Better Everyday

Confederation of Indian Industry

25th National Award for Excellence in Energy Management 2024

10 - 12 September 2024 HICC, Hyderabad

JSW STEEL COATED PRODUCTS LTD, TARAPUR WORKS, BOISAR

Amardeep Singh – Assistant General Manager

Awadhesh Mishra – Assistant General Manager

JSW GROUP

O. P. Jindal Group

- Mr. P R Jindal
  - Jindal Saw
- Mr. Sajjan Jindal
  - JSW
    - Steel
    - Energy
    - Infrastructure
    - Cement
    - Ventures
    - Coated Steel
- Mr. Ratan Jindal
  - Jindal Stainless
- Mr. Naveen Jindal
  - Jindal Steel & Power

Steel

Energy

Infrastructure

Cement

Ventures

Coated Steel

JSW Coated Capacity

JSCPL, Lassipora

- Color (PPGI/PPGL) – **0.12 MTPA ***

JSCPL, Vasind (1.93 MTPA)

- Capacity (GI/GL) **– 1.43 MTPA**
- **Color (PPGI/PPGL) – 0.60MTPA**
- **CRCA – 0.50 MTPA**

JSCPL, Tarapur (1.23 MTPA)

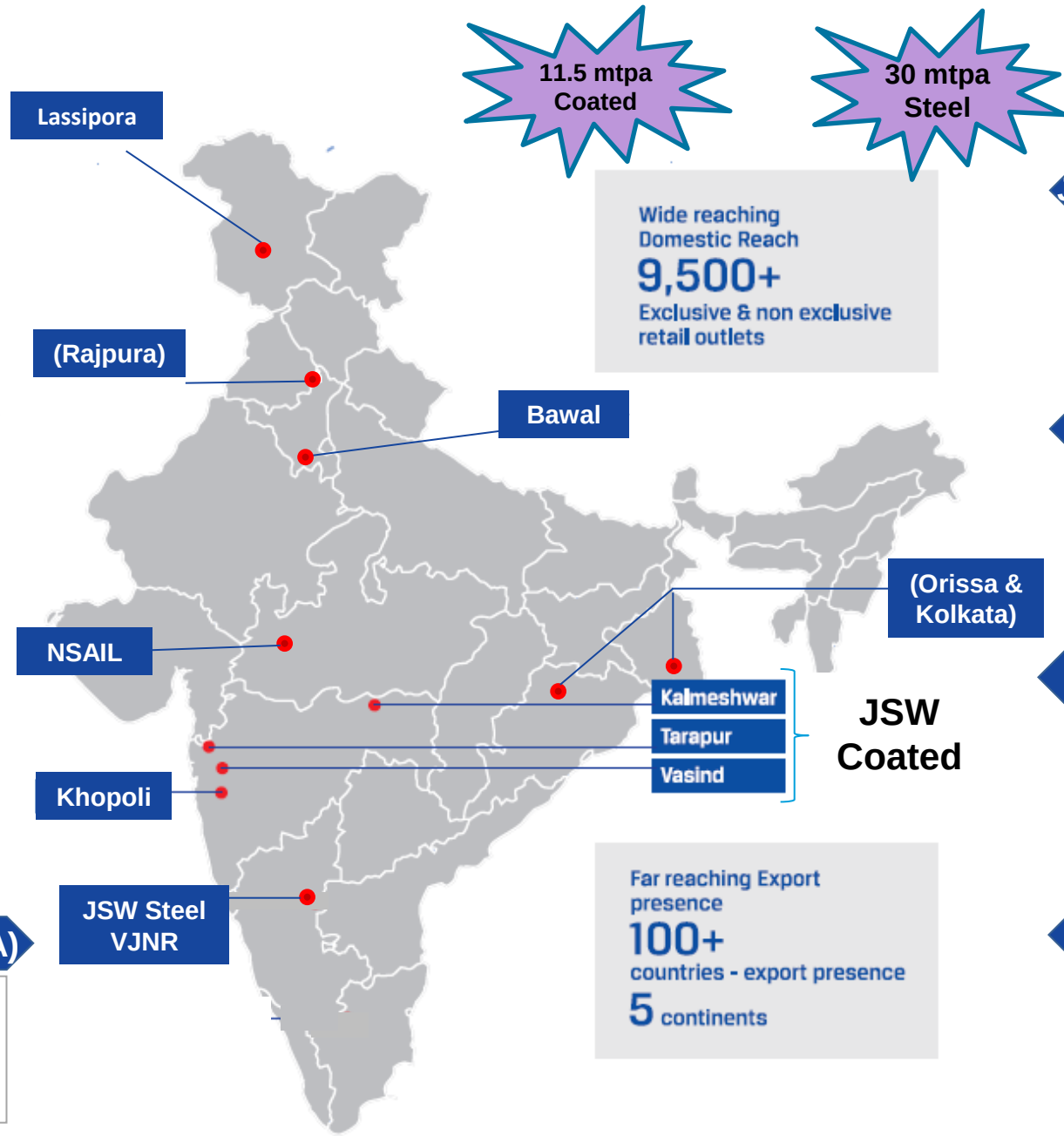
- Capacity (GI/GL) – **0.73 MTPA**
- Color (PPGI/PPGL) – **0.276 MTPA**
- Tin Plate – **0.425 MTPA**
- CRCA Capacity – **0.075 MTPA**

JSCPL, Kalmeshwar (0.96 MTPA)

- Capacity (GI/GL) – **0.96 MTPA**
- Color (PPGI/PPGL) – **0.55 MTPA**

JSW Steel, Vijayanagar (4.25 MTPA)

- Capacity (GI/GL) **– 1.30 MTPA**
- Color (PPGI/PPGL) – **0.30 MTPA**
- CRCA/ Si**– 2.95 MTPA**



JSCPL Bawal & Khopoli, (0.7 MTPA)

- GI/GL– **0.70 MTPA**
- Color (PPGI/PPGL) – **0.35 MTPA**

JSCPL Rajpura (0.12 MTPA)

- Color Coating – **0.306 MTPA**
- Tinplate – **0.12 MTPA**

BPSL Orissa & Kolkata (1.2 MTPA)

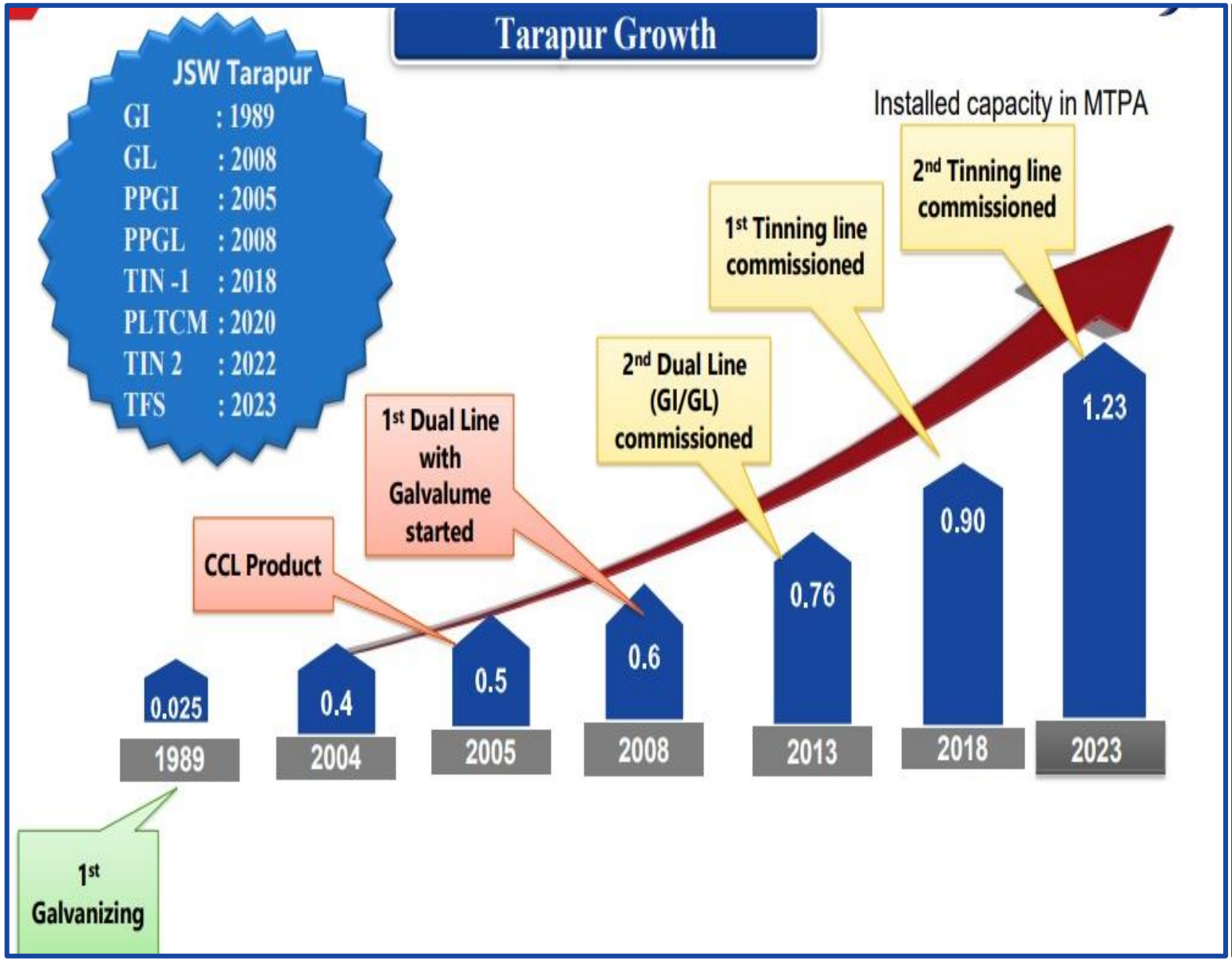
- Capacity (GI/GL) – **0.82 MTPA**
- Color (PPGI/PPGL) – **0.25 MTPA**
- **CRCA – 0.37 MTPA**

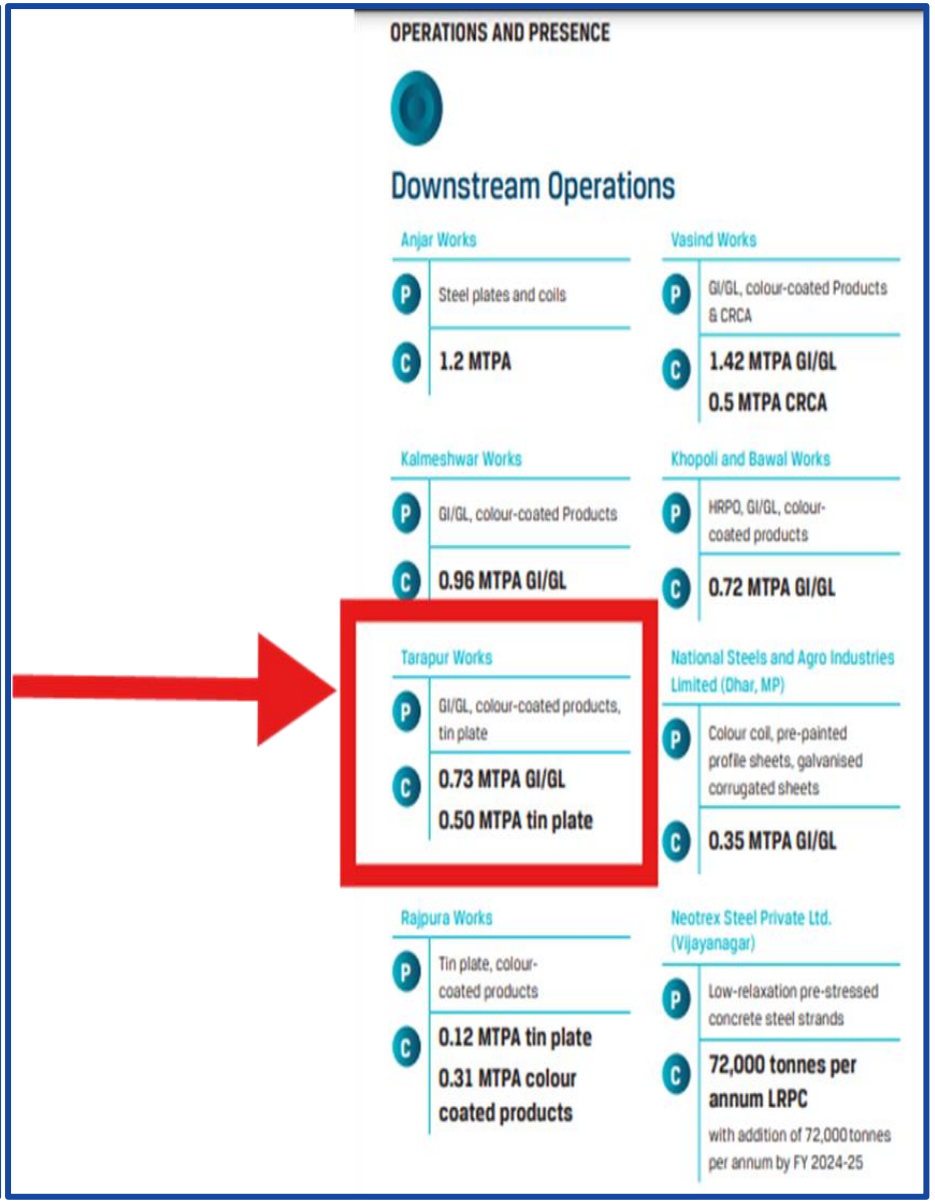
NSAIL, Indore (0.36 MTPA)

- Capacity (GI/GL) – **0.35 MTPA**
- **Color (PPGI/PPGL) – 0.15 MTPA**

TARAPUR PLANT LAYOUT

TARAPUR GROWTH





PROCESS FLOWCHART & PLANT FACILITIES

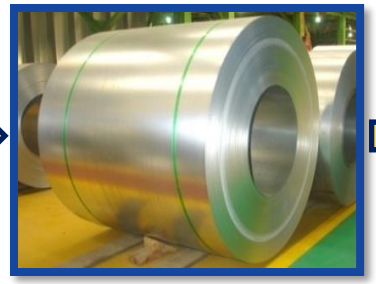
HOT Rolled Coil

Upstream Plant

Thru HR Slitter / Pickling

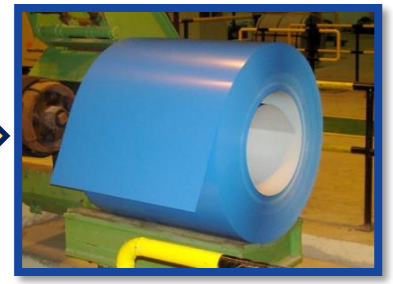
Cold Rolled

1.3 MTPA



Galvanized / Galvalume

0.73 MTPA



Color Coated

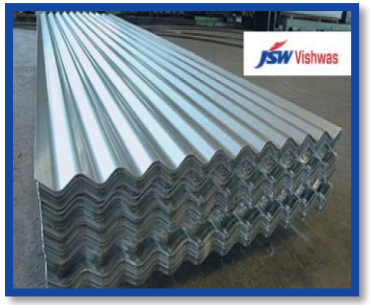
0.276 MTPA

CRCA

0.075 MTPA

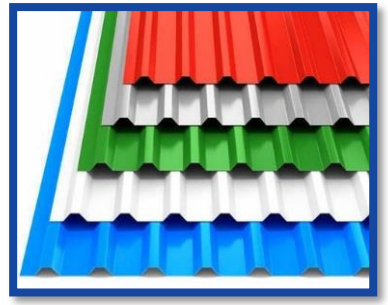
Electrolytic Tin

0.425 MTPA



Finishing

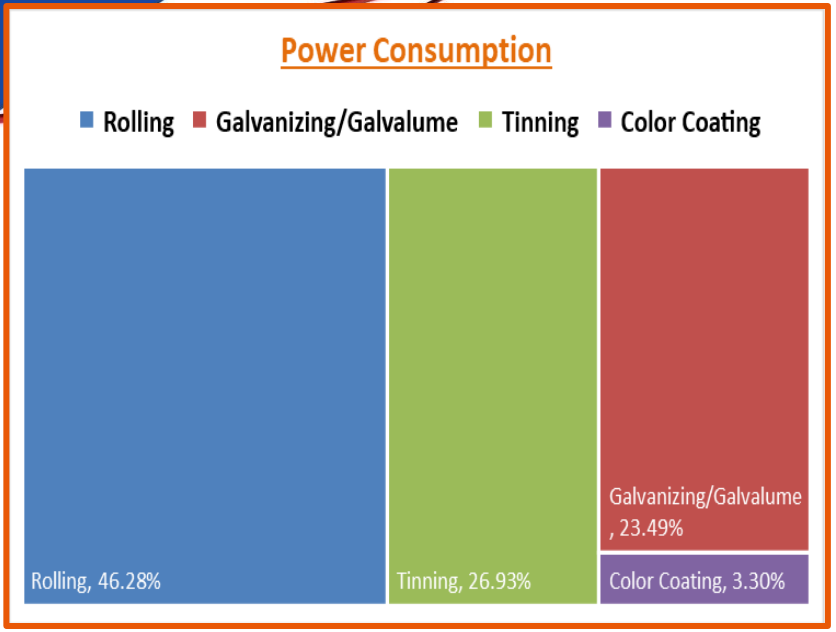
(CTL + Profiling)

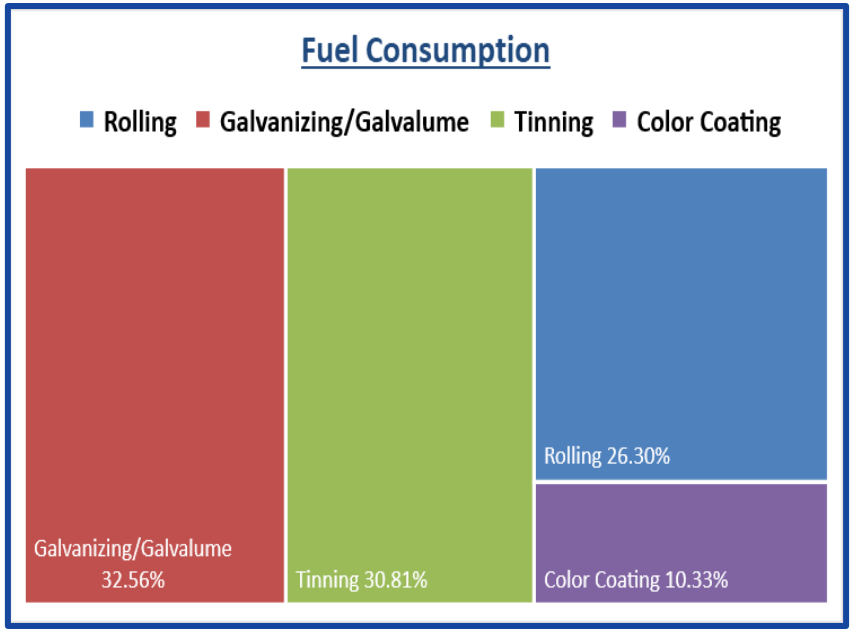


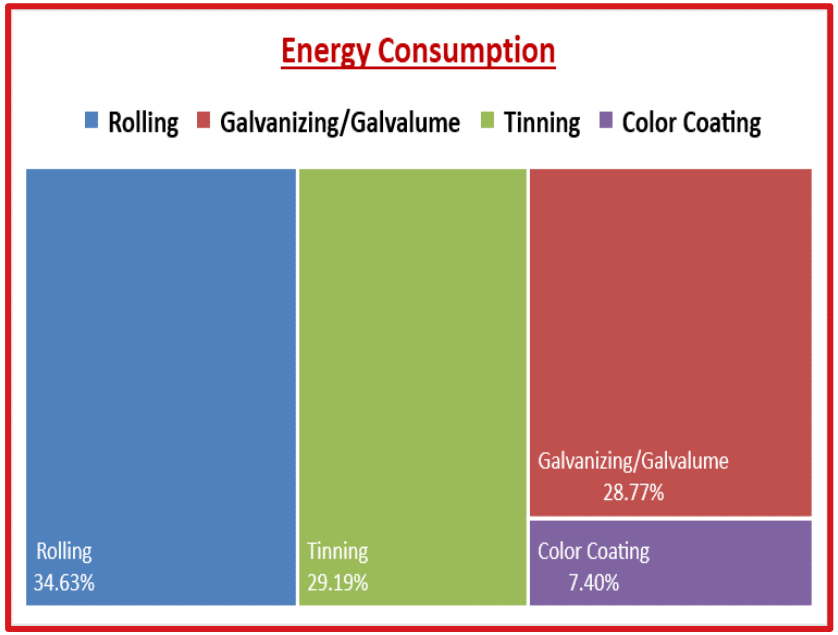
Finishing

(CTL + Profiling)

ENERGY CONSUMPTION OVERVIEW







Process	Power		Fuel		Total Energy	
	Consumption (Lakh kWh)	% Share	Consumption (mmbtu)	% Share	Consumption (Mtoe)	% Share
Rolling	1297.83	46.28	351922	26.30	20029.8	34.63
Galvanizing / Galvalume	658.65	23.49	435611	32.56	16641.8	28.77
Tinning	755.29	26.93	412247	30.81	16884.2	29.19
Color Coating	92.41	3.30	138279	10.33	4279.3	7.40
Total	2804.18	100	1338060	100	57835.1	100

Energy Mix

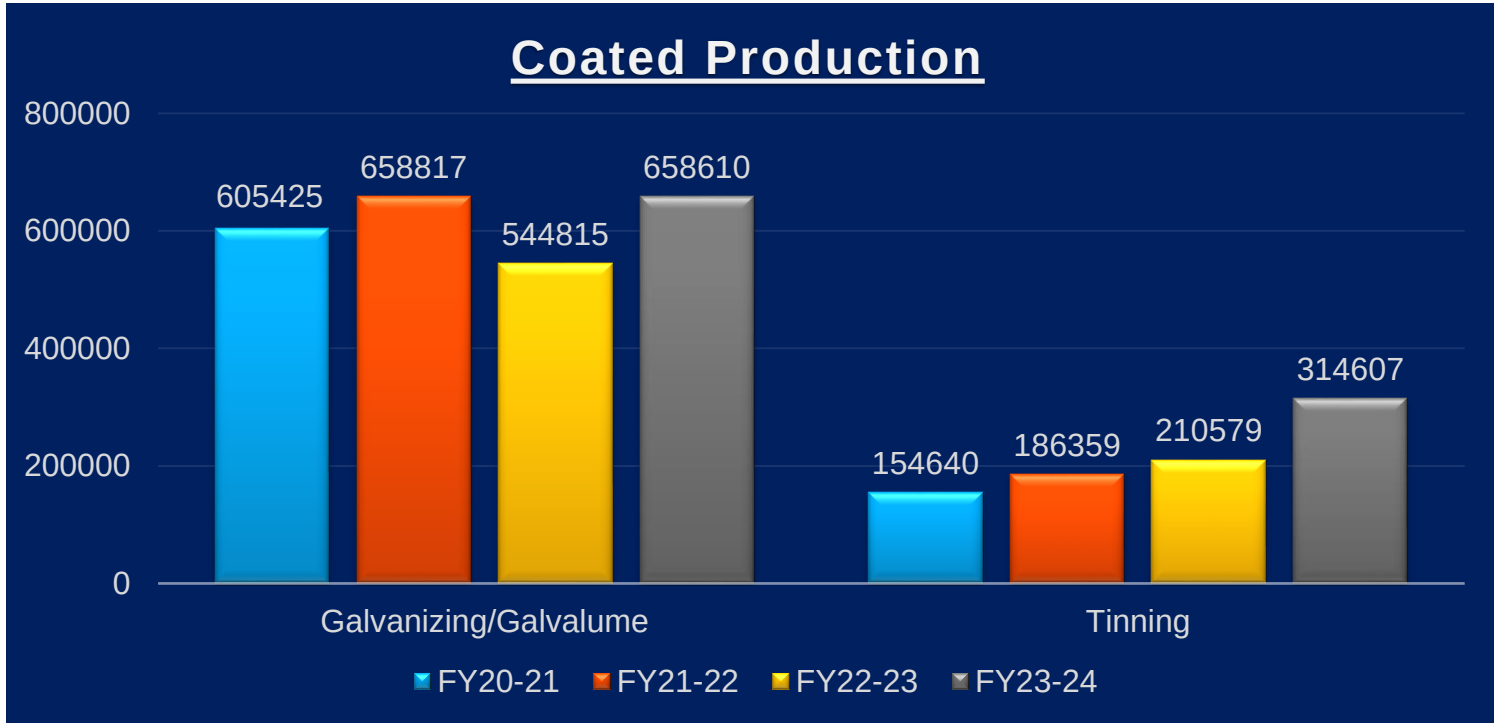
Power – 42%

Fuel - 58%

* FY24 – Energy Data

PLANT CAPACITY UTILIZATION / SPECIFIC ENERGY CONSUMPTION

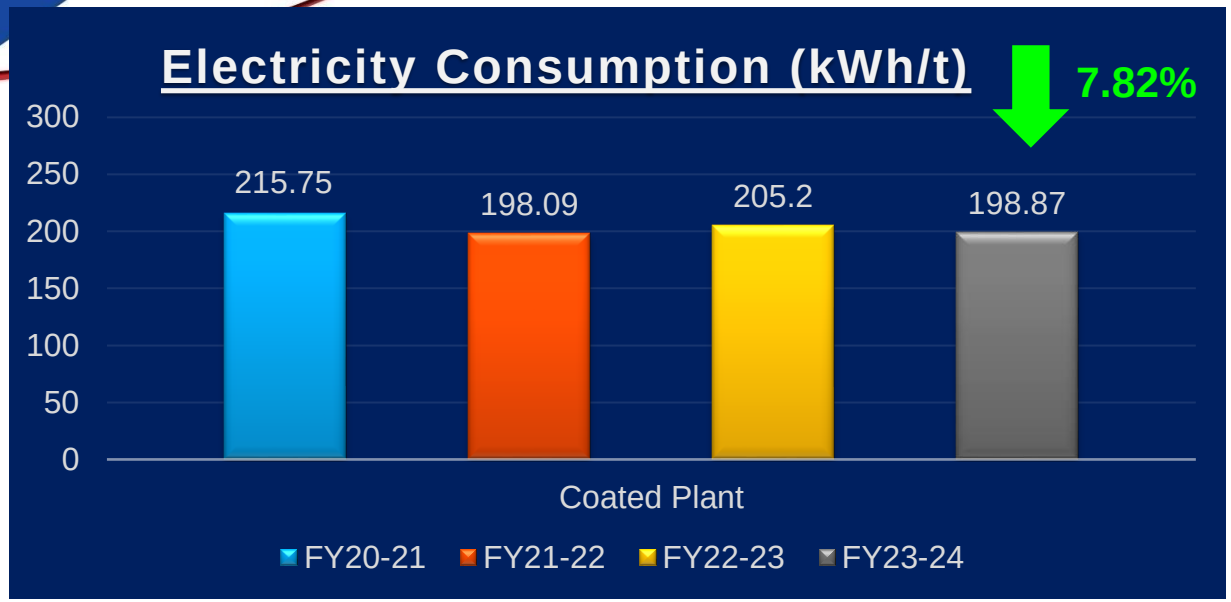
Parameter	Unit	FY20-21	FY21-22	FY22-23	FY23-24	% Improvement
Installed Capacity	MT	980000	980000	980000	1230000	-
Coated Production	MT	760065	845176	755394	973217	-
Utilization	%	77.56	86.24	77.08	79.12	1.56
Electrical SEC	kWh/MT	215.75	198.09	205.20	198.87	7.82
Thermal SEC	M kCal/MT	238119	243741	238410	226598	4.84
Plant Energy Consumption	MTOE/t	0.0434	0.0424	0.0424	0.0410	5.44

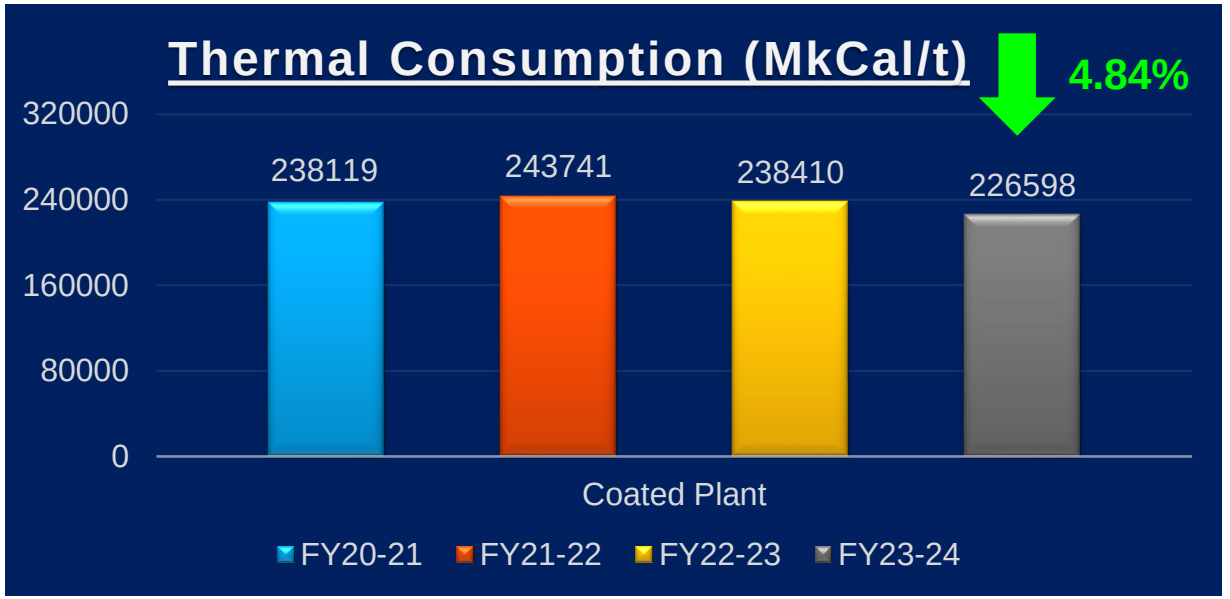


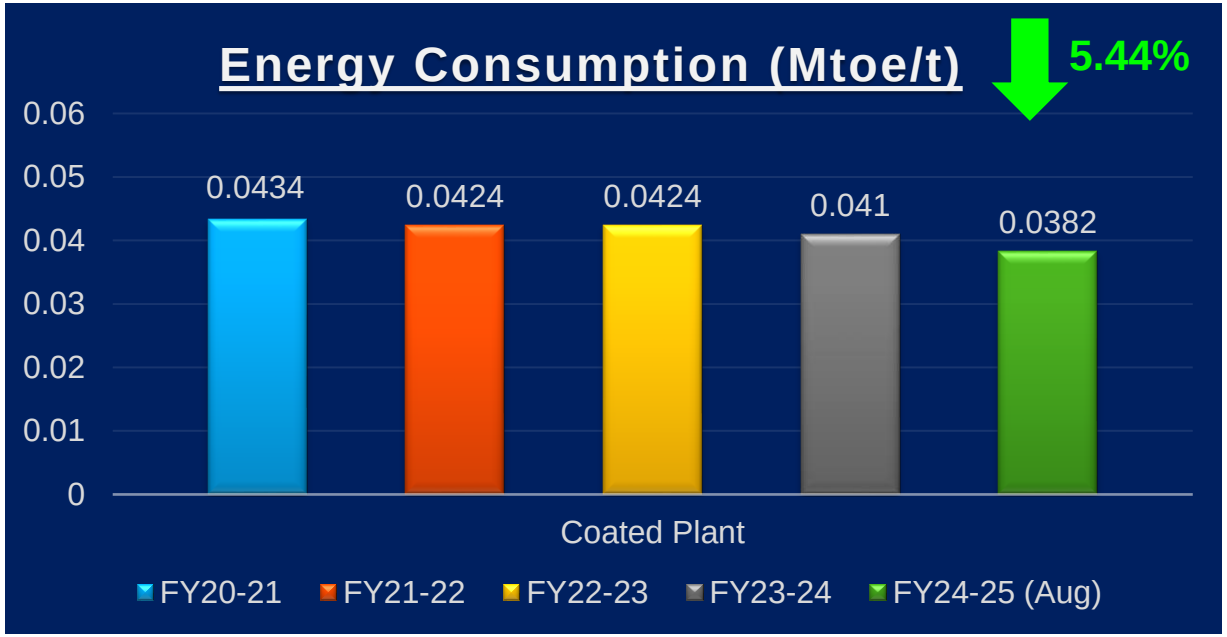
Reasons for Lower Capacity Utilization

- In FY22-23, Export Duty ~ 15% to 50% in May'22.
- Export Duty Restored in Nov'22.
- Tinning Complex-2 of Capacity- 0.25 MTPA Commissioned in FY23.

SPECIFIC ENERGY CONSUMPTION







PAT Cycle VII Target (Mtoe/t) – FY25	0.0377

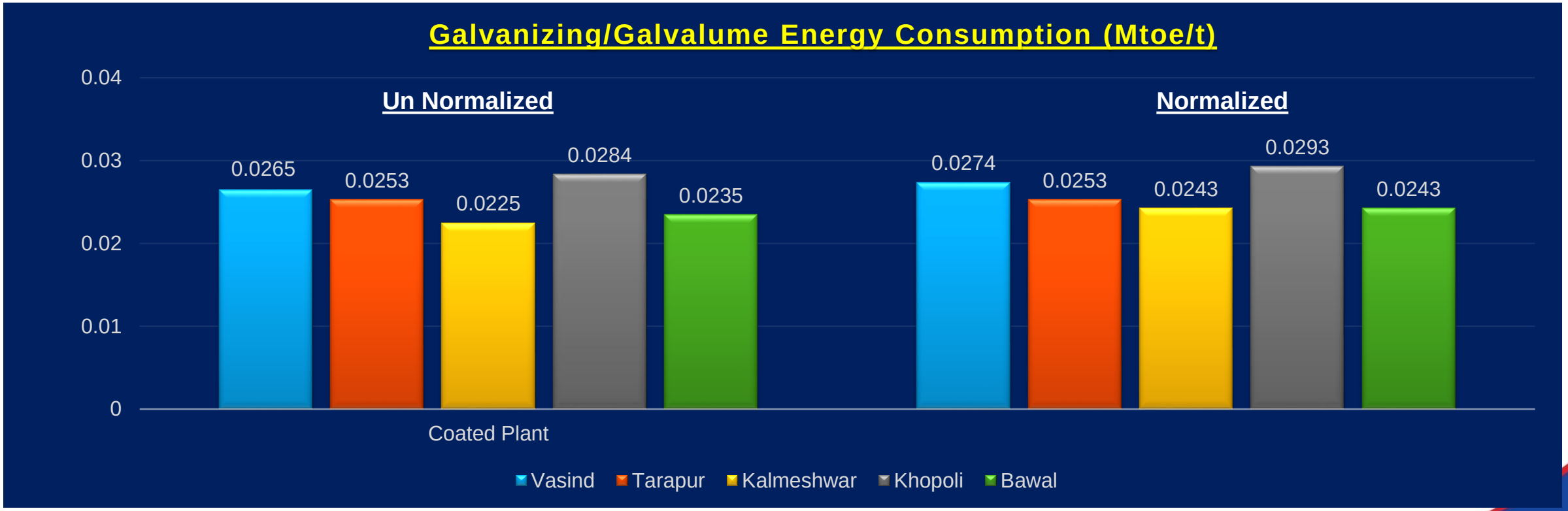
Apr'24	May'24	Jun'24	Jul'24	Aug'24	FY25 Till Aug'24
0.0377	0.0366	0.0371	0.0411	0.0390	0.0382

In Jul'24 & Aug'24 – Annual Capital Shutdown

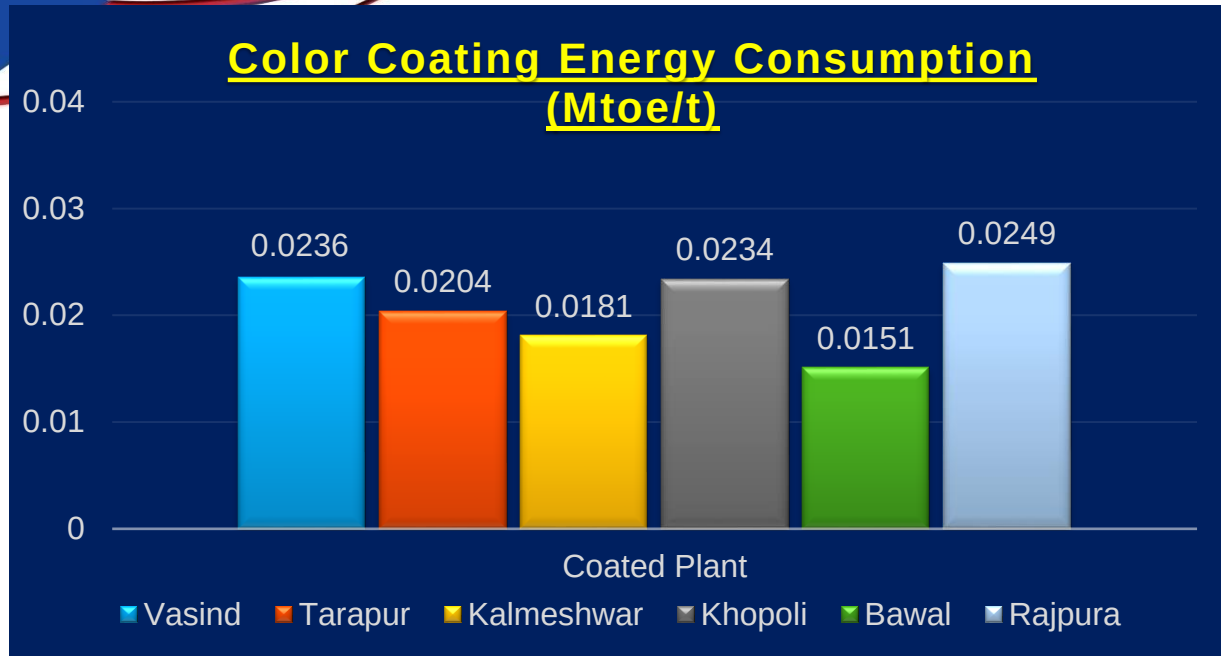
ENERGY BENCHMARKING

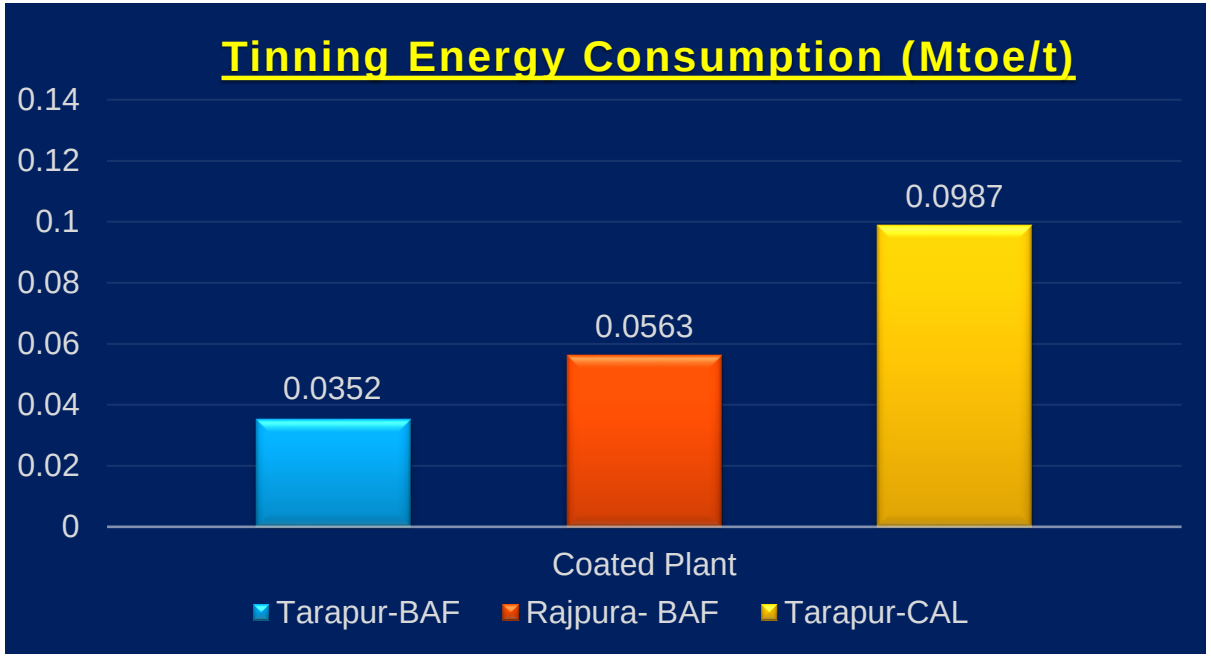
Process	Vasind	Tarapur	Kalmeshwar	Khopoli	Bawal	Rajpura
Galvanizing	0.69 X 1280	0.51 X 1196	1.48 X 1190	0.66 X 1305	0.59 X 1202	-
Galvalume	0.51 X 1208	0.41 X 1133	0.45 X 1214	0.42 X 1302	-	-
Color Coating	0.44 X 1187	0.41 X 1164	0.45 X 1215	0.43 X 1292	0.44 X 1214	0.51 X 1162
Tinning	-	0.23 X 890	-	-	-	0.22 X 865

* All Reference Size in mm



ENERGY BENCHMARKING





Energy Projects Planned	Budget (Rs Lakhs)	Power Saving (Lakh kWh)	Fuel Saving (mmbtu)	GI/GL SEC (Mtoe/t)
CSD2 Up gradation for Capacity enhancement from 0.18 to 0.24mtpa. Speed Increase to 250 mpm	2000	19.73	10866	0.0225
CSD3 Up gradation for Capacity enhancement from 0.30 to 0.36mtpa	2500	33.52	21152	
CSD5 Up gradation for Capacity enhancement from 0.25 to 0.30mtpa. Speed Increase to 250 mpm	2500	21.63	13650	
Total	**8150**	**87.27**	**45668**	

List of Major Encon Projects Planned in FY24-25

Sr. No.	Energy Conservation Measures	Annual Energy Saving		Annual Saving	Investment & ROI	
		Electricity (Lakh kWh)	Thermal (M kCal)	Rs Lakhs	Rs Lakhs	Months
1	Auto Stop of CPC Hyd and Circulation motor after first Pass TM1	1.01		8.08	0	Immediate
2	Auto Stop of CPC Hyd and Circulation motor after first Pass TM4	0.69		5.52	0	Immediate
3	GL Pot- 4 Nos Idle power Saving	5.76		46.08	0	Immediate
4	Reduction in fuel consumption by installing electric heater in launder CSD5 (differential saving)	0	630	20.16	10	4
5	Provision of VFD 75 KW in Pump House Pump Motor	1.68		13.44	5	5
6	Auto Stop of Entry and Exit Hyd Power Pack 227 KW each in Idle Line condition through PLC Logic	1.31		10.48	0	Immediate
7	Provision of VFD in Fume Exhaust System Blower	1.95		15.60	5	5
8	Provision of VFD 45 KW in Hot Air Dryer	1.87		14.96	5	5
Total		14.27	630	134.32	25	2.5

ENERGY SAVING PROJECTS IMPLEMENTED IN LAST THREE YEARS

Year	No of Energy Saving Projects	Investments (INR Million)	Electrical Savings (Million kWh)	Thermal Savings (Million kCal / MTOE)	Savings (INR Million)
FY 2021-22	11	28.5	6.27	4536	69.41
FY 2022-23	6	19.35	3.21	0	25.66
FY 2023-24	6	1.70	0.72	0	5.76
Total	**23**	**49.55**	**10.20**	**4536**	**110.76**

ENERGY SAVING PROJECTS IMPLEMENTED IN LAST THREE YEARS

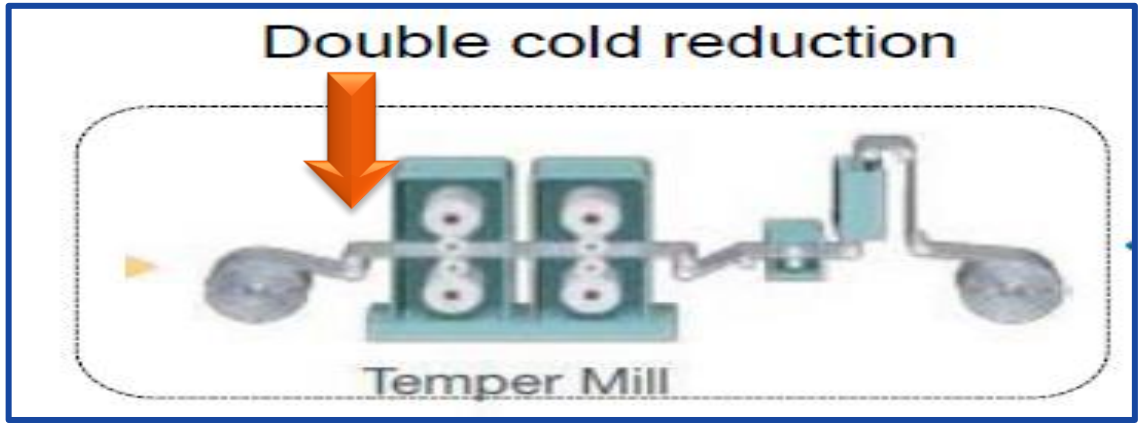
Sr. No.	Energy Conservation Measures	Annual Energy Saving		Annual Saving	Investment & ROI	
		Electricity (Lakh kWh)	Thermal (M kCal)	Rs Lakhs	Rs Lakhs	Months
1	Increase of Speed from 180mpm to 200mpm in CSD2	30.67	-	199.37	Nil	Immediate
2	Modification in TCM Hydraulic Power Pack operation at PLTCM	10.09	-	85.3	Nil	Immediate
3	Modification in Pickling Hydraulic Power Pack operation at PLTCM	7.91	-	66.9	Nil	Immediate
4	Auto operation of CSD2 APC blowers	0.76	-	6.41	Nil	Immediate
6	Online Feedback Driven Productivity Improvement at CCL , saving in CCL2	0.12	-	10	25	32
7	Online Feedback Driven Productivity Improvement at CCL , saving in CCL1	0.11	-	9	25	33
8	VFD Installation in CCL-1 Hot Rinse Pump - 2Nos	0.14	-	1.16	5	51
9	VFD Installation in CCL-1 Degreasing Section - 2Nos	0.13	-	1.07	5	48
10	VFD Installation in CCL-1 Hot Air Dryer - 2Nos	0.06	-	0.50	5	120
11	Reduction in SEC of CPL Power by replacement of PU coated by TC coated roll	1.86	-	12	20	22
12	Installation of LTOP Mathematical Model in CAL Line	10.80	4536	302.4	200	8
13	CPC Installation at TM4	5.50	-	44	40	11
14	CPC Installation at TM2	7.01	-	56.1	40	9
15	Defect Monitoring System at DCR1	11.0	-	88.0	45	6

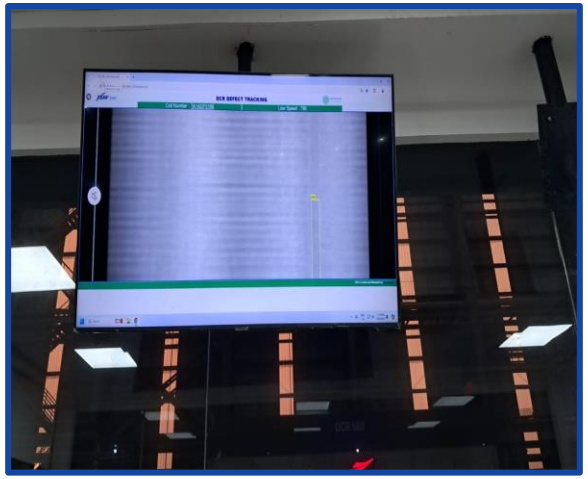
ENERGY SAVING PROJECTS IMPLEMENTED IN LAST THREE YEARS

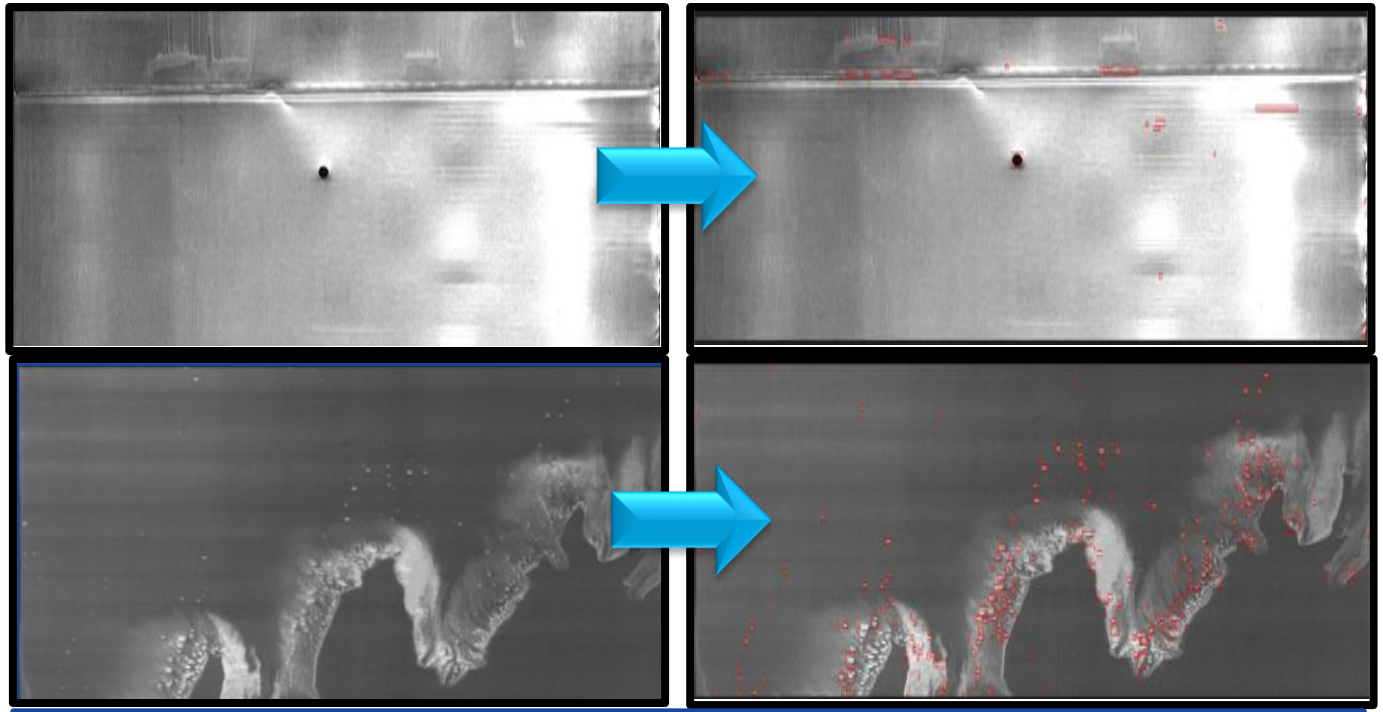
Sr. No.	Energy Conservation Measures	Annual Energy Saving		Annual Saving	Investment & ROI	
		Electricity (Lakh kWh)	Thermal (M kCal)	Rs Lakhs	Rs Lakhs	Months
16	Installation of Pyrometer for Peal Metal temp monitoring at CCL1	3.89	-	31	25	10
17	Installation of Pyrometer for Peal Metal temp monitoring at CCL2	4.25	-	34	25	9
18	VFD Installation in HOT Air Dryer-2	0.42	-	3.35	5	18
19	Replacement of Old AC-70 TR by energy efficient AC-58TR at TM4	0.38	-	3	3	12
20	Installation of AHU at TM1	2.28	-	18.20	8	5
21	Changing of Exit crane LT & CT with VFD motors and drives at CSD2	0.19	-	1.50	1	8
22	Pot ECR cooling tower stopped and water taken from centralized cooling system at CSD3	1.28	-	10.2	Nil	Immediate
23	Optimization of Shed Lights at PLTCM	0.78	-	6.20	5	10
24	Replacement of Acid Blower with lower capacity at PLTCM	2.30	-	18.5	Nil	Immediate
Total		**102.0**	**4536**	**1107.6**	**495.5**	**5.5**

INNOVATIVE 1 – INCREASE THROUGHPUT OF DCR BY DEFECT TRACKING SYSTEM

Problem Statement	**Double Cold Reduction Mill in Electrolytic Tin Process has to be stopped in every coils to check the sheet quality for 5-15 mins for Sheet Inspection & Roughness.**
Solution Approach	➢ **Deployment of Deep Neural Network algorithm** for defect identification. ➢ Deep Neural Network is a type of a machine learning algorithm designed to help machines recognizes pattern without being explicitly programmed. ➢ **It's a first kind of projects in rolling mill application.**





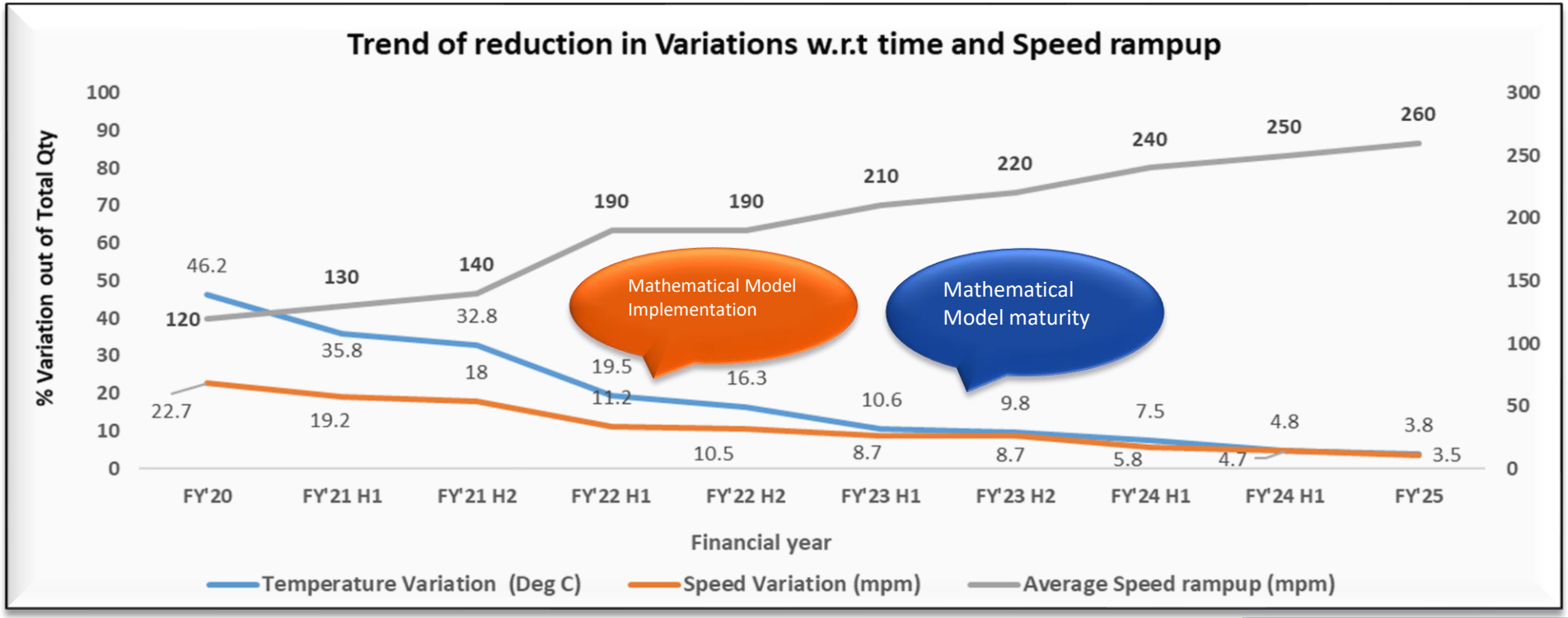


Power Saving of 7 kWh/t

Annual Power Saving - 11 Lakh Kwh

INNOVATIVE 2 – INSTALLATION OF LTOP MATHEMATICAL MODEL IN CAL LINE

Problem Statement	Maintaining uniform parameters through out the length of the coil so as to get an uniform mechanical properties for high speed CAN manufacturing at Customers end was the challenge during mass production.
Solution Approach	LTOP mathematical model in the continuous annealing line which aims to keep the processing of temperature and speed constant in auto mode by eliminating operators' manual interventions



Qty, Tons losses (length discard)	Reduction in losses In Lacs (INR)
262	18.34
212	14.84
202	14.14
132	9.24
127	8.89
112	7.84
94	6.58
78	5.46
56	3.92
32	2.24

- Less Inplant rejections due to parameters variation & lower customer complaints
- Minimum manual interventions of Operators
- Saving in Yield and corresponding Cost benefits
- Speed rampup with stability

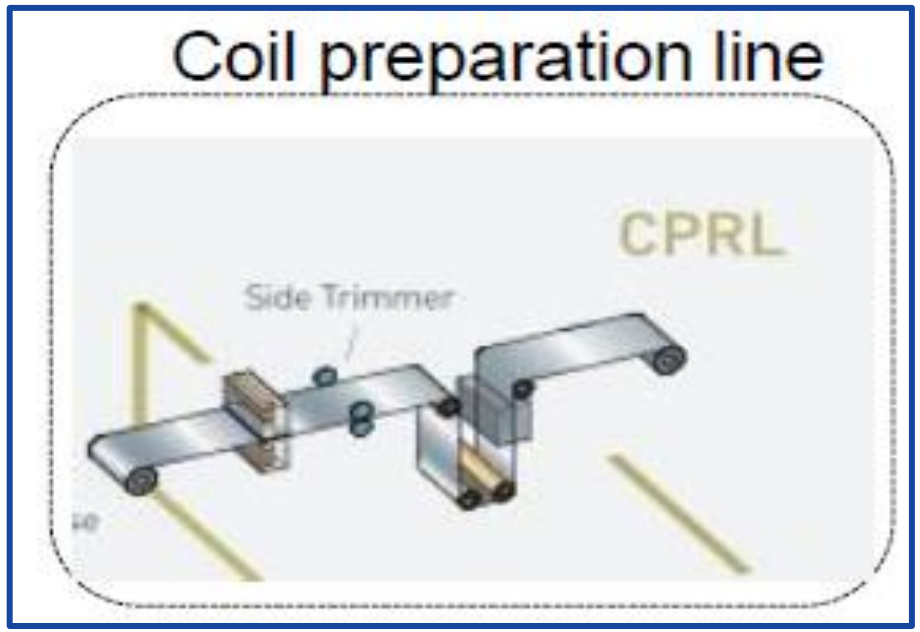
Power Saving of 6 kWh/t.

Fuel Saving of 0.15mmbtu/t

Annual Energy Saving of Rs 302.4 Lakh

INNOVATIVE 3 – REPLACEMENT OF PU COATED BY TC ROLL IN CPL

Problem Statement	Use of PU Coated Roll at CPL-1 Line. Unable to run at maximum speed of 500 mpm due to less roughness of roll (<1.5 um).
Solution Approach	Replacement of PU Coated Roll by TC Coated Roll. Increase of Line Speed from 400 mpm to 500mpm (Rated). Roughness of the roll at 3 um. Scratches & Dent also reduced from CPL Line.

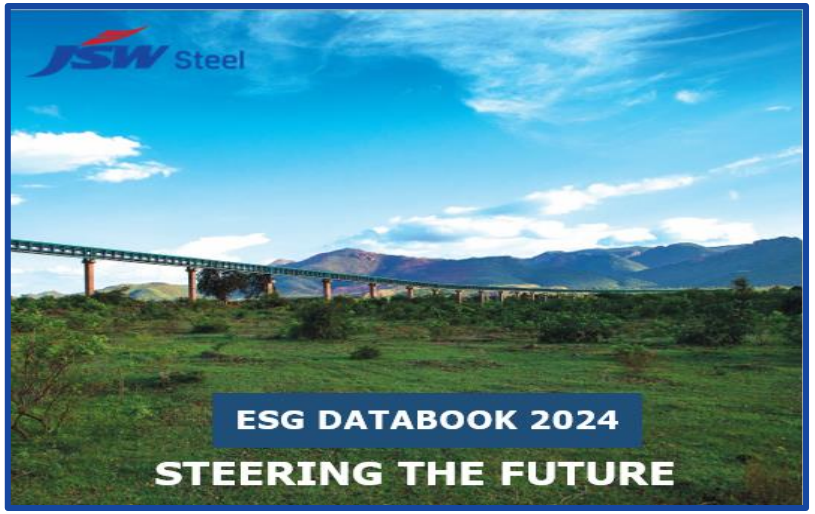


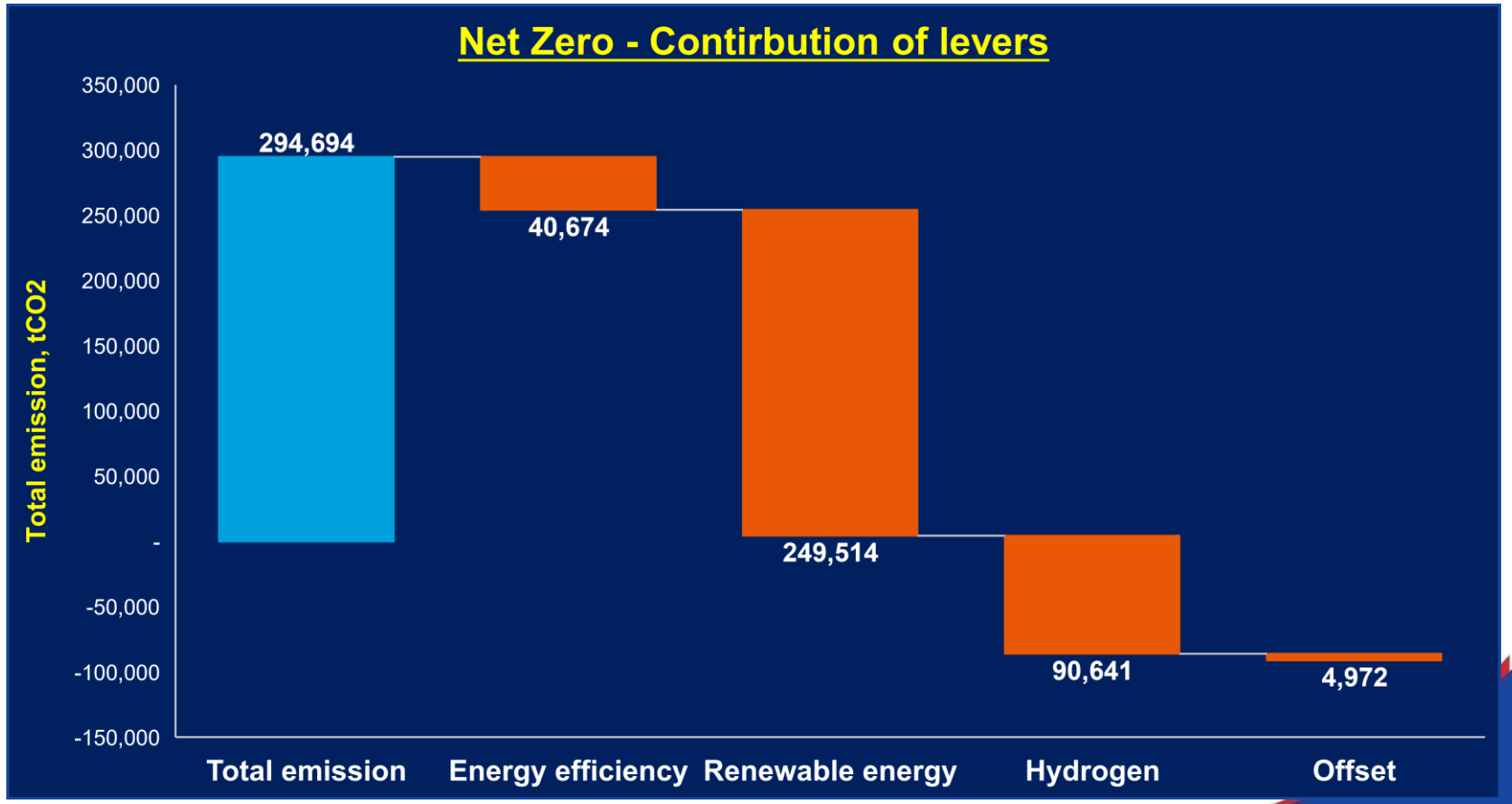
Power Saving of 1 kWh/t.

Annual Saving of Rs 12 Lakh

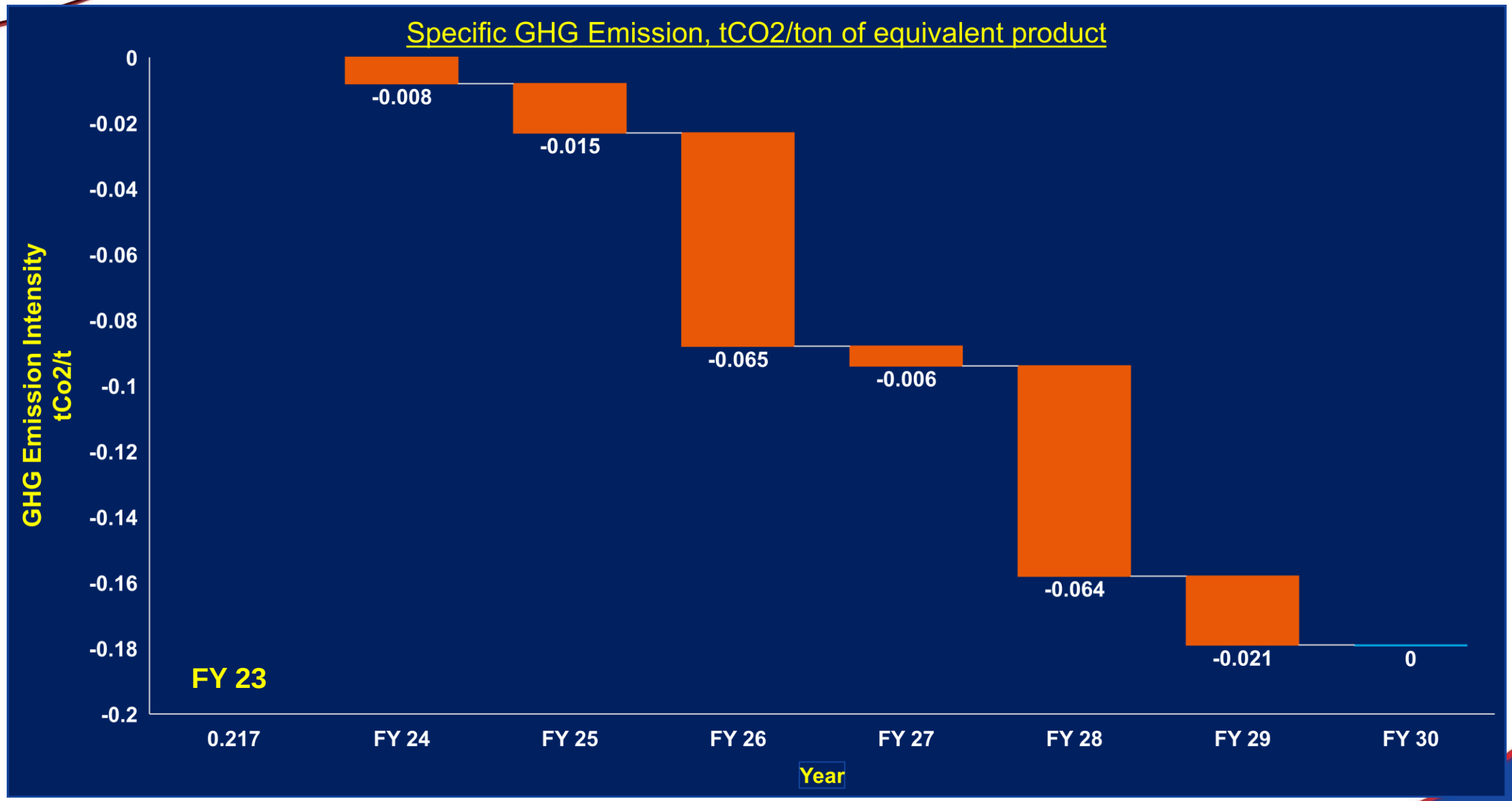
GHG INVENTORIZATION

Parameter	Unit	FY20-21	FY21-22	FY22-23	FY23-24	% Improvement
Scope-1 Emissions	tCO2e	52873	61988	57739	67555	-
Scope-2 Emissions	tCO2e	183529	193001	190390	227139	-
Total GHG Emissions	tCO2e	236402	254988	248130	294694	-
GHG Emission Intensity	**tCO2e/MT**	**0.225**	**0.212**	**0.217**	**0.209**	**7.16**





GHG INVENTORIZATION



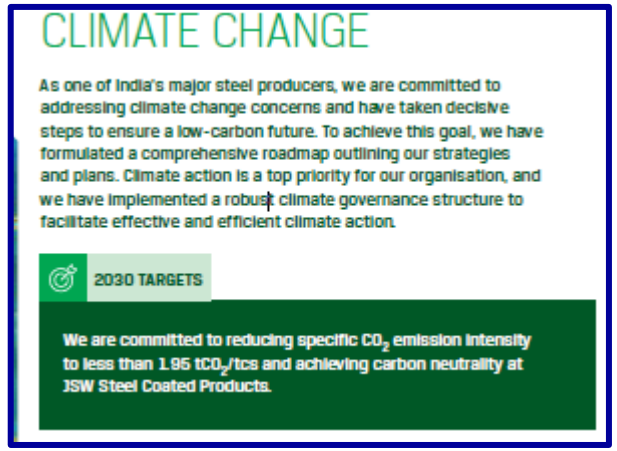
ROADMAP FOR CARBON NEUTRALITY BY 2030

Better Everyday

Mandatory Compliance – 11%

- Reductions from regulatory compliance requirements
  - Perform Achieve and Trade (PAT) Mechanism – **1.5%**
  - Carbon sequestration through existing plantation **– 2%**

FY 2024-25 onwards



Electricity Energy switch–65%

- Reductions from 100% switch of current fossil fuel based power to reliable round the clock mix of renewable power – **65%**
- RE Power from JSW Energy – VTKKh from 149 MW RE power

FY 2025-26 onwards

Thermal Energy Switch – 24%

- Reductions from 100% avoidance of RLNG to Green Hydrogen– **24%**

FY 2026-27 onwards

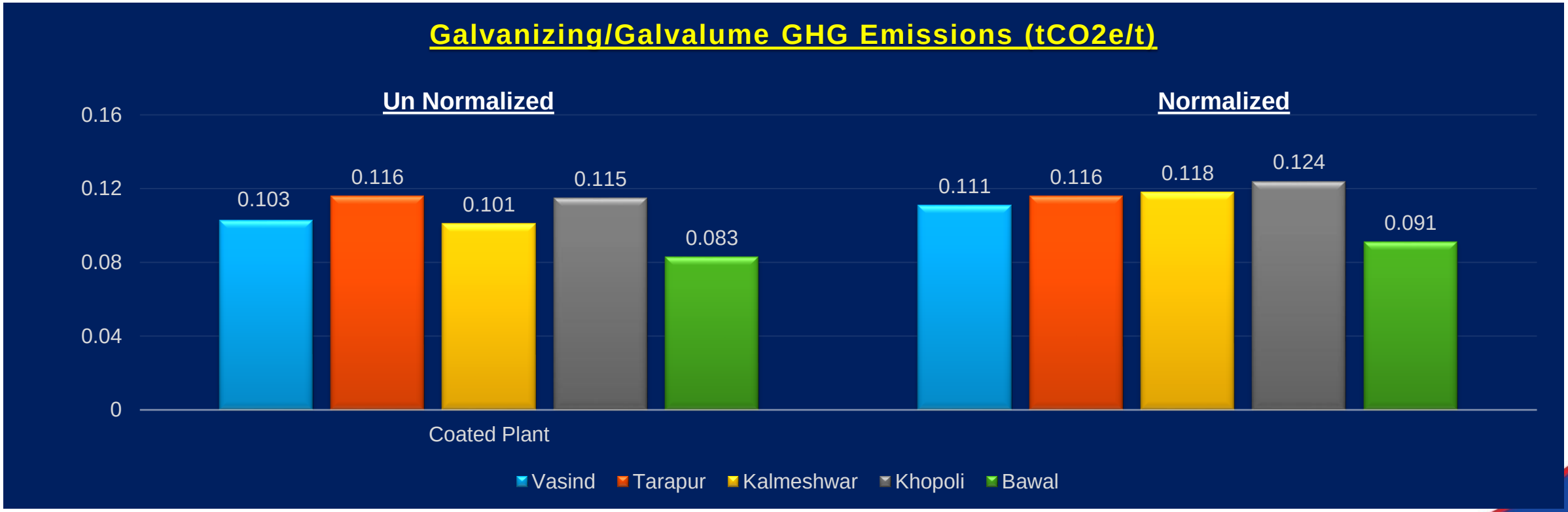
Offsets – 5%

- Carbon sequestration through additional plantation / Miyawaki Park
- Emission offsets through purchase of voluntary emission reductions (VERs) or through emission reducing programme of activities like project of distribution of multi-fuel fired cook-stoves to rural/ tribal households undertaken by JSW Foundation

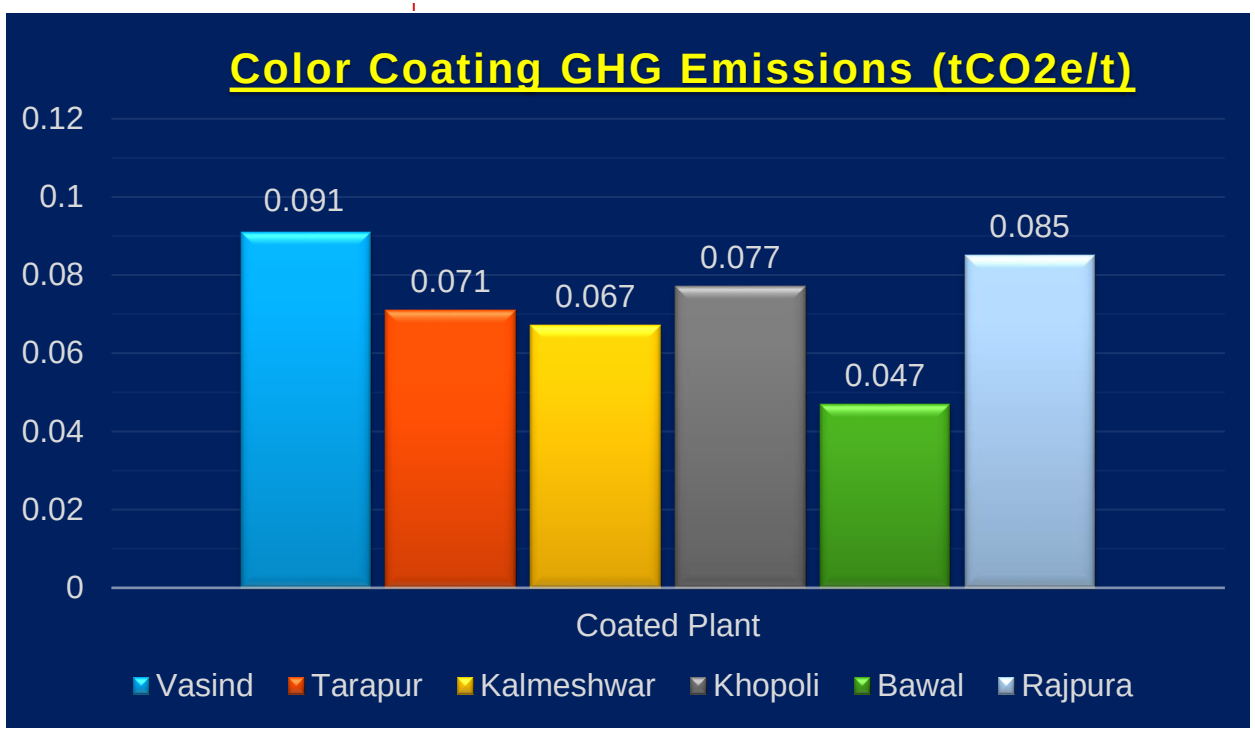
FY 2029-30 onwards

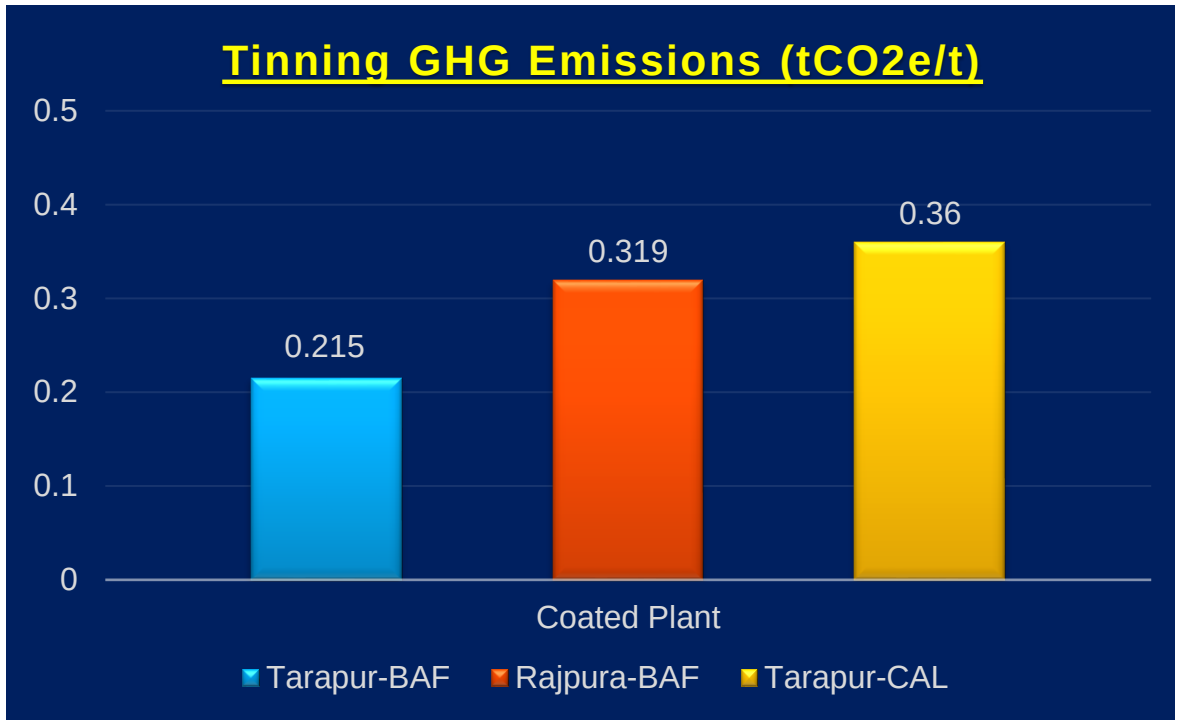
GHG EMISSION BENCHMARKING

Process	Vasind	Tarapur	Kalmeshwar	Khopoli	Bawal	Rajpura
Galvanizing	0.69 X 1280	0.51 X 1196	1.48 X 1190	0.66 X 1305	0.59 X 1202	-
Galvalume	0.51 X 1208	0.41 X 1133	0.45 X 1214	0.42 X 1302	-	-
Color Coating	0.44 X 1187	0.41 X 1164	0.45 X 1215	0.43 X 1292	0.44 X 1214	0.51 X 1162
Tinning	-	0.23 X 890	-	-	-	0.22 X 865



GHG EMISSION BENCHMARKING





1) CBAM Compliance

2) Trial of Bio Gas – Approval Initiated

INDEPENDENT ASSUURANCE / COMMITTMENTS

Independent Assurance Statement

April 2024[1]; and discussions with the concerned personnel for JSW Steel Coated Products Limited's operations at Vasind and Kalmeshwar.

Conclusions
Integrated Report

Based on the procedures followed as mentioned in the scope of work and methodology adopted and the data/evidence obtained, the sustainability performance of non-financial disclosures in the Integrated Report of JSW Steel Limited is reviewed as per the GRI Standard framework for the reporting period (1st April 2023 to 31st March 2024).

BRSR

On the basis of our methodology and the activities described above, it is our opinion that the BRSR for FY 2023-24 of "JSW Steel", containing its reporting and declaration of the various ESG parameters from the operations within the reporting boundary and the reporting period, as described above, is prepared in all material respects in line with the applicable criteria here before stated

It is concluded based on the assurance review that the information presented in the Integrated Report for JSW Steel operations in accordance with select sustainability reporting non-financial disclosures of Global Reporting Initiative (GRI Standard) is proper, adequate, reliable, and maintained in line with the material topics and reporting criteria, which JSW is solely responsible for consideration.

Responsibilities

JSW Steel Limited is completely responsible for the Report contents, identification of material topics, and data reporting structure. The selection of reporting criteria, reporting period, reporting boundary, monitoring, and measurement of data, preparation, and presentation of information for the report are the sole responsibility of the management of "JSW Steel". Bureau Veritas (BV) was not involved in the drafting or preparation of the report and any other backup data for the reporting period. The responsibility of BV was to provide limited independent assurance for the sustainability of non-financial disclosures as described in the scope of assurance.

The said assessment is properly based on the assumption that the data and information provided in the report is proper and without any discrepancy. Bureau Veritas shall not be held liable or responsible for any type of decision a person or entity would make based on this assurance statement. While reading the assurance statement, stakeholders shall recognize and accept the limitations and scope as mentioned above.

Uncertainty

The reliability of assurance is subject to uncertainty(ies) that is inherent in the assurance process. Uncertainties stem from limitations in quantification models used, assumptions, or data conversion factors used or may be present in the estimation of data used to arrive at results. Our conclusions with respect to this assurance are naturally subject to any inherent uncertainty(ies) involved in the assurance process.

Statement of independence, impartiality, and competence

Independent Assurance Statement

Bureau Veritas is an independent professional services company that specializes in Quality, Health, Safety, Social, and Environmental Management with almost 190 years of history in providing independent assurance services.

Bureau Veritas has implemented a Code of Ethics across the business to maintain high ethical standards among staff in their day-to-day business activities. We are particularly vigilant in the prevention of conflicts of interest.

No member of the assurance team has a business relationship with "JSW Steel", its Directors, Managers, or officials beyond that required of this assignment. We have conducted this verification independently and there has been no conflict of interest.

The assurance team has extensive experience in conducting assurance over environmental, social, ethical, and health & safety information, systems, and processes and an excellent understanding of Bureau Veritas standard methodology for the assurance of Sustainability Report as per Global Reporting Initiative (GRI) Standards.

Bureau Veritas (India) Private Limited

72 Business Park, 9th Floor, MIDC Cross Road 'C', Opp. SEEPZ Gate #2, Andheri (East) Mumbai-400 093 India.

Lead Assurer **Team Member**

Technical Reviewer
Ms. Archana Thakur
Reviewer BVA Schemes
Date: 24/06/2024
Place: India

Our commitments

Climate Change

- Targeting Net Neutral by 2050
- 42% ↓ of CO_2 emission intensity to 1.95 tCO_2/tcs by 2030, aligned with India's NDCs

Energy Transition

- Transition from thermal to renewable energy (RE)- installation of 10 GW RE capacities by 2030
- 19% ↓ in specific energy consumption to 5.65 Gcal/tcs by 2030

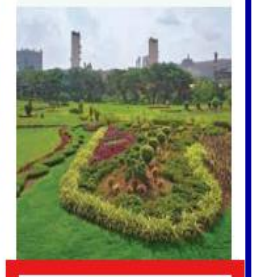
Water Security

- Maintaining zero liquid discharge
- 39% ↓ in specific water consumption
- Water neutrality at coated steel plants by 2030

Air Emissions

- PM, SOx and NOx emission targets of 0.26, 0.82 and 0.91 kg/tcs respectively, by 2030

Circularity and Biodiversity

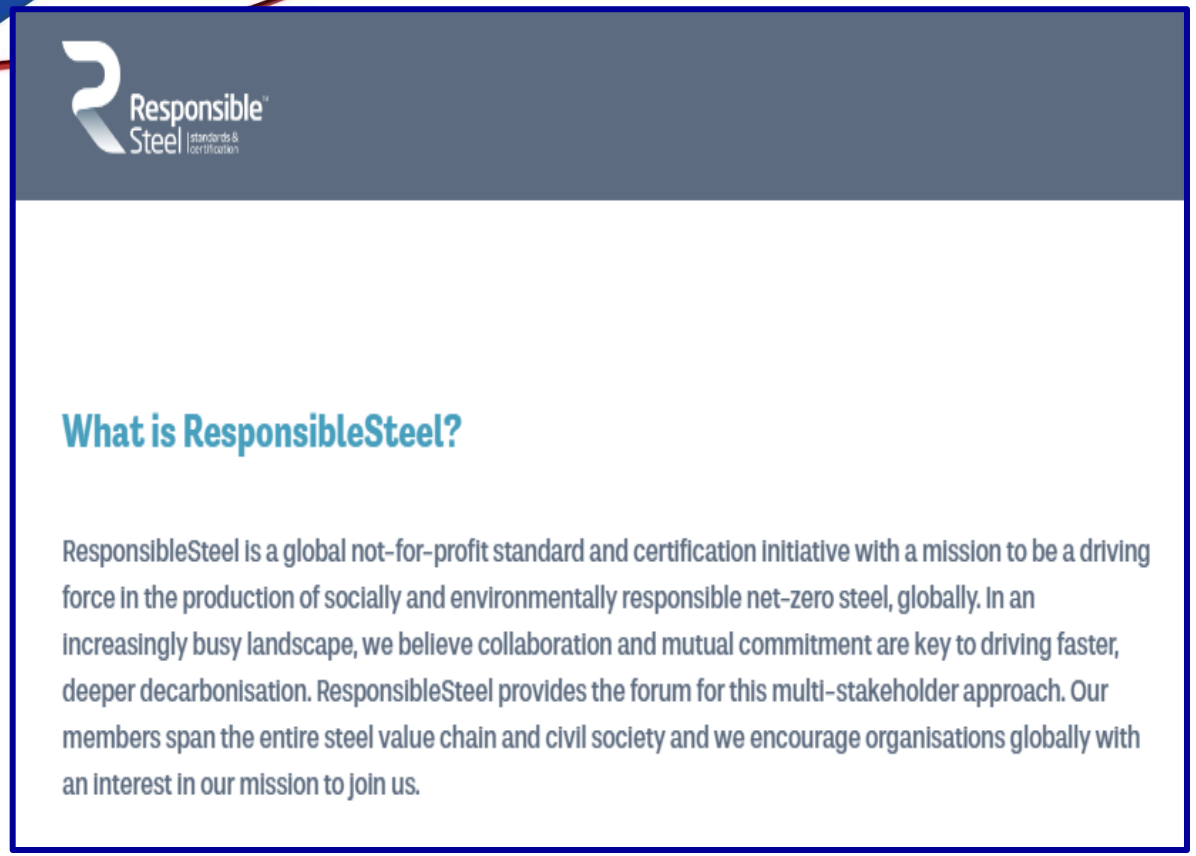


- 100% recycling of all waste generated from operations
- 'No net loss' of Biodiversity by 2030

Sustainability

JSW Coated plant operations make strides towards Water Neutrality: Aiming for Net Zero by 2030

Responsible Steel Site Certification



Responsible Steel | standards & certification

What is ResponsibleSteel?

ResponsibleSteel is a global not-for-profit standard and certification initiative with a mission to be a driving force in the production of socially and environmentally responsible net-zero steel, globally. In an increasingly busy landscape, we believe collaboration and mutual commitment are key to driving faster, deeper decarbonisation. ResponsibleSteel provides the forum for this multi-stakeholder approach. Our members span the entire steel value chain and civil society and we encourage organisations globally with an interest in our mission to join us.

Responsible Steel | standards & certification

BECOME A MEMBER BECOME CERTIFIED

MENU

Back

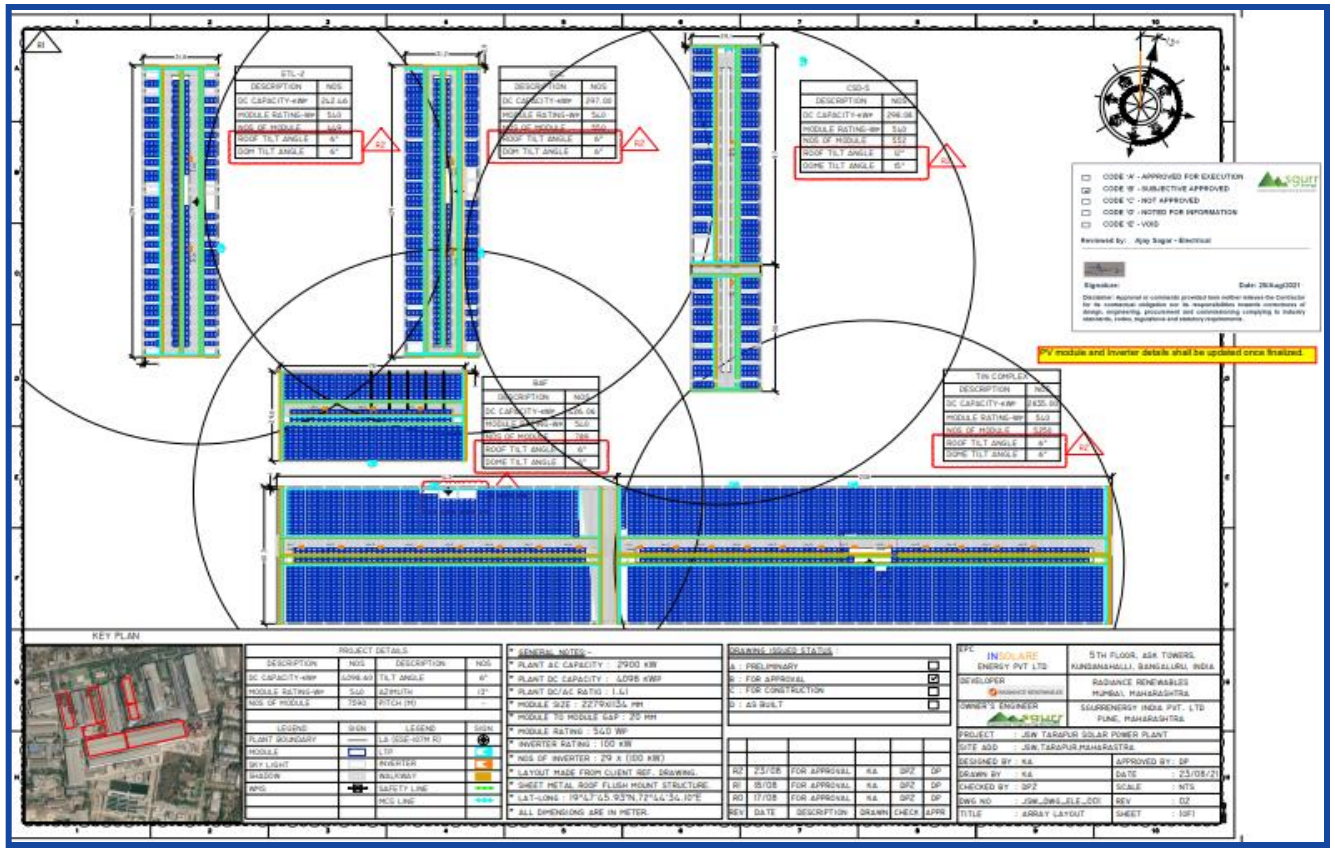
JSW Steel Joins ResponsibleSteel

January 20, 2023

JSW Steel Coated Products Limited, Tarapur, India	Core site certification	Initial certification	Tarapur, India	January 30, 2024 - February 3, 2024	Bureau Veritas	Bureau Veritas

UTILIZATION OF RENEWABLE ENERGY SOURCES

Year	Source (Solar, Wind etc.)	Installed Capacity in MW	Capacity Addition (MW)	Total Generation (million KWh)	Share % wrt to Overall Energy Consumption
FY 2021-22	-	-	-	-	-
FY 2022-23	-	-	-	-	-
FY 2023-24	-	-	-	-	-



- ✓ 100% Renewable Purchase Obligations Compliance till FY 23-24.
- ✓ RPO Targets – 10.27% & 29.91% (Designated Consumers for FY24-25.
- ✓ Compliances by purchase of Renewable Energy Certificates.

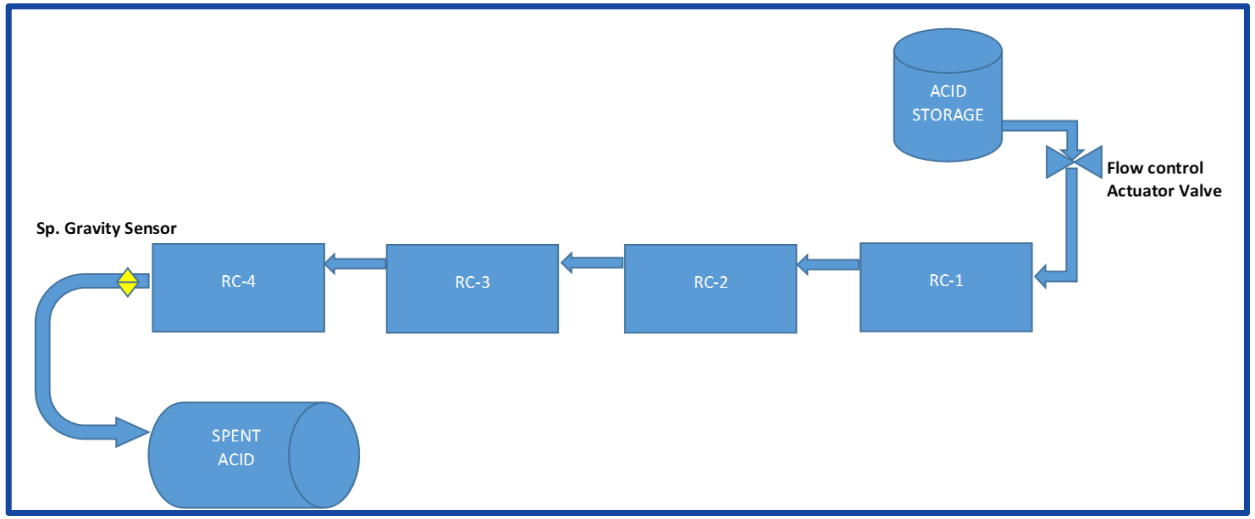
- ✓ Rooftop Solar Capacity LOI for 4 MW in Jun'21.
- ✓ Regulatory Challenges
- ✓ MERC Green Energy Open Access Rules 2023 clears the regulatory challenges
- ✓ Rooftop Solar Capacity Proposal in Commercial for 4 MW since Apr'24 due to regulatory challenges
- ✓ Clearance from Discom on 9th Sep'24 for 1 MW Rooftop Solar Plant

- ✓ 210 MW Renewable Energy Projects Finalized
- ✓ Wind – 155 MW & Solar – 55 MW
- ✓ Renewable Energy Mix – 74%
- ✓ Board Approval under progress

WASTE UTILIZATION / WASTE MANAGEMENT

Year	Type of Waste Generated	Quantity of Waste Generated (MT/year)	Disposal Method
FY 2021-22	Hazardous & Non Hazardous	46878	Sale to Authorized Party / Reuse / Recycle
FY 2022-23	Hazardous & Non Hazardous	54350	Sale to Authorized Party / Reuse / Recycle
FY 2023-24	Hazardous & Non Hazardous	49410	Sale to Authorized Party / Reuse / Recycle

S.no	Project	Benefits achieved
1	Commissioning of PLTCM and de-commissioning of pickling line 1	Reduction in spent acid by 2kg/ton of product
2	Installation of online meter at pickling 2 to control acid generation, part of digitalization	Reduction in acid generation by 3kg/ton of product
3	Optimization of consumption of cotton waste sand filter bags in color change	Reduction in hazardous waste through reuse
4	Use of Paint Bulker at Color Coating Line	Reduction in hazardous waste of 50MT/Yr



Installation of online meter at pickling 2 to control acid generation

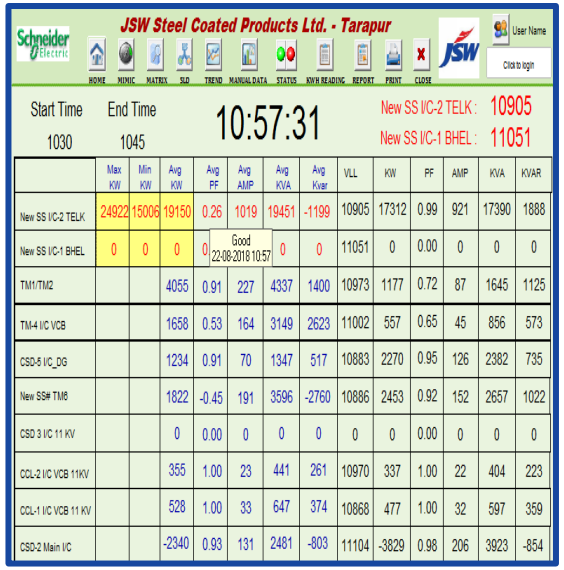
Use of Paint Bulker at Color Coating Line

MIYAWAKI CUM BIODIVERSITY PARK

- ✓ Urban Forest in the heart of Tarapur, Boisar, named as Miyawaki cum Biodiversity park.
- ✓ Plantation of 8560 saplings of more than 45 indigenous varieties
- ✓ Area Covered – 3.3 Acres
- ✓ Expenditure – 7.18 Crs

ENERGY MONITORING

REAL TIME ENERGY MONITORING SYSTEM

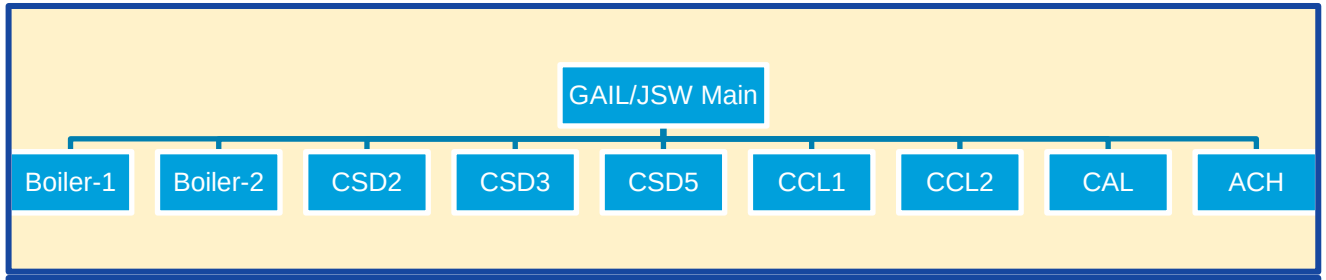


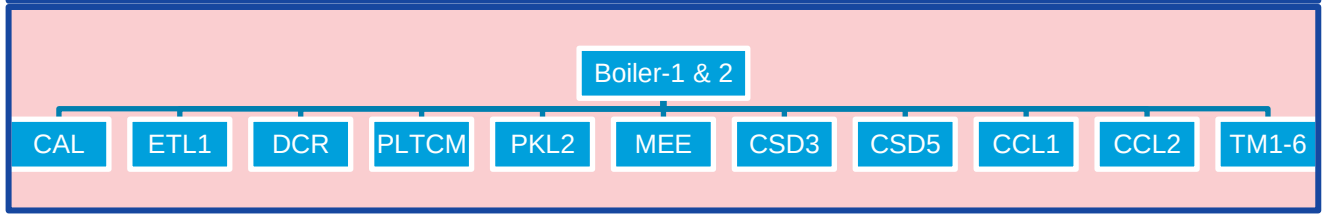
	Max KW	Min KW	Avg KW	Avg PF	Avg AMP	Avg KVA	Avg Kvar	VLL	KW	PF	AMP	KVA	KVAR
New SS I/C-2 TELK	24922	15006	19150	0.26	1019	19451	-1199	10905	17312	0.99	921	17390	1888
New SS I/C-1 BHEL	0	0	0	0		0	0	11051	0	0.00	0	0	0
TM1/TM2			4055	0.91	227	4337	1400	10973	1177	0.72	87	1645	1125
TM-4 I/C VCB			1658	0.53	164	3149	2623	11002	557	0.65	45	856	573
CSD-5 I/C_DG			1234	0.91	70	1347	517	10883	2270	0.95	126	2382	735
New SS# TM6			1822	-0.45	191	3596	-2760	10886	2453	0.92	152	2657	1022
CSD 3 I/C 11 KV			0	0.00	0	0	0	0	0	0.00	0	0	0
CCL-2 I/C VCB 11KV			355	1.00	23	441	261	10970	337	1.00	22	404	223
CCL-1 I/C VCB 11 KV			528	1.00	33	647	374	10868	477	1.00	32	597	359
CSD-2 Main I/C			-2340	0.93	131	2481	-803	11104	-3829	0.98	206	3923	-854

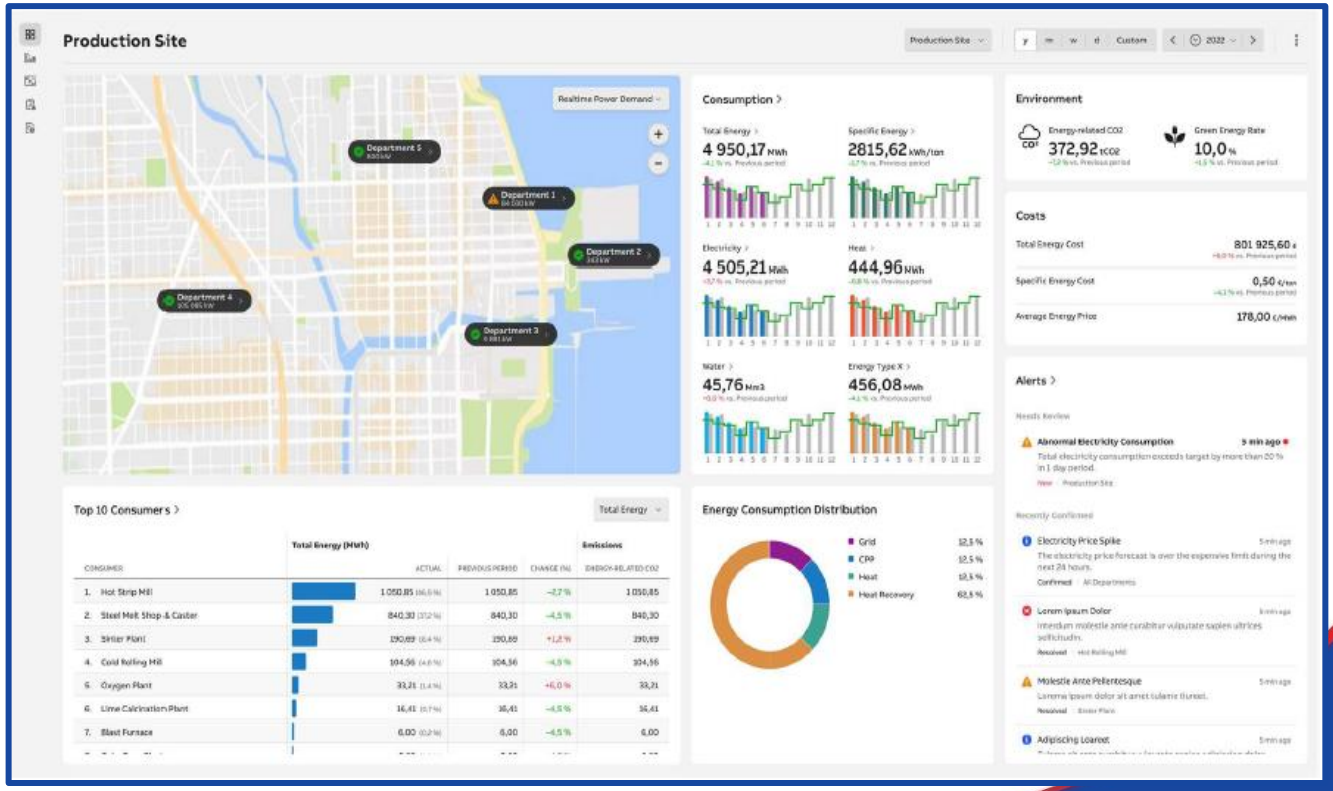
SPICE, E- ENERGY & ENVIRONMENT

REVIEW MEETING

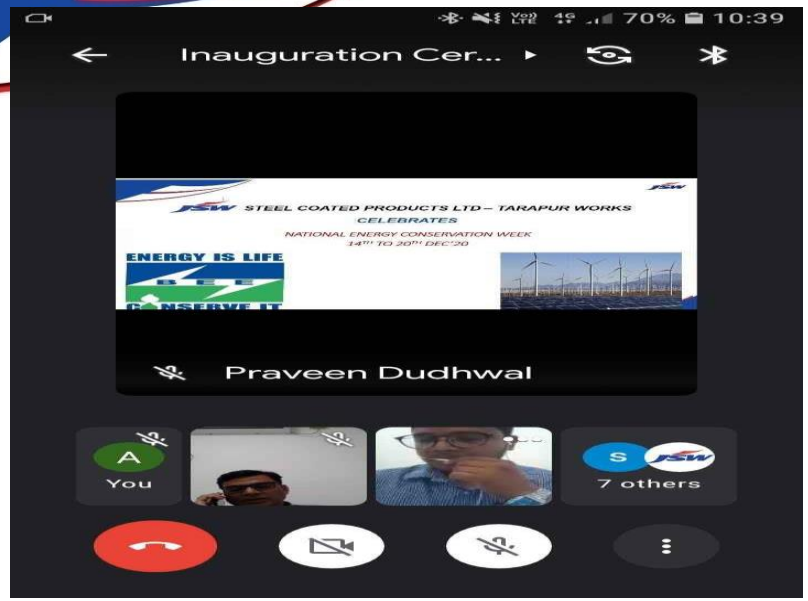
- JOINT MANAGING DIRECTOR — EXE COMM
- HEAD – COATED PRODUCTS — COR OPCOM
- PLANT HEAD / FUNCTIONAL HEAD — OPCOM
- DEPARTMENT / TEAM / INDIVIDUAL — DEPT

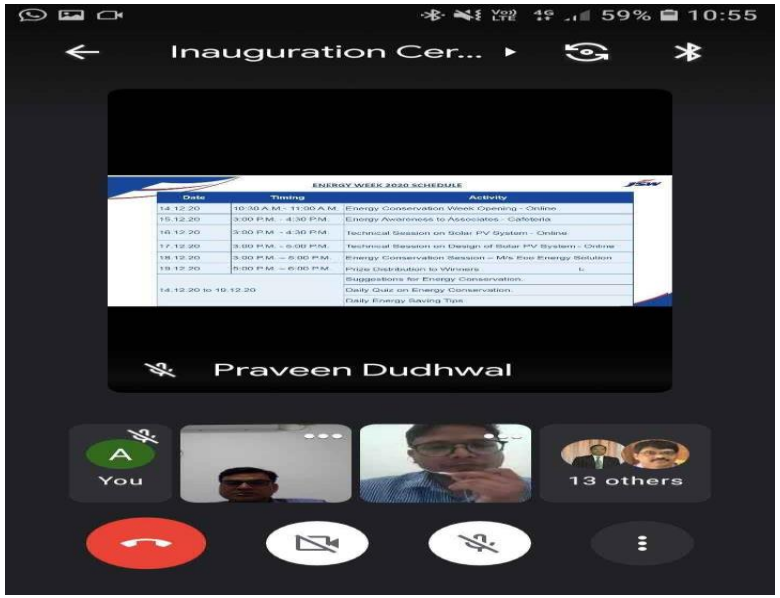


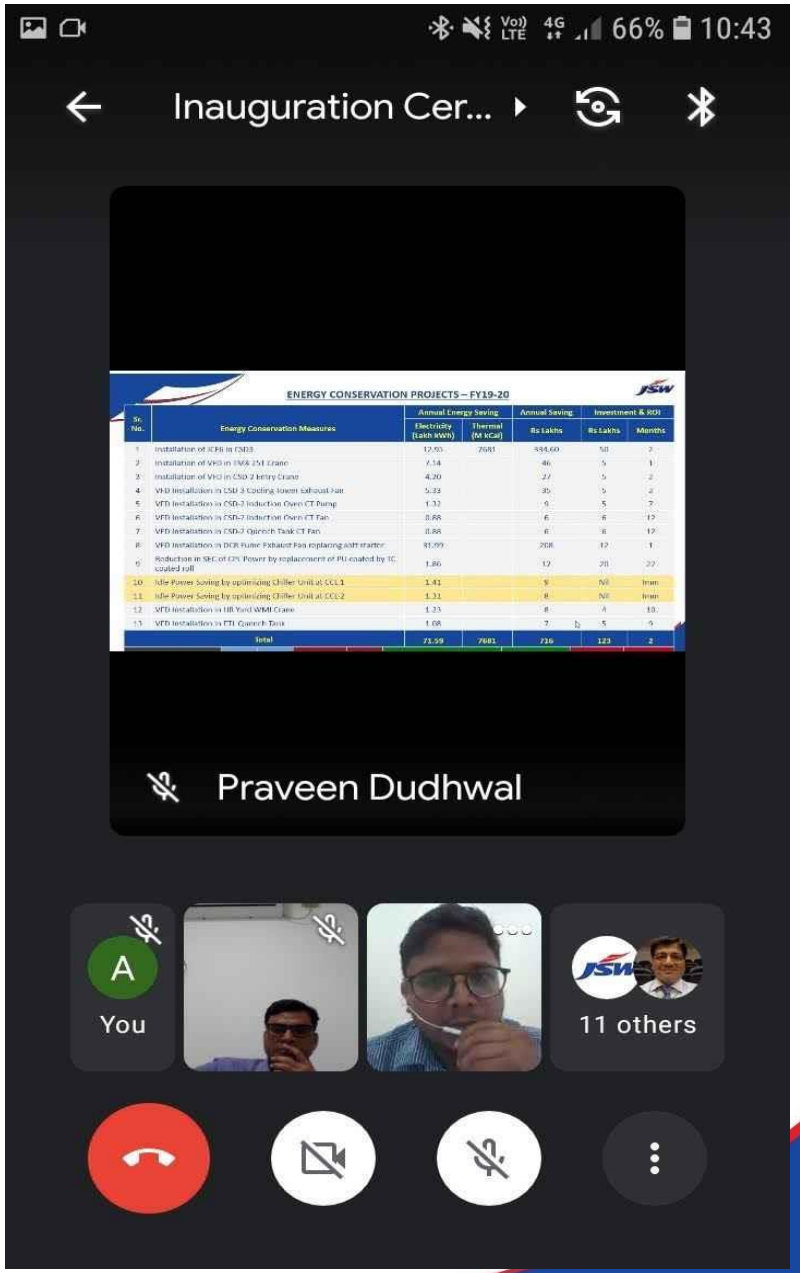




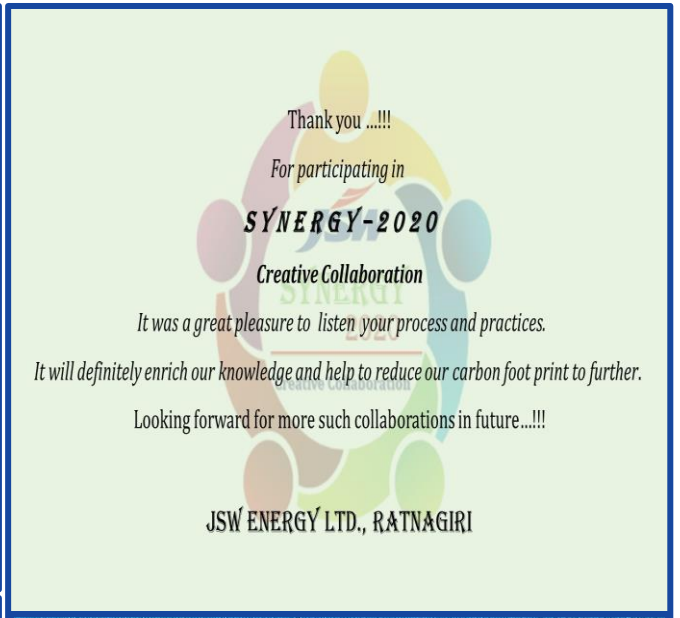
EMPLOYEE AWARENESS / INVOLVEMENT





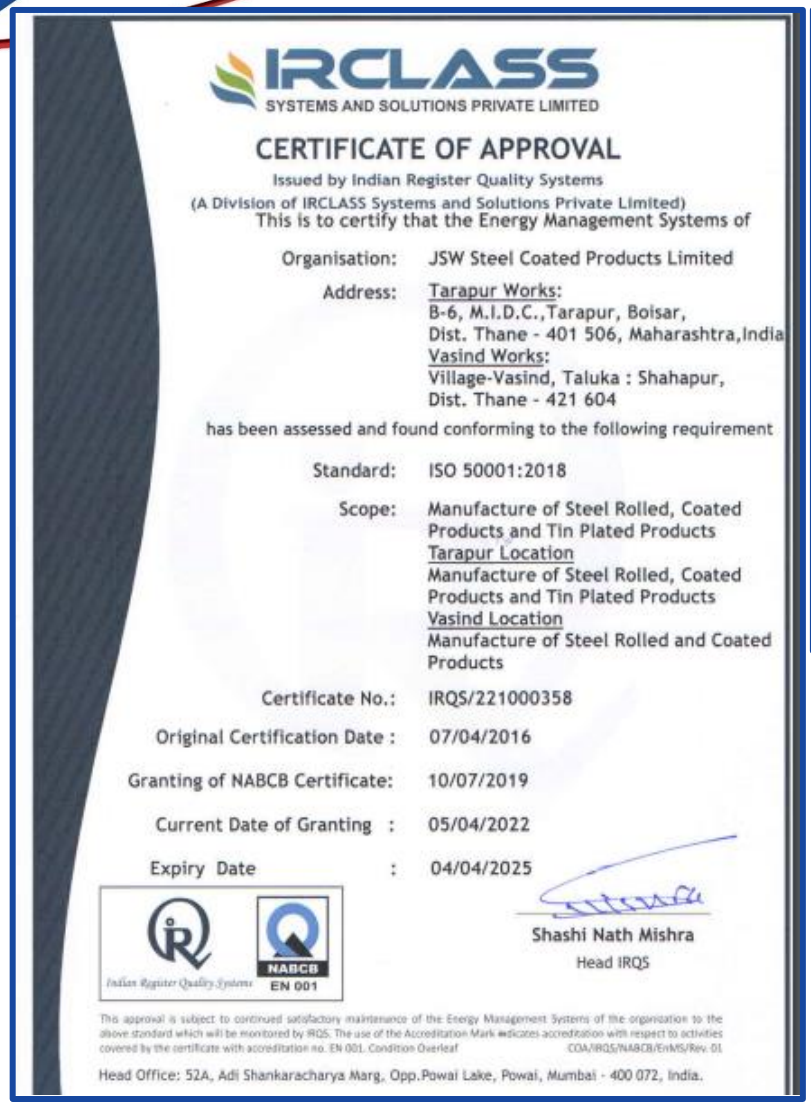


EMPLOYEE AWARENESS / INVOLVEMENT



Associate Employee Awareness Training

IMPLEMENTATION OF ISO 50001



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 Steel Coated Products Limited

Address: Tarapur Works:
B-6, M.I.D.C.,Tarapur, Boisar,
Dist. Thane - 401 506, Maharashtra,India
Vasind Works:
Village-Vasind, Taluka : Shahapur,
Dist. Thane - 421 604

has been assessed and found conforming to the following requirement

Standard: ISO 50001:2018

Scope: Manufacture of Steel Rolled, Coated Products and Tin Plated Products
Tarapur Location
Manufacture of Steel Rolled, Coated Products and Tin Plated Products
Vasind Location
Manufacture of Steel Rolled and Coated Products

Certificate No.: IRQS/221000358

Original Certification Date : 07/04/2016

Granting of NABCB Certificate: 10/07/2019

Current Date of Granting : 05/04/2022

Expiry Date : 04/04/2025

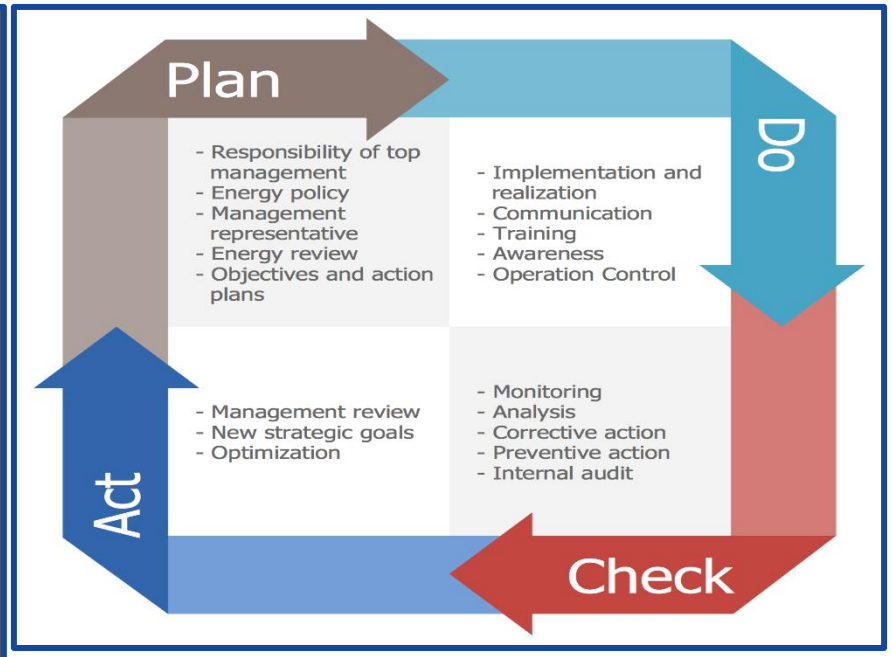
Shashi Nath Mishra
Head IRQS

Indian Register Quality Systems NABCB EN 001

This approval is subject to continued satisfactory maintenance of the Energy Management Systems of the organisation 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 COA/IRQS/NABCB/EnMS/Rev. 01

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

ISO 50001 Certified since 2016



NO NCs in Last 3 Years

Learning of ISO 50001

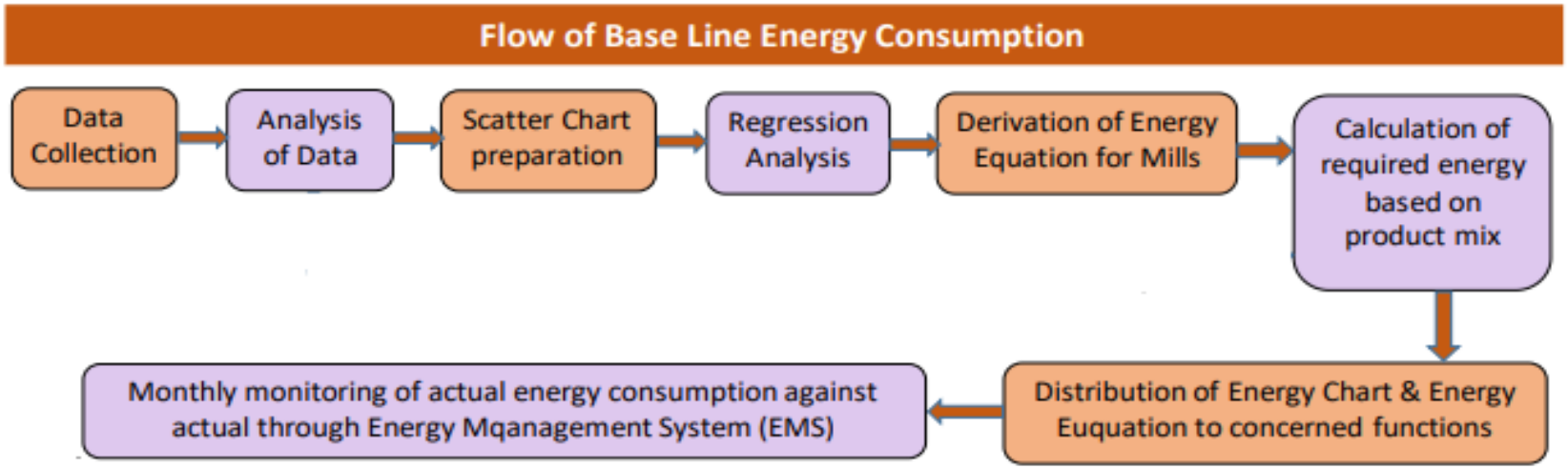
1) Energy Review

2) Significant Energy Use Process & Equipment

3) Performance monitoring of the SEU Process & Equipment

4) Deviation in the Energy Metering Recording

5) Management of EC Program, CAPA



ENERGY REVIEW

Identification of SEU's For FY 21-22 Location - Tarapur Process - All

Revision No - 3

T-EMT-All-01
Revision Date- 1st Oct 2021

Process

SEU

Energy Consumption

Sr. No.		Production (t)	Consumption /Year				Thermal Consumption/year in Gcal				Total Energy	Consumption in %			Annual Saving of Energy Consumption			% Annual Saving of Energy Consumption			Legal requirement	Top Management guidelines	Significant Energy Use (SEU)	Selection below)
			Power	RLNG	FO	Steam	RLNG	FO	Steam	Total		% of Total Power	% of Total Thermal	% of Total Energy	Electrical Energy	Thermal Energy	Total Energy	Electrical Energy	Thermal Energy	Total Energy				
			KWh	MMBtu	t	Kg	GCal	GCal	GCal	GCal	GCal	%	%	%	Lakh kWh	GCal	GCal	%	%	%	Y/N	Y/N	Y / N	
1	TM1	82899	10174762	0	0	0	0	0	0	0	8750	**8.78**	0.0	3.6	1.01	0.0	86.7	1.0	0	1.0	N	N	Y	1
2	TM2	35923	5354103	0	0	0	0	0	0	0	4605	4.62	0.0	1.9	0.00	0.0	0.0	0.0	0	0.0	N	N		
3	TM4	28977	5920273	0	0	0	0	0	0	0	5091	5.11	0.0	2.1	0.00	0.0	0.0	0.0	0	0.0	N	N		
4	TM5	27850	2886081	0	0	0	0	0	0	0	2482	2.49	0.0	1.0	0.00	0.0	0.0	0.0	0	0.0	N	N		
5	PLTCM	301169	28264221	0	0	15317478	0	0	10730	10730	35037	**24.39**	7.7	**14.6**	0.00	0.0	0.0	0.0	0	0.0	N	N	Y	1
6	PICKLING -2	186353	912594	0	0	13117796	0	0	11997	11997	12782	0.79	**8.6**	5.3	0.00	0.0	0.0	0.0	0	0.0	N	N	Y	1
7	CSD2	78216	10312538	47487	0	0	11967	0	0	11967	20836	**8**			0.00	0.0	0.0	0.0	0	0.0	N	N	Y	1
8	CSD3	153796	13250323	93937	0	0	23672	0	0	23672	35067	**1**			2.01	0.0	172.9	1.5	0	0.5	N	N	Y	1
9	CSD5	109848	11155573	68962	0	0	17378	0	0	17378	26972	**9**			0.00	0.0	0.0	0.0	0	0.0	N	N	Y	1
10	CCL1	58583	2587599	39745	0	0	10016	0	0	10016	12241	2			2.58	0.0	221.9	10.0	0	1.8	N	N	Y	1,2
11	CCL2	57258	2231997	34029	0	0	8575	0	0	8575	10495	1			0.35	0.0	30.1	1.6	0	0.3	N	N		
12	CAL	97978	7935236	70919	0	0	17872	0	0	17872	24696	6			1.20	0.0	103.2	1.5	0	0.4	N	N	Y	1
13	DCR	96343	3175782	0	0	0	0	0	0	0	2731	2.74	0.0	1.1	0.00	0.0	0.0	0.0	0	0.0	N	N		
14	CPL	97391	369803	0	0	0	0	0	0	0	318	0.32	0.0	0.1	0.00	0.0	0.0	0.0	0	0.0	N	N		
15	ETL	45541	8255845	33827	0	0	8524	0	0	8524	15624	**7.13**	6.1	6.5	0.00	0.0	0.0	0.0	0	0.0	N	N	Y	1
16	HRS1	107222	285044	0	0	0	0	0	0	0	245	0.25	0.0	0.1	0.00	0.0	0.0	0.0	0	0.0	N	N		
17	HRS2	123499	316386	0	0	0	0	0	0	0	272	0.27	0.0	0.1	0.00	0.0	0.0	0.0	0	0.0	N	N		
18	GP Slitter	55898	313858	0	0	0	0	0	0	0	270	0.27	0.0	0.1	0.00	0.0	0.0	0.0	0	0.0	N	N		
19	Adminstration	0	145260	0	0	0	0	0	0	0	125	0.13	0.0	0.1	0.00	0.0	0.0	0.0	0	0.0	N	N		
20	Stores & Canteen	0	130266	0	0	0	0	0	0	0	112	0.11	0.0	0.0	0.00	0.0	0.0	0.0	0	0.0	N	N		
21	ETP	0	1088244	0	0	0	0	0	0	0	936	0.94	0.0	0.4	0.00	0.0	0.0	0.0	0	0.0	N	N		
22	ARP	22028	800645	73586	0	0	18544	0	0	18544	19232	0.69	**13.2**	**8.0**	0.00	0.0	0.0	0.0	0	0.0	N	N	Y	1
23	DG Set & Substation	0	0	0	89.53	0	0	899.8167	0	900	900	0.00	0.6	0.4	0.00	0.0	0.0	0.0	0	0.0	N	N		
	Total		**115866435**	**462492**	**89.53**	**28435274**	**116548**	**900**	**22727**	**140175**	**239820**	**100.00**	**100.0**	**100.0**	**7.15**	**0.00**	**614.73**	**0.6**	**0**	**0.3**	**N**	**N**		

Criteria

Criteria -1 : More than 7 % of total power or total thermal or total energy used to be considered as Signifi **ria -2 : % Annual Saving of Energy Consumption**
Criteria 3 - Legal requirements other than PAT & RPO **Criteria -4 : Top management guidelines .**

Priority

Methodology for deciding the SEU's priority

Name of SEU	Annual Saving of Energy Consumption	Investment Required	Required Down Time	Saving potential	Investment required	Required down time	Score	
	GCal	Rs in Lakhs	Day	A	B	C	A X B X C	*
TM1	87	8	1	1	5	5	25	**P3**
PLTCM	0	0	0	0	0	0	0	0
PICKLING -2	0	0	0	0	0	0	0	0
CSD2	0	0	0	0	0	0	0	0
CSD3	173	8	1	2	5	5	50	**P1**
CSD5	0	0	0	0	0	0	0	0
CCL1	222	25	1	2	3	5	30	**P2**
CAL	103	20	1	2	3	5	30	**P2**
ETL	0	0	0	0	0	0	0	0
ARP	0	0	0	0	0	0	0	0

"*" = Priority of SEU to be decided based on above methodology i core . Eg. P1 top priority and so on…

Score

A) Annual Saving of Energy Consumption in GCal	
5	More than 1000 GCal
4	More than 500 GCal
3	More than 250 GCal
2	More than 100 GCal
1	Less than 100 GCal
0	Not Identified

B) Investment Required (Rs. In lacs)	
5	Less than 10 lacs
4	More than 10 lacs
3	More than 15 lacs
2	More than 25 lacs
1	More than 50 lacs
0	Not Identified

C) Required Down Time (excluding lead time of resources.)	
5	Less than One day
4	Less than three days
3	Less than five days
2	Less than seven days
1	More than seven days
0	Not Identified

Methodology for deciding the SEU on % Annual Saving of Energy Consumption

% Annual Saving of Energy Consumption in Electrical Energy or Thermal Energy or Total Energy in respective process	2%

Annual Saving Potential

Remarks -

1) Data for Plant Energy Review considered from Apr'21 to Sep'21

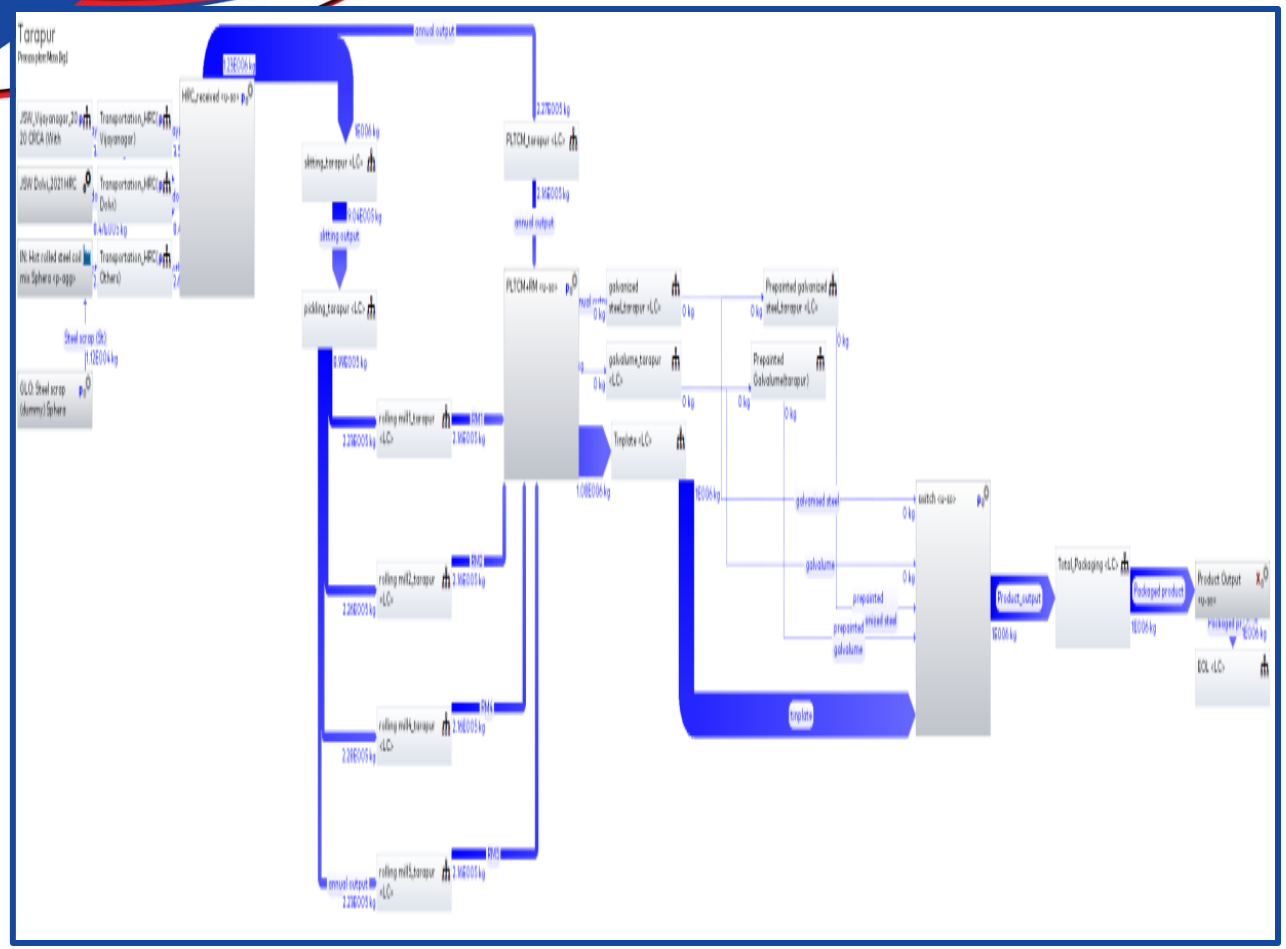
2) Criteria 1 has been changed from 10% to 7% wef 1st Oct'21

Prepared and Verified by EMT

Approved by HOD

Distribution through E-mail to concerned HOD's

LCA STUDY



1) Green Co Rating Initiated
2) Training & Handholding Session Completed
3) Final Assessment in Dec'24

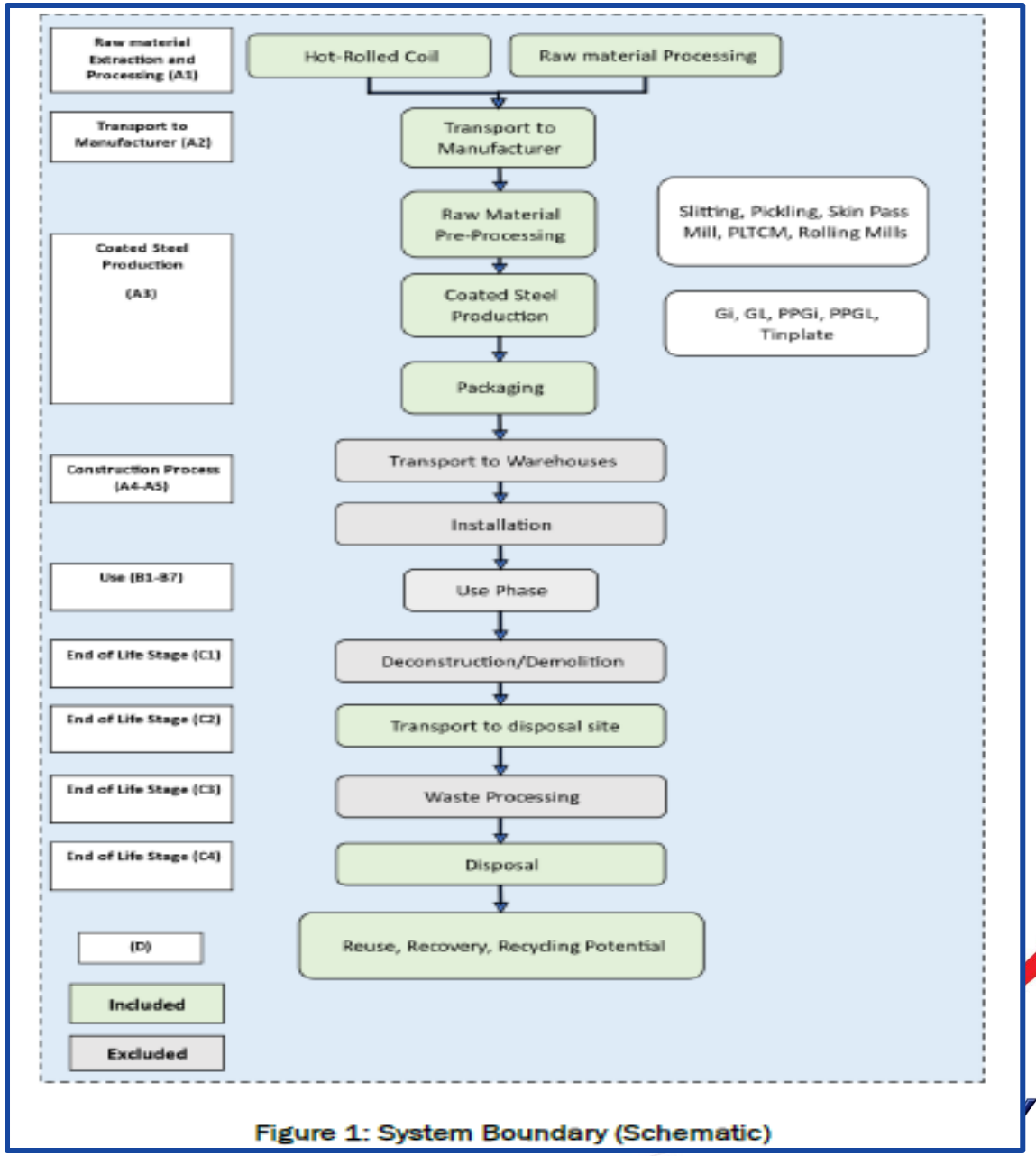


Figure 1: System Boundary (Schematic)

MAJOR ACHIEVEMENTS

Energy Conservation Award	
2008-09	MEDA – THIRD PRIZE
2011-12	MEDA – FIRST PRIZE
2014-15	MEDA – FIRST PRIZE
2015-16	MEDA – SECOND PRIZE
2015-16	BEE – CERTIFICATE OF MERIT
2017	CII – EXCELLENT ENERGY EFFICIENT UNIT
2017	SEEM – SILVER PRIZE
2018	CII – ENERGY EFFICIENT UNIT
2017-18	MEDA – SECOND PRIZE
2019	SEEM – GOLD PRIZE
2020	CEM ISO 50001 INSIGHT AWARD
2020	MEDA – THIRD PRIZE
2021	MEDA – THIRD PRIZE
2022	CII – ENERGY EFFICIENT UNIT
2022	SEEM – GOLD PRIZE
2023	APEX – GOLD AWARD
2024	APEX – PLATINUM AWARD

THANK YOU