

# JSW Steel: Site Visit to 10 MTPA Dolvi Works

December 2022

## **Forward Looking and Cautionary Statement**



Certain statements in this report concerning our future growth prospects are forward looking statements, which involve a number of risks, and uncertainties that could cause actual results to differ materially from those in such forward looking statements. The risk and uncertainties relating to these statements include, but are not limited to risks and uncertainties regarding fluctuations in earnings, our ability to manage growth, intense competition within Steel industry including those factors which may affect our cost advantage, wage increases in India, our ability to attract and retain highly skilled professionals, time and cost overruns on fixed-price, fixed-time frame contracts, our ability to commission mines within contemplated time and costs, our ability to raise the finance within time and cost client concentration, restrictions on immigration, our ability to manage our internal operations, reduced demand for steel, our ability to successfully complete and integrate potential acquisitions, liability for damages on our service contracts, the success of the companies in which the Company has made strategic investments, withdrawal of fiscal/governmental incentives, impact of regulatory measures, political instability, legal restrictions on raising capital or acquiring companies outside India, unauthorized use of our intellectual property and general economic conditions affecting our industry. The company does not undertake to update any forward-looking statements that may be made from time to time by or on behalf of the company.

JSW Steel Dolvi Works Site Visit: December 2022

## **Agenda**





Sustainability

**Plant Overview** 

Digitalization

## Agenda





Sustainability

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#### **JSW Steel: ESG Commitments**



#### **Environment**



Targets for 2030 and compared to base year 2005



42%

Emissions reduction



39%

Reduction in water consumption

- Carbon neutrality at JSW Steel Coated Products
- Renewable Energy consumption of c.1,000 MW
- Maintaining zero liquid discharge
- 'No net loss' of biodiversity



100%

Waste recycling/ reutilisation



19%

Reduction in energy consumption

- Reduce specific dust emissions to 0.26 kg/tcs
- Reduce specific emissions of oxides of sulphur to 0.82 kg/tcs
- Specific emissions of oxides of nitrogen to 0.91 kg/tcs

#### Social



- Zero harm to life
- Nurturing a diverse and inclusive culture
- Empowering local communities
- Creating sustainable livelihoods
- Adhering to human rights

#### Governance



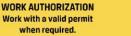
- Diverse, involved and competent Board
- Highest levels of ethics and transparency
- Strict adherence to Code of Conduct
- Ensuring information security and cybersecurity
- Robust corporate governance

## Safety: Building a Culture of Health & Safety



- Mandatory Safety Certification for all employees on 5 highrisk standards (PTW, PPE, LOTO, CSE, WAH)
- **Animated Safety Movie** for all serious accidents being utilized inside plant areas for learning & training
- **E-learning modules** for **safety standards** are developed for ease of learning
- **Skill Assessment** of all new contract employees before induction training
- Robust Fire Prevention, Fire Fighting & Emergency response

# 10 JSW CRITICAL SAFETY RULES





**ENERGY ISOLATION** Follow the Lock Out, Tag Out (LOTO) isolation procedure when working on equipment.



**DRIVING SAFETY** Always wear your seat belt. Respect speed limits. Do not use your mobile or operate any device while driving.



WORKING AT HEIGHT Protect yourself against a fall when working at height.



**HOT WORK** Identify and control flammables and ignition sources before starting any hot work.



INCIDENT REPORTING Report all workplace injuries & incidents.



Obtain a valid authorization before entering a confined space.



SAFETY CONTROLS Obtain a valid authorization before overriding or disabling safety controls/safety critical equipment.



Do not walk or stand under a suspended load.



NO ALCOHOL, DRUGS, SMOKING Do not work or drive under the influence of alcohol or drugs. Do not smoke in designated no smoking zones.

## JSW Sanjeevani Multispecialty Hospital, Dolvi



#### **Vision**

To provide timely, affordable, quality health services to improve life, particularly of the vulnerable

#### **Key Highlights**

- Commissioned in FY 2021
- Extensive healthcare services including Neonatal Care, Cardiology, General Surgery, ENT, Gynaecology, Orthopaedic, Dentistry, Ophthalmology and Emergency Care
- 80,000 sq ft building spread over 4.5 acres
- 73 beds, 10 OPDs, ICU & Emergency wards
- Serves around 200 nearby villages



## **Mangrove Conservation**





#### **Environmental Initiatives at Dolvi Plant**



#### **Covered Sheds for Jetty Yards**



## **Covered sheds for Raw Material Storage at Jetty**

- 110kt Coal storage
- 305kt Iron Ore and Flux storage
- Prevents dust, wastage of materials

#### **Top Gas Recovery Turbine**



**Top Gas Recovery Turbine** utilises the top gas from blast furnace having high pressure (5 bars) to generate power

#### **Dry Gas Cleaning Plant**



# Dry Gas Cleaning Plant (GCP)

Enabled the energy recovery of ~22 MW Reduced CO2 emissions by ~0.14 mn tCO2eq

#### **Coke Dry Quenching (CDQ) System**



cDQ Systems recover the sensible heat of red hot coke, reducing energy consumption & pollution It also improves the quality of coke, reducing moisture

## **Agenda**





Sustainability, Safety & CSR

**Plant Overview** 

Digitalization

#### **Dolvi Plant: Overview**

SW Steel

- The 10 MTPA integrated steel plant at Dolvi is advantageously located in the state of Maharashtra on the West coast of India
- JSW Steel acquired the 3.3 MTPA Dolvi plant in 2010, and has increased the capacity to 10 MTPA through brownfield expansions
- Plant is connected to Dharamtar Jetty (cargo handling capacity of 28 MTPA);
   total area of 1400+ acres
- Dolvi manufactures products that meet the needs of companies across sectors: Automotive, Consumer Durables, Oil & Gas, Infrastructure and Construction





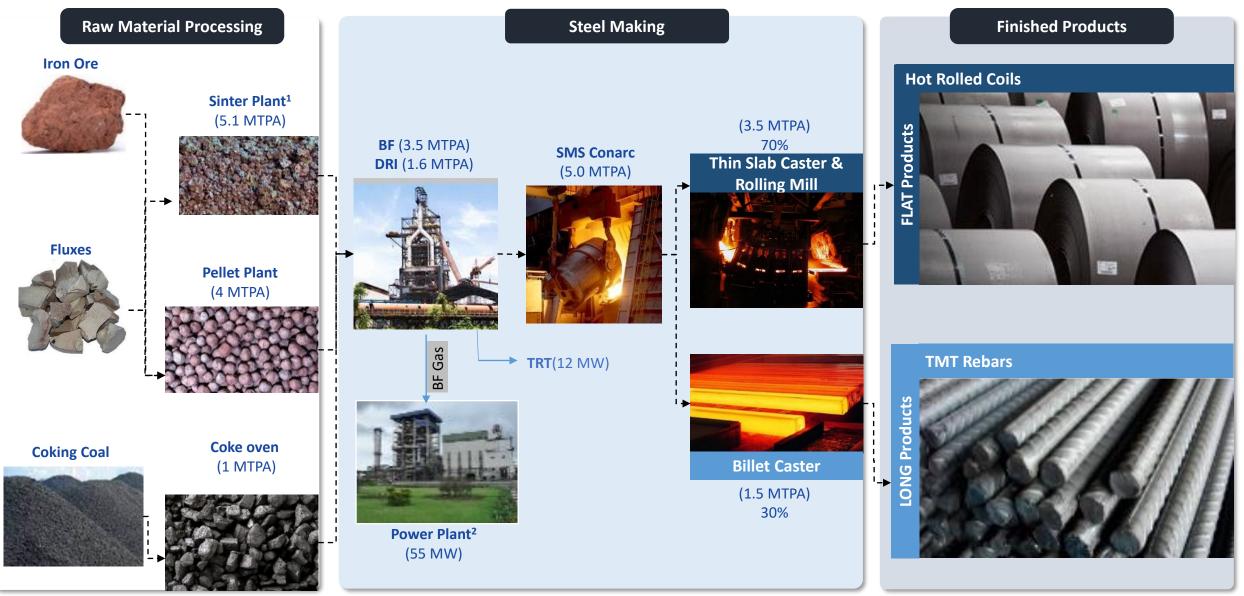


De	cember 2010	>	FY2011 – 2015	>	FY2016 – 2017	FY 2022
	equisition 3 MTPA		Completed Turnaround	•	acity expanded to 5 MTPA	Capacity expanded to 10 MTPA

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#### **Dolvi Plant: Process flow at Phase-I (5 MTPA)**





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TRT: Top Recovery Turbine Power Generation

1: Supplies to Phase-I and II. 2: Additional power is procured through PPA's and grid.

### Dolvi Plant: Process flow at Phase-II (5 MTPA) Commissioned in 2021

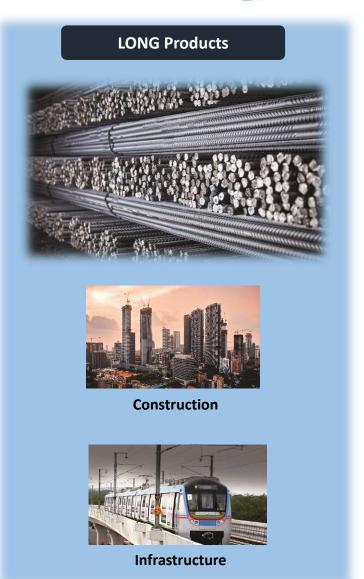




## **Dolvi Plant: Product Portfolio & Applications**







## **Agenda**





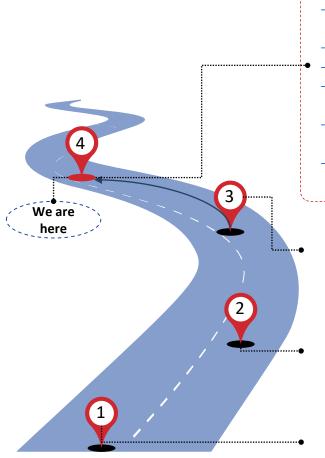
Sustainability, Safety & CSR

**Plant Overview** 

Digitalization

## Digitalization: JSW Steel's Approach & Impact Created





#### Wave 4 and Digital Vision-2026\*

#### Expand and scale Digital to best-in-class:

- Enhance Sales, Marketing, branding, Customer service and eCommerce
- Existing plants Continue digital projects
- New plants ACCIL, JSW-ISPL, JSW-BPSL
- Support functions HR, Finance, Logistics, Commercial
- Integrated Control Tower (ICT) extension to other functions
- Sustainability and R&D

#### Wave 3

**Expanding the state of art technology** to E2E plant Digitalisation and other functions

#### Wave 2

- Digitalisation of procurement
- E2E Digitalisation of single mfg shop
- Digital in large project management

#### Wave 1

**Accelerated implementation of select** use cases across value chain



130+

**Digital Assets** Created



6,000+

**Employees** engaged in the digital journey

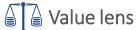


Digital lighthouses and projects

#### Guiding principles behind Digitalization



- Fail-fast approach
- Continuous improvement
- Discreet problems



- ROI key to investment
- Safety added focus
- Customer, Supplier & **Employees Experience**



- Nurture inhouse talent
- Promote Horizontal deployment
- PMO & Governance

Note:\*-Rolling 3 year strategy

## **Dolvi Plant: Digitalization Journey**





Billet Length
measurement system
by Video analytics
(11 Initiatives)
DCOE 2019-20

Radar-based wireless crane safety mechanism (26 Initiatives)
DCOE 2021-22



Wave 1

(8 Initiatives)

Predictive power utilization dashboard to reduce over-injection



Wave 3

(14 Initiatives)

Predictive maintenance activities at Blast Furnace



DCOE 2020-21

(7 Initiatives)

Video analyticsbased reduction of delays in CONARC operation



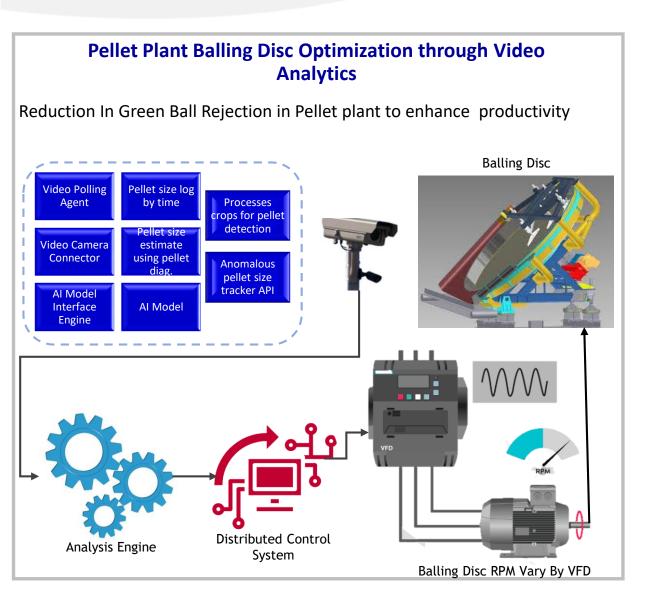
DCOE 2022-23

(29 Initiatives)

Man-less logistics operation

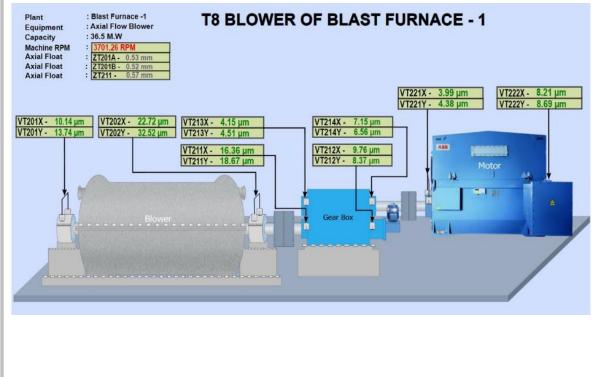
### **Dolvi Plant: Digitalization Success Stories**





# Predictive Maintenance and Analytics Module for Detecting Equipment Anomalies

Real-time condition monitoring and predictive analysis to prevent anomalies in Equipments



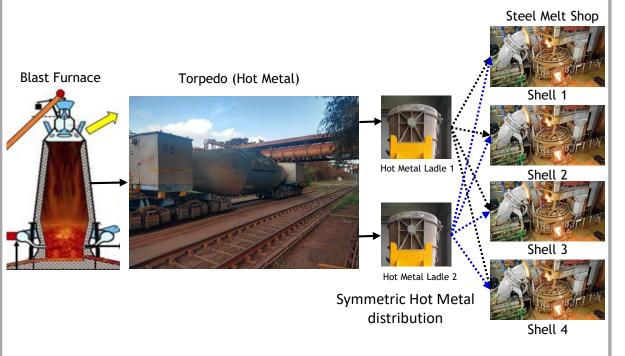
JSW Steel Dolvi Works Site Visit: December 2022 VFD: Variable Frequency Drive

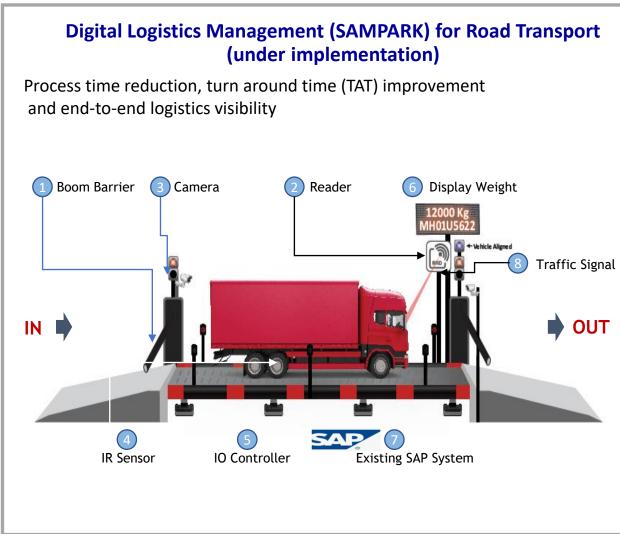
## **Dolvi Plant: Digitalization Success Stories**



#### **Digital Excellence-based Production Optimization Model**

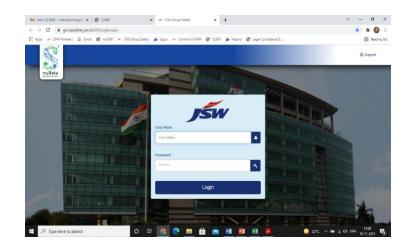
Dynamic optimization model to get advanced information of all incoming hot metal through Torpedoes to SMS for Shift Planner to make optimized planning of hot metal distribution in all shells



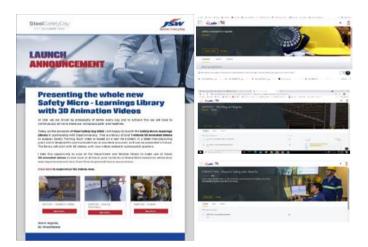


## **Dolvi Plant: Digitalization Initiatives for Safety**

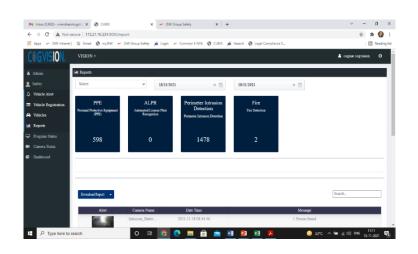




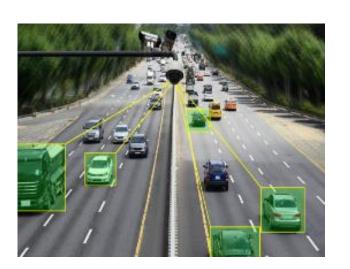
**Online Reporting Portal** 



Online Training
Modules - Safety MicroLearnings Library with
3D animation Videos



Online Detection on PPE Violation, Intrusion Detection & Fire Detection through CCTV



Al Based Road Safety Violation monitoring system.

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**Butterflies seen in the garden of Dolvi Plant** 

## **THANK YOU**

**Investor Relations Contact:** 

ir.jswsteel@jsw.in