotting, Cutting, Threading, Chipping

Rejected Product/ Runner

SAFETY TRAINING AND MOCK DRILLS

Fire Mock Drill

- A robust system is put in place for the continual trainings and capacity building
- Trainings related to the Fire Safety and Fire Mock Drills are imparted on every 2 months basis
- This ensures awareness in workers and employees in case of probable hazards

Session on Fire Safety

GHG INVETORISATION AND PUBLIC DISCLOSURE

Company listed at stock exchange and GHG data available in BRSR along with Annual report.

Scope of emission

Scope-1- emission from owned resources i.e. Diesel consumed in DG sets, petrol/diesel in vehicle, LPG combustion, refrigerant.

Scope-2- Energy Purchased From Discom

Scope-3- T&D losses from Discom, upstream fuel transport, employee commute, upstream transportation, downstream transportation.

GHG PROFILE JADCHERLA– FY 2022-23

10002 $TCO_{2\,(e)}$ Total Emission	**671 $TCO_{2\,(e)}$** Scope 1 Emission	**9331 $TCO_{2\,(e)}$** Scope 2 Emission
26,435 MT Production	**0.38 TCO_2/MT** Emission Intensity	**986 TCO_2** Avoided Emission

TREE PLANTATION DRIVE – ENVIRONMENT DAY 2023

TSIL-Jadcherla

Planted
120
New Plant Saplings

Bureau Veritas Certification

THE SUPREME INDUSTRIES LIMITED

Supreme® People who know plastics best

Plot No. 24, 26 to 40, 43 to 45, 41(P), 42(P), 47(P), 48(P), GIP JADCHERLA,
VILLAGE POLEPALLY, DIST. MAHABUBNAGAR – 509 301, TELANGANA, INDIA.

Bureau Veritas Certification Holding SAS – UK Branch certifies that the Management System of the above Organisation has been audited and found to be in accordance with the requirements of the Management System Standards detailed below.

Standards

ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018

Scope of certification

Manufacture and Dispatch of UPVC Pipes, CPVC Pipes, HDPE Pipes, Monolayer & Multilayer PEX Pipes, Compression & Electrofusion PE Fittings, Roto Moulded Water Tanks, Plastic Moulded Furniture, Material Handling Products and Protective Packaging Products.

Original cycle start date:	**21 June 2023**
Expiry date of previous cycle:	**Not Applicable**
Certification Audit date:	**25 February 2023**
Certification cycle start date:	**21 June 2023**

Subject to the continued satisfactory operation of the Organisation's Management System, this certificate is valid until: **20 June 2026**

Certificate No. **IND.23.5119/IM/U** Version: **1** Issue date: **21 June 2023**

Signed on behalf of BVCH SAS UK Branch
Jagdheesh N. MANIAN
Director – CERTIFICATION, South Asia
Commodities, Industry & Facilities Division

For certificate authenticity, click here
https://certcheck.ukas.com/

ISO 9001	IN043384
ISO 14001	IN043383
ISO 45001	IN043382

UKAS MANAGEMENT SYSTEMS 0008

Certification body address: 5th Floor, 66 Prescot Street, London, E1 8HG, United Kingdom.

Local office: Bureau Veritas (India) Private Limited (Certification Business) 72 Business Park, Marol Industrial Area, MIDC Cross Road "C", Andheri (East), Mumbai – 400 093, India.

Further clarifications regarding the scope of this certificate and the applicability of the management system requirements may be obtained by consulting the organisation.
To check this certificate validity please call **+ 91 22 6274 2000.**

ISO 50001:2018 CERTIFICATION AUDIT SUCCESSFULLY COMPLETED AWAITING FOR CERTIFICATE

Supreme People who know plastics best

ENERGY POLICY

THE SUPREME INDUSTRIES LIMITED (Supreme) IS COMMITTED AND PLEDGED TO CONSERVE ENERGY JUDICIOUSLY IN ALL ITS PROCESSES, PRODUCTS AND SERVICES ACROSS THE ORGANIZATION. WE SHALL ENDEAVOUR TO TRANSFORM ENERGY CONSERVATION INTO A STRATEGIC BUSINESS GOAL FULLY ALIGNING WITH THE TECHNOLOGICAL ADVANCEMENTS BY IMPROVING THE SKILLS AND KNOWLEDGE OF OUR EMPLOYEES. THE OBJECTIVES TO ACHIEVE THE ENERGY SAVING ARE AS FOLLOWS :

- To reduce specific energy consumption in all our operations & activities by improving energy efficiency.
- Adopting best energy efficient technology equipment's available in the Global Market
- Committed to fulfill 35- 40% of the electricity demand through renewable sources by 2025.
- Committed to reduce the Carbon footprint GHG emission by 5% year on year basis upto 2025.
- To provide a framework EnMS Certification 50001 an focused documented approach for setting and reviewing objectives and Energy Targets.
- To improve Energy Performance and Energy Management system through Continual monitoring
- To encourage the supply chain partners for adopting sustainable sourcing of materials with low embodied energy.
- Energy conservation awareness program throughout the organization to ensure participation of all employees.
- Designing of new establishment & renovated facilities in line with better energy performance .
- To Commit & satisfy applicable legal requirements and other requirements related to energy efficiency, energy use and energy consumption.
- To Commit & ensure availability of information and necessary resources to achieve objectives and energy targets.

S. J. TAPARIA
(EXECUTIVE DIRECTOR)

ENERGY AND ENVIRONMENT TEAM

Corporate Team

Vasudev Sharma
Senior General Manager – Energy and Environment

Yogesh Gupta
Senior Manager – Energy and Environment

Shashank Srivastava
Manager – Energy and Environment

Siddharth Srivastava
Manager – Energy and Environment

- ISO 50001 handholding for implementation
- Sharing best practices to supplier
- Energy eff. Facility planning
- Upgradation to eff. Technologies
- Supplier training
- Process study and gap analyses
- Benchmarking
- Efficient O&M of utility/IT facilities
- Upgradation to eff. Technologies
- Process study Benchmarking
- Facilitate external training
- Participation in external events
- Rewards and recognition
- Green supply chain initiatives

Plant Team

JAYANT SAWANT
Plant Head

Maintenance	Production	Plant -Com	Purchase & HR
Mr. Lakshmane Gowda Mr. Abhishek Mishra Mr. Biswajit Behera	Mr. Somnath Mr. Nethaji Jena Mr. Gaurav Mishra Mr. Pravin Nayak Mr. Gunanidhi Pradhan Mr. Subhash Mr. Madhav Kini Mr. Gouse Pasha	Mr. Sharat Babu Mr. Kuldeep Chauhan	Mr. Mini Kumar Mr. Venkat Rao

- Daily monitoring & control
- Gap analyses
- Zero investment idea implementation
- Operational efficiency during fluctuating demand
- Idea generation
- Motivate employee involvement
- Training need identification


THANK YOU