



### **Investor Presentation**

November 2024

### **Agenda**



Sustainability	Company Overview	India Growth Opportunity	JSW Steel Delivering Growth & Value	Products and Brands Portfolio
03	14	19	23	29

Digitalisation and R&D Governance and Board and Debt Profile 48 52



### Sustainability at JSW Steel



#### Governance & Oversight by Board-level Business Responsibility & Sustainability Committee





Climate Change Energy Resources Water Resources Waste Waste Water Air Emissions Biodiversity Sustainable Mining Supply Chain Availability

Indiaenous People Cultural Heritage **Employee Wellbeing** Local Considerations Social Sustainability



#### **Driving sustainability initiatives across platforms**















Aligned to national & international frameworks

















Reporting

<u>Integrated Report</u> | <u>ESG Databook</u> | <u>Climate Action Report</u>



### **Environment: Our Targets & Commitments**











#### **Climate Change**

- Targeting Net Neutrality in carbon emissions by 2050
- 42% reduction of CO<sub>2</sub> to 1.95 tCO<sub>2</sub>/tcs by FY30, aligned with India's NDC's
- Increased use of scrap in steelmaking
- Adoption of disruptive technologies (Green H<sub>2</sub>, CCUS, etc.) in a progressive manner

#### **Water Security**

- Maintaining zero liquid discharge
- 39% reduction in specific water consumption to 2.21 m3/tcs by FY30
- Adopting digitalisation for better water control and monitoring

#### **Energy Transition**

- Transition from thermal to renewables
- 19% reduction in specific energy consumption to 5.65 Gcal/tcs by FY30
- Energy efficiency and process efficiency improvements through BATs

#### **Air Emissions**

- PM, SOx and NOx emission targets of 0.26, 0.82 and 0.91 kg/tcs respectively, by FY30
- Adoption of best available technologies like MEROS, Oven Pressure Control, CDQ, TRT etc.

## Circularity & Biodiversity

- Promoting Circular Economy
- Focus on 'Zero waste to Landfill'
- 'No net loss' of Biodiversity by FY30
- Increase green cover across operations

### **Building a Strong Health & Safety Culture**



**Safety Vision** 

ZERO major incidents ZERO injury ZERO harm





Launched **Safety Chatbot**, enables employees to access safety standards and guidance instantly, round the clock, using text or voice commands in their preferred language



Safety Experience Centre: Confined Space



**Camera-fitted Helmet** 

#### **Capability Building Initiatives**

- **Digital Vision Platform** to provide 24/7 realtime detection of safety violations with high accuracy. Implemented at Dolvi and Vasind (see Digitalisation section for further details)
- Digitally Connected Workers Solution: 'Rakshak' cards issued to 2,500 workmen at Dolvi plant to enhance workplace safety (see Digitalisation section for further details)
- Camera-fitted Helmets introduced to monitor high-risk/critical operations in real-time at JSW BPSL and Dolvi
- Establishing Centres of Excellence for Process Safety Management across plants
- Competency Framework for Safety Professionals developed with British Safety Council
- Standardized Consequence Management System: Uniform system to address safety violations across plants

### **Targeting Net Neutral by 2050: Decarbonization Agenda**





Two Phases, Two Milestones Phase-II 2050

1.95tCO₂/tcs ▼ 42% from base year Strategic Levers

**Energy Efficiency** 

Process efficiency - SEED

Energy transition - Renewable power

Improve material quality - Beneficiation

Alternative fuel sources - Biomass

Material circularity - increased scrap use

Piloting breakthrough technologies

#### Net Neutral in Carbon emissions Strategic Levers

Use of syngas and TGR<sup>1</sup> in BF (Carbon Circularity)

Commercial deployment of green hydrogen for steel-making

Scrap-based electric arc furnaces

Large scale implementation of CCUS<sup>2</sup>

Carbon offset and sequestration

Nature-based solutions

Increasing demand side material efficiency

Alternate steel-making technologies, e.g. Electrolysis

#### **Progress So Far**

- Energy Efficiency: More than 40% of total energy consumed sourced from waste gases and waste heat
- Process Efficiency: More than 250 projects under implementation within the SEED<sup>3</sup> program
- Energy Transition: approx. 2.5GW RE and 320MWh Battery Storage approved; 375MW operational and another 580MW to be commissioned by Mar 2025
- Material Circularity: Supply Chain for post-consumer scrap established



BHP, Carbon Clean and JSW Steel signed an agreement to explore Carbon Clean's CycloneCC technology for scaled implementation of CCU in steel-making

#### **Climate Action: Earth Care Awards**







#### **Taking Action for the Planet**

- Initiated by JSW with The Times of India in 2008 to recognise visionaries and innovators who are responding to the adversities of climate change
- One of the leading awards in climate mitigation and adaptation
- Comprehensive and rigorous assessment by a renowned independent jury
- More than 9,500 registrations with 87 winners over the last 11 editions

#### **6 Award Categories**



Community Based Climate Action



Enablers for Urban Centered Climate Action



Emerging Businesses in Climate Action



Green Business Titan



Women Leaders in Climate Action



Young Climate Champions

### **Biodiversity: Committed to "No Net Loss"**



- Biodiversity Management Plan for all operating sites in place
- "No Net Loss" assessment completed for Vijayanagar
- Made significant positive impact in freshwater ecosystem
- Removal of invasive species and offset development in Reserve Forest underway
- Created a positive biodiversity impact of approx. 4,000 hectares through afforestation carried out with the Karnataka Forest Department in Vijayanagar









JSW Miyawaki Park at Tarapur

### **Our Commitment to Society: Benefitting over 2.5mn Lives Annually**





19,00,000 Students Benefitted



15,00,000



**Skill Development** 



**Art, Culture & Heritage** 

**Health Consultations** 

46,000 Individuals Trained

**Projects Supported** 



30,000 Individuals Benefitted



61,000 Farmers Benefitted



42,50,000 Individuals Benefitted



**Waste Management** 

6,23,000 Individuals Benefitted

### **Our Commitment to Society**





- Roof to Dream: Refurbished 41 schools in Maharashtra for 9,000+ students
- New infrastructure and digital **learning facilities** for 25,000+ students across 100 schools in Karnataka
- · JSW Smart Shaala: Enhanced Math & English education for 1.4mn children in 14,000 schools in Maharashtra



Health

- TB-Mukt Panchayat program: 3M reached across 1,000+ villages in 3 states
- · VIMS Ballari Medical College: 400-bed Maternal & Child Healthcare Wing benefits 50,000+



**Skill Development** 

- Shakti all-women BPO: Empowers 260 women for livelihoods through training and mentoring
- India's first Skill Impact **Bond:** Provides skills to 50,000, focusing on women in F&B, retail, IT, etc.



**Art, Culture & Heritage** 

 157-vear-old David Sassoon Memorial **Library in Kala Ghoda** (a UNESCO World Heritage Site) restored in 16 months with partners

### **Our Commitment to Society**





**Sports** 

- Inspire Institute of Sports (Karnataka): High Performance Centre with satellites in Hisar, Odisha, Himachal Pradesh, and Manipur, supporting 300 athletes in multiple sports
- IIS athletes have won medals at the global stage including Olympics and Asian Games



• Enhancing agri-value chain: Supporting 32 FPOs¹ to provide farm inputs, climate resilient farming practices and market linkages, benefitting more than 50k farmers



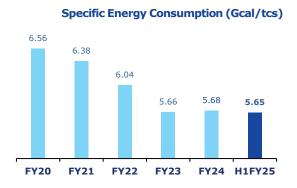
- Lake rejuvenation in Bangalore and Gujarat: 100,000 m<sup>3</sup> water storage, 10 floating wetlands, 12,000+ plants
- 10 Suvidha Centres in Mumbai: Benefit 200,000 with toilets, water, showers, laundry; solar-powered, saving 300M liters of water

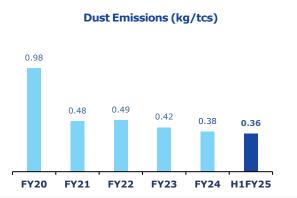


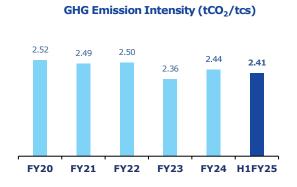
- EcoKaari project: Upcycles 4,000+ kg of waste plastic every month and supports livelihoods
- Swachh Kedarnath Project: A Plastic Collection Refund initiative

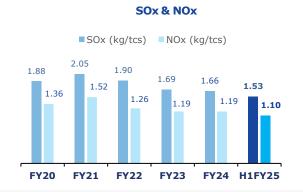
### **Environmental Performance Dashboard**

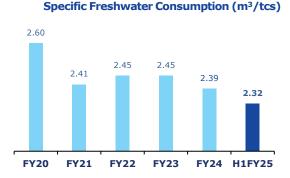
















### **JSW Group Overview**





- India's largest steel producer with capacity of 35.7<sup>1</sup> mtpa
- Growing to 43.5 mtpa by Sep'27 and 51.5 mtpa by FY31
- Market Cap of US\$ 27.7bn



- 10 GW power generation portfolio by end of FY25
- Targeting 20GW generation along with 40GWh of Storage before FY30
- Market Cap of US\$ 14.0bn



- Second largest private port operator in India
- Strategically located Ports and Terminals, 170 mtpa capacity
- Targeting 400 mtpa by FY30
- Market Cap of US\$7.8bn



- Capacity of 20.6 mtpa, growing to ~40 mtpa
- Lowest CO2 emission intensity in Indian cement industry and among major global companies
- · Targeting 60mtpa capacity



- · Capacity of 170,000 klpa
- State-of-the-art plants in Karnataka and Maharashtra
- Targeting 800,000 klpa capacity by FY30



- 35% stake in JSW MG Motor India, 2<sup>nd</sup> largest EV passenger vehicle seller in India
- Plan to build India's largest EV complex (targeting 300k of PV and 100k of CV capacity by 2030)



- High Performance Training centre at Vijayanagar and 4 satellite centres - trained Olympic medal winners
- Sports Franchises: Delhi Capitals, Pretoria Capitals, Bengaluru FC, Haryana Steelers and Soorma Hockey Club



- Early-stage institutional VC fund investing in technology companies across Platform and AI-led SaaS businesses
- Pre-series stage A to series A+ funding

1: Including 5.0mtpa of capacity under commissioning Note: Market cap as on 4<sup>th</sup> November 2024

### JSW Steel: India's Leading Steel Manufacturer



Fastest growing Indian steel producer over the past two decades

Healthy balance sheet and access to diversified funding sources

Generated superior shareholder returns



### Sustainability & Governance at the core

Actively pursuing climate agenda, target Net Neutrality in carbon emissions by 2050. Strong Board and management team



### **Integrated Manufacturing Process**

From mining to steel-making to downstream value-added and special products capacities; one of the lowest conversion costs globally



#### **Diversified Product Portfolio**

Hot-rolled, cold-rolled & coated products, tinplate, electrical steel, bars & rods, wire rod, plates, AHSS, LRPC, rails, grinding balls, etc



#### **Technological Expertise**

Combination of state-of-the-art steel making technologies: BF-BOF, DRI-EAF, Corex, Conarc



#### **Geographically Diversified**

Most geographically diversified steel company in India with presence in US & Italy



### Strong institutional and retail network

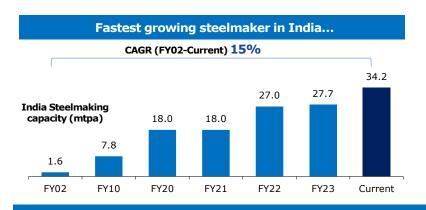
Strong B2B presence across all sectors, with export footprint in over 100 countries across five continents

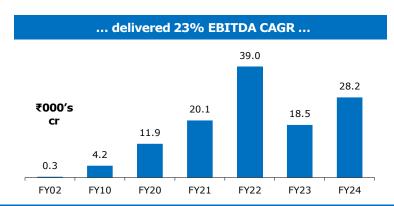




### **Growth and Value Creation Track Record**

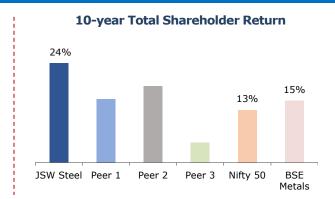


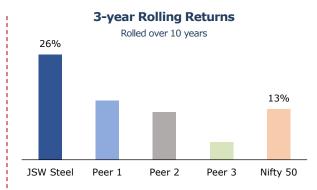




#### ... and superior investor returns

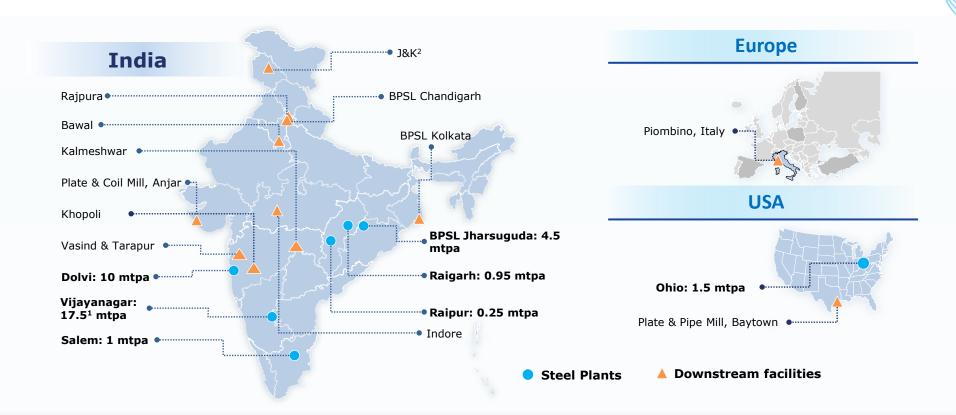






### **Most Geographically Diversified Steel Producer in India**







# **India Growth Opportunity**

Overview

**Opportunity** 

**Growth & Value** 



**Brands Portfolio** 

and R&D

and Board

and Debt Profile

### India steel demand poised for healthy growth



#### **Nation-Building Phase**

- India going through a 'Nation-Building Phase' with rising urbanisation and infrastructure investment
- India's elasticity of steel demand to GDP growth over FY21-24 was 1.55x
- Steel demand projected to grow from 136mt in FY24 to 230mt by FY30

#### Other Countries' Nation-Building Phase



Japan: 1950-1973

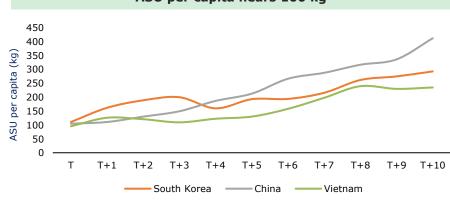
GDP growth 9.1% CAGR Steel Demand 14.2% CAGR Elasticity of steel demand to GDP growth of 1.56x



China: 2000-2013 (CAGR)

GDP growth 10% CAGR Steel Demand 14.7% CAGR Elasticity of steel demand to GDP growth of 1.47x

## Steel demand accelerates sharply once ASU per capita nears 100 kg



	Year (T) when ASU per capita reached 100 kg	ASU per capita CAGR in the next decade
South Korea	1976	10.2%
China	1999	14.7%
Vietnam	2008	9.4%

India's per capita steel consumption was 98kg in FY24

### **India: Strong Demand Tailwinds from Infra and Construction**



Policy Thrust Areas

Infrastructure: National Infrastructure Pipeline of US\$2.1 trn<sup>1</sup>

**Manufacturing:** Increasing share as a % of GDP from  $\sim 15\%$  to 25% by 2030; PLI scheme targeted to promote manufacturing

**Housing:** PM Awas Yojana- 41mn houses sanctioned (11.8mn Urban & 29.4mn Rural), with 35mn completed.

June 2024: Further 30mn announced over the next 5 years

**Energy Transition:** Renewable Energy, Green H<sub>2</sub> and EV ecosystem

#### Investment is rising as a share of India's GDP

Gross Fixed Capital Formation (% of GDP)

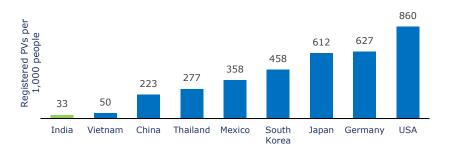


	Now	Viksit Bharat by 2047
IIII Urbanisation	35%	53%²
Railways	8 bn+ passengers	20 bn+ passengers
### Highways	145k km	300k km
Ports	2,500 mtpa Handling Capacity	10,000 mtpa Handling Capacity
Aviation	138 Airports 200 mn+ trips	300 Airports 1.5 bn+ trips
(E) Metro Rail	700 km	7,000 km

### **India: Automotive and Energy Transition**



#### Low car penetration offers growth headroom



#### India to be the world's second largest vehicle producer by 2032

- Auto-components export target of US\$100bn by 2030, from US\$21bn in FY24
- India emerging as a global center for automotive R&D
- India's 2030 vision of e-mobility: 102mn registered EVs and deployment of 2.9mn public chargers

India has 4 <sup>th</sup> largest Renewable capacity <sup>1</sup>				
China 1,453GW US 388GW Brazil 194GW	India 176 GW			
India renewable capacity CAGR of 15%	India's FY32 target <b>570 GW</b>			

#### **Energy Transition is steel intensive**

- Solar and Wind generation plants use value-added flat steel
- Power transmission grid needs to be expanded
- Transformation capacity uses high value Electrical Steel
- Storage capacity to use renewables round-the-clock through Pumped Storage Projects (PSP) and Battery storage



### **Strategic Priorities to Create Shared and Sustainable Value**





Mainstreaming **sustainability** across the business



Strategic growth with efficient capital allocation



Cost leadership through **resource optimisation** and improved raw material security



Enhance valueadded product portfolio with innovation and R&D



Being future ready through technology-led transformation & digitalisation

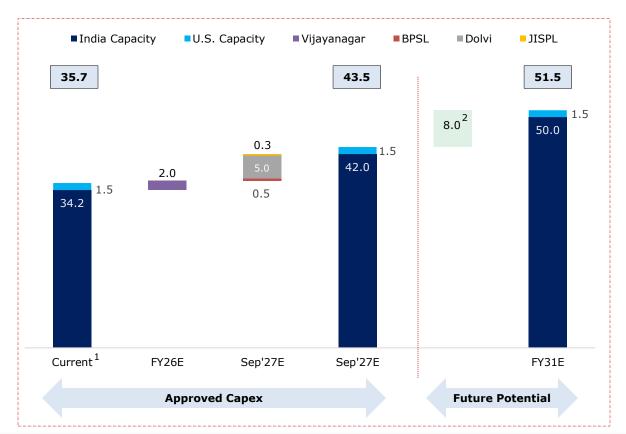


Strong financial profile and **credit** ratings

**Creating Value** for all Stakeholders

### **JSW Steel: Growing with India**







#### **Growth Options in the Portfolio**

#### **Organic**

- Brownfield growth potential of ~5mt at each of Vijayanagar and BPSL
- 4mt brownfield Green Steel in 2 phases
- Greenfield growth in Odisha (13mt in phases)
- · Greenfield EAF

#### Inorganic

• Selectively explore value-accretive acquisitions

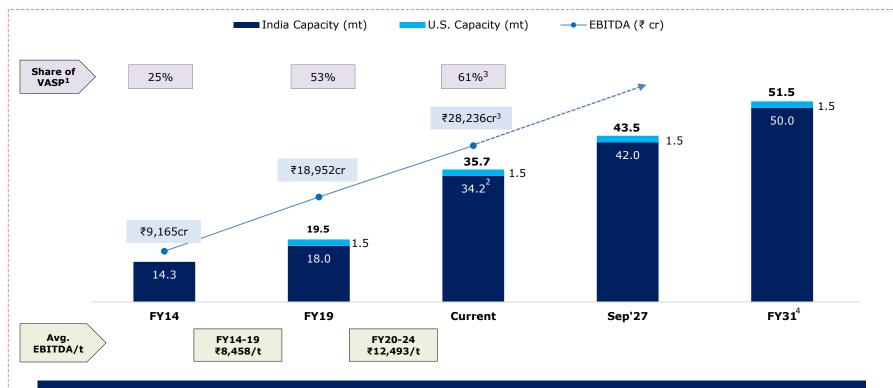
#### **Value Added and Special Products**

• Maintain >50% share of VASP in total sales

**Underpinned by Raw Material Security** 

### **JSW Steel: Transforming Scale and Profitability**





Economies of scale and margin expansion initiatives are driving EBITDA and Cash Flows

### JSW Steel: Pillars of Transformation





#### Growth

- > Strategy focused on growth in India, world's fastest growing steel market
- Added 16mtpa capacity over FY20-24
- Adding >7mtpa capacity over next 3 vears
- Maintain prudent capital allocation and strong B/S

### **★★** Product Enrichment

- Targeting VASP share >50%
- > VASP driving sustainability: packaging, roofing, AHSS for lightweighting cars and EVs, energy transition, etc.
- All products EPD certified. GreenPro Ecolabel for Automotive steel
- > Setting up India's first end-to-end CRGO line (JV with JFE Steel, Japan)

#### **Cost Optimisation**

- Achieved 100% self sufficiency in coke and pellets
- Optimised coking coal blend
- Waste gas & heatbased power plants
- Economies of scale from 5mt expansions
- Odisha slurry pipeline under construction
- Multiple fuel-rate reduction initiatives
- Debottlenecking across plants



#### **Raw Materials** Security

- Geographic optimisation of iron ore (IO) sourcing
- Increasing captive IO from existing and new mines - 1.6bnt of reserves secured
- > IO upgradation with Best Available **Technologies**
- Access to high-grade coking coal assets1 in Australia, Mozambique
- Coking coal supply linkage with Coal India
- Commence coking coal mining in India



#### **Decarbonisation** and Green Steel

- > Targeting 18mt of CO<sub>2</sub> reduction by 2030 through SEED Program
- Transition to renewable power - 10 GW by end of decade
- > Enabling material and carbon circularity in operations
- ➤ Pilot Green H₂ project at Vijayanagar by Mar'25
- Green Steel facility (4mtpa)

End-to-End Digitalisation across the value chain; focus on innovation and R&D

#### Transforming towards structurally higher and resilient margins

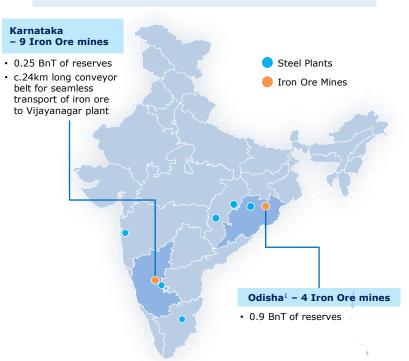
### **Strong Raw Material Linkages**



### **Iron Ore**24 Mines with 1.6bnt R&R

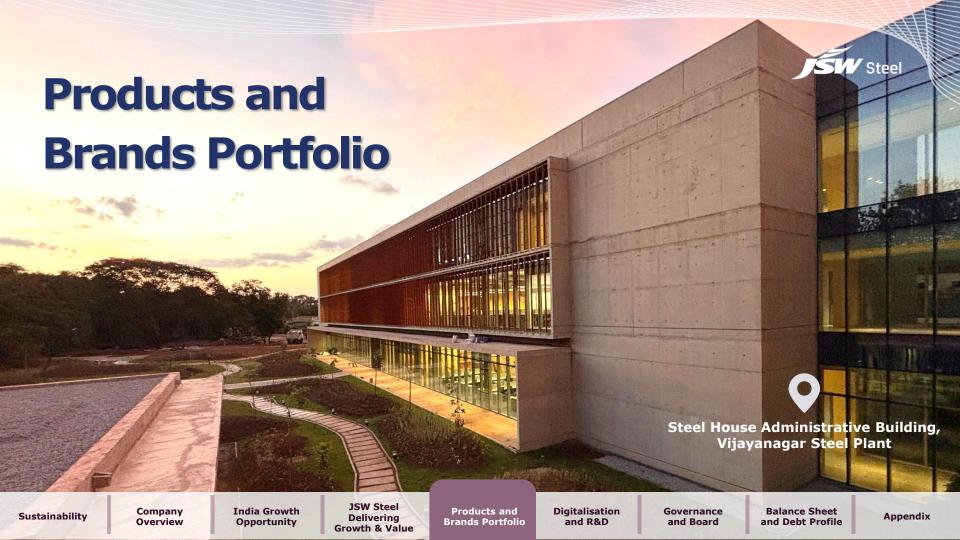
- 13 mines currently operational:
   9 in Karnataka (~11mtpa) and 4 in Odisha¹ (~20mtpa)
- To be operationalised over time:
   3 mines in Karnataka (4.5 mtpa), 2 in Goa, 1 in Odisha, 2 exploration blocks in Maharashtra and 3 in Andhra Pradesh
- Provides strategic long term iron ore security; consistent grades to enhance BF productivity; optimize logistics cost over time

#### **13 Operational Iron Ore Mines**



#### **Coking Coal**

- 3 coking coal mines in Jharkhand, India with reserves of 159mt; to be commissioned over next two years and will yield ~1.6mtpa clean coking coal
- Secured ~2mt of long-term linkage supply from Coal India
- Acquired 20% effective interest in Illawarra highgrade mines in Australia. Total reserves of 99mtpa, 6.5mtpa average production in last 5 years
- Acquiring Minas de Revuboe (MdR) hard coking coal predevelopment stage mine project in Mozambique. 800mt reserves, potential to yield 280mt of clean coking coal



### **Steel Products for Diverse Applications**



#### **Key Products**

- · HR Plates. Coils & Sheets
- HRPO
- CRCA
- · Electrical Steel
- GI / GL / GA
- Zn-Mq
- · PPGI / PPGL
- Tinplate

### ongs · Wire Rods

#### **Infra & Construction**



High Speed Rail

(Wind+Solar)

· Roofing Solutions

Shipbuilding

Renewables

Power Sector

- · Buildings (Resi. & Commercial)
- Roads
- Bridges
- Metro & other Urban Infra
- Airports

#### **Consumer Durables**



- Refrigerators
- Air Conditioners
- Home Appliances Tinplate for
- Packaging
- · Oil & Non-Oil Cans
- Aerosols
  - Battery Casings · Paint Containers
  - Bottle Caps

#### **Pipes & Tubes**



- · Oil & Gas (API grade)
- Industrial Applications
- Agriculture

#### **General Engineering**



- Alternators
  - Fans Motors Generators
  - Compressors Inverters
  - Pumps Yellow Goods

#### Railways & Defence



- Hopper & Headstock in Wagons
- Roof of Railway Locomotive
- Cargo Containers
- Shell Casings (Defence)

#### **Automotive**



- Outer skin panels Connecting Rod
- Axle Shafts
- A&B Pillars
- Cross Beams
- Suspensions & Chassis **Bumper Cross Member**
- Seat Rails
- Seat Belt Tonque
- Door Impact Beams

- LRPC
- TMT Bars

### **Leveraging Strong Brands for Value Added Products**







JSW Steel offers branded products across customer segments and applications

### **Leveraging Strong Brands for Value Added Products**



#### **Galvanised and Galvalume for Roofing Solutions**





Premium GC Sheets

Premium GC (galvanized corrugated) sheet with high durability



Premium Al-Zn Sheets

Premium Al-Zn coated roofing (galvalume) sheets & coils with 7 year warranty



Premium Al-Zn Sheets

Premium galvalume sheets offering corrosion protection and enhanced durability





Lead-free galvanized steel, suited for consumer durable sector

JSW Steel offers branded products across customer segments and applications

### Focus on Building Brands and Increasing Value Added Sales Steel



#### **Tinplate**





Tinplate coils and sheets used in food and non-food packaging

#### **Zn-Mg-Al Coated**





Al-Zn-Mg coated galvanized steel offering better protection against moderate to aggressive corrosive environments, up to 25-year warranty

#### **Zn-Al Coated**





Al-7n coated coils and sheets designed for solar structures

JSW Steel offers branded products across customer segments and applications

### Focus on Building Brands and Increasing Value Added Sales Steel



#### **Other Brands**





GreenPro certified TMT bars with unique rib pattern that provides best bonding with cement



LRPC strands that enable longer span concrete structures





ERW and superior quality GP pipes and tubes





Cut-to-Lenath HR sheets available in wide variety of sizes and grades





Steel doors designed to overcome issues like seasonal door jams, fire, termites and heavy-handed installation

JSW Steel offers branded products across customer segments and applications

### LRPC Steel Strands: Strengthening India's Infrastructure



• LRPC (Low Relaxation Prestressed Concrete) Strands that facilitate wide span construction in infrastructure and buildings, allowing >25mtrs span between pillars. Engineered for challenging situations and environments

#### **Applications**

- Infrastructure: High Speed Rail, Rapid Rail, Metro Rail, Roads & Bridges, Sea Links, Dedicated freight corridors
- High-strength structures: Nuclear Power plant, Wind towers, Hydro power dams
- Building & Construction: Commercial Buildings such as IT parks, Malls, Cineplexes, Podium parking, Recreational areas



Longer span length concrete structures >25 mtrs length



Reduce overall concrete usage and carbon footprint



Design flexibility and increase in usable floor space in commercial buildings



Reduce overall construction time by ~25% & project cost by ~13 %





Mumbai-Ahmedabad Bullet Train
Supplying LRPC, high-strength TMT Bars &
HR Plates for the project

### **Strong Retail and Influencer Network**

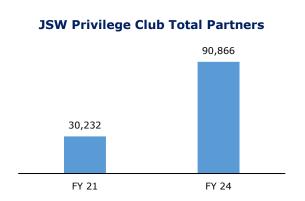




- Presence in 20,300 retail stores across 1,750 towns in India
- Strong distribution channel of 2,974 points
  - o 475 distributors
  - o **2,499** Branded stores



#### **20 Experience Centres across India**



#### **JSW Privilege Club**

- A platform to build long-term engagement with fabricators, masons, contractors and engineers to increase demand generation
- Key in developing long term loyalty & brand advocacy of JSW Steel as a brand of choice
- The influencers play a critical role in affecting purchasing behavior of consumers



### JSW One: One-Stop Digital Marketplace for MSMEs and Home Solutions

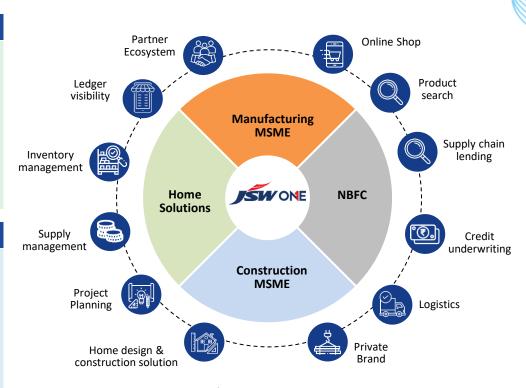


#### JSW One

- One of India's leading integrated B2B commerce platforms catering to buying needs of MSMEs
- · Offers building material products, logistics and credit solution
- GMV annual run rate has crossed ₹11,000cr
- Led by an experienced leadership team employing more than 900 experienced and specialized talent
- Leverages JSW Group's strength in building materials as well as products from numerous other suppliers
- JSW Steel holds 62.1%<sup>1</sup> stake while Mitsui holds 7.4%<sup>1</sup>

#### **JSW One Finance Ltd (JOFL)**

- JOFL has commenced NBFC business in August 2024
- To offer diversified product basket of purchase and vendor finance, working capital loans, etc. under principal and colending models
- Experienced team specialised in areas of credit underwriting, lending partnership & alliances, risk, regulatory and compliance
- Will maintain a high quality balance sheet through secured tech infrastructure and robust risk management framework

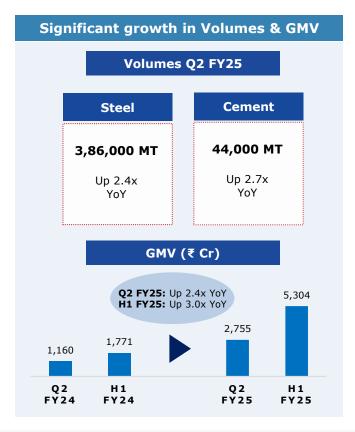


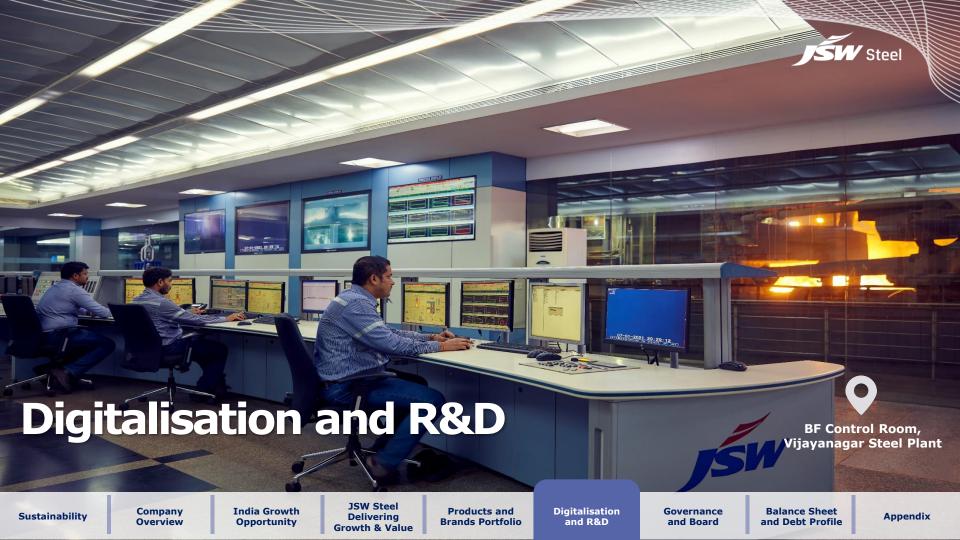
JSW One operates 2 platforms: JSW One MSME and JSW One Homes

### JSW One: One-Stop Digital Marketplace for MSMEs and Home Solutions



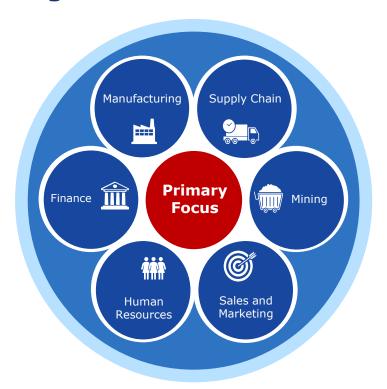






### **Digitalization at JSW Steel**





### **ADDITIONAL FOCUS**



Safety, Security, Governance



Sustainability led R&D



Cultural Transformation



Integrated Control Tower



**Increased Sales** 



**Cost Optimisation** 



IMPACT

ANTICIPATED

**Asset Availability** 



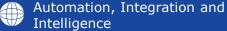
**Emissions Reduction** 



Safety Enhancement

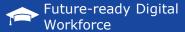


Employee Satisfaction and Wellbeing





End-to-End Functional Transformation Focus



JSW Steel Investor Presentation: Nov 2024 /

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## **Digital Vision Platform for Enhanced Safety**



### Al-powered computer vision & automated insights by processing visual data feeds



- Provides 24/7 real-time detection of safety violations with high accuracy
- Enhanced situational awareness delivered through 15+ AI use cases
- Automated alerts enable Quick Response Teams to ensure safe and secure premises
- Live at Dolvi and Vasind plants

### **Major Use Cases**





PPF Detection



Vehicle Collision



Helmet Detection



**Unauthorized Parking** 



Crowd Detection



Traffic Jam



Perimeter Intrusion



**Dust and Smoke Detection** 

### **Highlights**



**Computer Vison Al** 



Automated & real-time violation detection



**Automated anomaly** tagging



**Unified View of plant** operations



**Quick Response** 



Reporting and **Auditing** 



**Event based recording** for investigation

### **Enhancing Workplace Safety via Digitalisation**



### **Connected Work Force - Project Rakshak**

**Flagship digital workplace safety improvement program** which tracks the well being of all employees within the plant premises in real-time

Deployed through distribution of SafePass card to all employees to enhance personalized safety through IoT enabled sensors

The card works within plant premises



Sensors trigger real-time alerts for unsafe actions, while insights from historical data and pattern recognition lead to better procedures resulting in improved employee behavior and a safer workplace

### **Key Technology Levers**



**Location Information** 



**Emergency Signaling** 



Headcount



Fall and Immobility



**Device Audio Alarm** 



**Geo Fencing** 



**Proximity Detection** 

### **Digitalization Driving End-to-End Transformation**



### **Industry 4.0 for Steel Plants**



#### **Artificial Intelligence**

- AI enabled Smart Surveillance
- · AI Bots improving workplace productivity



#### **Machine Learning**

- Optimization Models for Improving Cost & Quality
- Computer vision for surface quality



#### **Simulation**

Process Twins for optimizing charge and feed mix



### **Cloud Computing**

• Integrated Control Tower for dynamic performance monitoring & governance



#### **Process Automation**

- Digital Logistics management for route optimization
- Advance Planning & Scheduling for Demand & Supply management



#### **Advanced Robotics**

- Yard Management System
- Sleeve loading in Coated operations and Dross removal



#### **Big Data Analytics**

Predictive quality, integrated energy / power scheduling



#### **Internet of Things**

- Anomaly detection in critical asset signature analysis
- IoT enabled Connected Workers

### **R&D at JSW Steel**



#### **Focus Areas**



**New Product** Development



**Process Innovations** 



**Energy Optimisation** 



Waste Utilization



Upgradation of locally sourced Raw Materials



Cost Reduction

#### **R&D Track Record** FY20-24

157 patents granted

**126 technical papers** published

#### **Achievements in FY24**

48 new products approved

### 51 new steel grades

introduced including 21 import substitution and 15 for AHSS

## **Partnerships**











**New Delhi** 

**IARI New Delhi** 

**Bombay** 







**Agricultural** Sciences BLR



NIT Surathkal



**MNIT Jaipur** 

### **Collaboration with IIT-Bombay**

Established 'JSW Technology Hub' at IIT Bombay with state-of-the-art infrastructure to undertake R&D for steelmaking & its applications

Collaboration for research, training, and technical studies on new and emerging steel technologies



# **Governance and Board**



JSW Centre, Mumbai

Sustainability

Company Overview India Growth Opportunity JSW Steel Delivering Growth & Value

Products and Brands Portfolio Digitalisation and R&D

Governance and Board Balance Sheet and Debt Profile

**Appendix** 

## **Strong and Experienced Board**





Savitri Jindal Chairperson - Emeritus

Board member from 2005 to 2011. Haryana MLA & former Cabinet Minister



Sajjan Jindal Chairman and MD

Mechanical Engineer; Ex-Chairman World Steel Association; EY Entrepreneur of the Year 2022



Jayant Acharya
Joint Managing Director and CEO

At JSW Steel since 1999, held various roles including Director-Commercial & Marketing and Deputy MD



Gajraj Singh Rathore
Chief Operating Officer

At JSW Steel since 1996. Led Vijaynagar and Dolvi plants. Expert in large-scale transformations



Arun Maheshwari
Director, Commercial & Marketing

Part of JSW Group leadership team for over 28 years. Former JMD & CEO of JSW Infrastructure



Hiroyuki Ogawa Nominee Director of JFE Steel Corp

Member of the Board and EVP, JFE Steel. Has held leadership positions at West Japan Works, Kawasaki Steel Corporation



Khushboo Goel Chowdhary Nominee Director of KSIIDC

2008 batch IAS. Held various highimpact roles in govt. incl. Deputy Secretary, Dept. of Personnel & Training and MD at HESCOM



Seturaman Mahalingam

Lead Independent Director

Over 42 years at TCS, retired in 2013. Recognized as one of 16 globally influential CFOs by Treasury & Risk magazine in 2012



Haigreve Khaitan

Independent Director

M&A expert, advises large Indian Conglomerates and MNCs on legal matters



Nirupama Rao

Independent Director

Retd. Diplomat & Foreign Sec, India's 1st woman spokesperson in External Affairs Ministry, former Ambassador to U.S. & China



Fiona Jane Mary Paulus

Independent Director

37 years in resources and energy investment banking & risk mgmt., advised Boards of FTSE 100 companies and MNCs



Marcel Fasswald

Independent Director

Deep expertise of steel plant engr. Former CEO of Thyssenkrupp Industrial Solutions & part of Managing Board at SMS Group



Sushil Kumar Roongta

Independent Director

Wide and varied experience in PSUs. Former Chairman of SAIL. Been member of Exec. Committee of World Steel Association

### **Robust Governance, Board with Diverse Skillsets**







**Independent Directors** with wide range of expertise, backgrounds and experience



25% Women Directors



**Independent Directors** heading all major board committees





**Designated Lead Independent Director**present on the Board

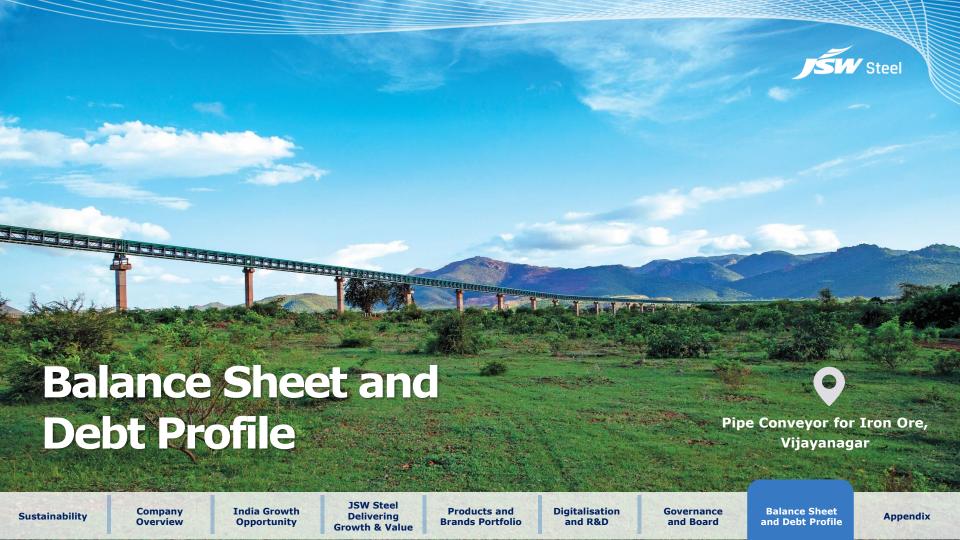


**50% independent directors** on the Board fully compliant with SEBI norms



**Executive Management Committee** reporting to the Board

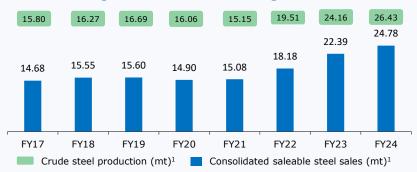
	Sajjan Jindal	Jayant Acharya	Gajraj Singh Rathore	Arun Maheshwari	H. Ogawa	Khushboo Goel Chowdhary	<b>S. Mahalingam</b> (Lead Independent Director)	Nirupama Rao	Haigreve Khaitan	Fiona Paulus	Marcel Fasswald	Sushil Kumar Roongta
Nationality	<b>®</b>	⊚	•	<u> </u>		<b>®</b>	•	•	<b>©</b>			<b>⊚</b>
Industry Experience	•	•	•	•						•	•	•
Projects	•		•	•	•		•			•	•	
Risk Mgmt.		•		•			•			•	•	•
Accounting					•		•			•	•	
Govt./Public Policy	•	•	•	•		•		•				•
IT & Digital Outreach	•	•	•		•		•	•			•	
Law							•		•			



## **Strong Financial Growth driven by Prudent Capital Allocation**



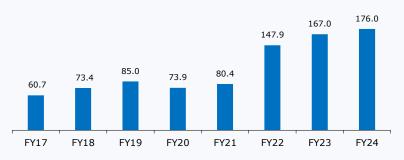




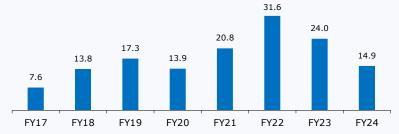
#### Robust EBITDA Margin through the cycle...



#### ... resulting in healthy Revenue growth (₹000's Cr)



### ... generating strong Cashflow from Operations (₹000's Cr)



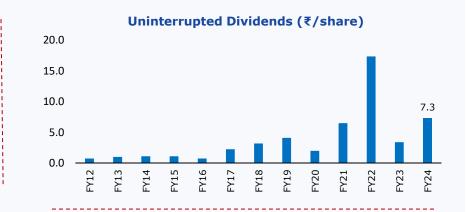
### Value-accretive growth through economic cycles

## **Track Record of Delivering Strong Shareholder Returns**









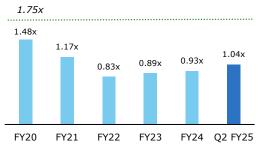


Prudent capital allocation and efficient operations have consistently delivered superior returns

## Strong Credit Ratings and Diversified Funding



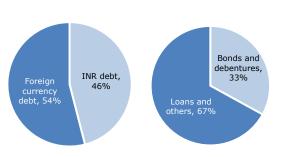




Leverage (ND/EBITDA) within the stated cap of 3.75x



**Funding Sources** 



### **Strong Liquidity and Credit Ratings**

- Cash and Cash Equivalents of ₹9,550 crore
- Credit Ratings:
  - o International: Moody's: Ba1 (Stable Outlook) and Fitch: BB (Stable Outlook)
  - o Domestic: ICRA: AA (Stable Outlook), IndRa: AA (Stable Outlook), CARE: AA (Stable Outlook)

#### **Access to Diverse Funding Sources**

- Access to diverse pools of liquidity; strong relationships with domestic and international banks and financial institutions
- Net Gearing and Leverage within stated caps of 1.75x and 3.75x, respectively
- Successfully raised US\$3.84bn through global bond markets since 2014 of which US\$1.5bn repaid
- Issued global steel industry's first USD Sustainability Linked Bond in September 2021
- Successfully raised ECB of US\$900mn in April 2024 and Non-Convertible Debenture issuance of ₹2,250 crore in August 2024



Sustainability

Overview

Opportunity

**Delivering Growth & Value** 

**Brands Portfolio** 

and R&D

and Board

and Debt Profile

**Appendix** 

## **Proven Track Record of Organic and Inorganic Growth**



2002-2005	2006 2	2009	2010	2011-2012	
Capacity expanded from 1.6 mtpa to 2.5 mtpa Color coating line	increased to to 4.8 minus	ry increased • Capacity increased to 7.8 mtpa nd pipe mill	<ul> <li>3.5 mtpa (HSM-2)</li> <li>JSW-JFE strategic partnership</li> </ul>	<ul> <li>49.3% stake in Ispat industries</li> <li>HSM-2 capacity expansion to 5 mtpa</li> </ul>	
2017	2016	2015	2014	2013	
	<del></del>	<del></del>	<del></del>	<del></del>	
<ul> <li>74% stake in Praxair's<sup>(1)</sup> industrial gases JV<sup>(2)</sup></li> <li>Won 6 Iron Ore mines in Karnataka</li> </ul>	Capacity increased to 18 mtpa	<ul> <li>CRM-2 - Phase 2</li> <li>0.2 mtpa electrical steel mill</li> </ul>	<ul> <li>New CRM-2 - Phase I</li> <li>4 mtpa- Pellet Plant<sup>(3)</sup></li> <li>1 mtpa- Coke Oven<sup>(3)</sup></li> <li>Welspun Maxsteel, Salav</li> <li>50% stake in Vallabh Tinplate</li> </ul>	14.3 mtpa capacity post Ispat merger	
2018	2019-2020	2021-2022	2023-2024	2025	
<ul> <li>EAF-based steel plant in Ohio, US</li> <li>Aferpi Steel, Italy</li> <li>Minority stake in Monnet Ispat</li> </ul>	Won 3 Iron Ore mines in Karnataka and 4 in Odisha     Acquisition of Asian Colour Coated (c.1mt downstream capacity)	<ul> <li>Acquired 49% in BPSL (2.75mtpa)</li> <li>Acquired Plate &amp; Coil Mill in Anjar, Gujarat</li> <li>Increased stake in BPSL to 83.3% w.e.f. 1st October</li> <li>Dolvi 5 mtpa expansion</li> </ul>	<ul> <li>Expanded BPSL capacity from 2.75mtpa to 3.5mtpa</li> <li>Merger of JSW Ispat Special Products</li> <li>Acquired National Steel</li> <li>Announced JV with JFE for CRGO Steel</li> </ul>	Acquired minority interest in Illawarra coking coal mines i Australia	

Steel-making Capacity Of 35.7 MTPA

## **Case Study: Turnaround Strategy at JSW Ispat's Dolvi plant**



#### Proven track record of identifying, acquiring and integrating assets creating synergies and optimizing costs

### At Acquisition in December 2010

- Plant under maintenance
- FBITDA losses
- High interest cost
- Financially distressed, unable to service debt
- Corporate debt restructuring (CDR) case

## Completed initiatives – FY2011 – 2015

- Infusion of equity
- Marketing strategies for freight synergies and VAT benefits
- Reduced high cost working capital funding
- Refinancing existing debt
- Electricity from JSW Energy at competitive prices
- Commissioning 4 mtpa pellet plant, 1 mtpa coke oven, waste gas based 55MW power plant, railway siding, and lime calcination plant

#### FY2016 - 2017

- Capacity expanded to 5 mtpa
- Diversified product offering from Flat steel only to mix of Flat and Long steel

#### FY2018 onwards

- Capacity increased to 10 mtpa in FY22
- Major facilities setup include:
  - 4.5 mtpa BF with 5 mtpa SMS
  - o 5 mtpa Hot Strip Mill
- Announced expansion to 15 mtpa in May 2024

#### **IMPACT**

- Exit from CDR
- Generating positive PAT

 Stabilized and ramped up expanded capacity  Large-scale and valueaccretive growth

Leveraging acquisitions for maximum value accretion through knowledge and experience

### **Proven Track Record of JVs and Partnerships**







#### **Partnership overview**

- JFE acquired 14.99% in JSW Steel in 2010 and has maintained this stake
- Sharing of technology and best practices has facilitated product development, quality, productivity, energy efficiency, etc.
- · JSW Steel has become top two supplier to Indian Auto sector
- CRGO steel plant being setup as 50:50 JV





- 50:50 JV with Severfield Plc, the largest steel fabricator in UK, since 2009
- · Complete Structural Steel Building Solutions, 150ktpa production capacity
- Constructed the Mumbai Air Traffic Control Tower and multiple projects across India and overseas





- 50:50 JV with Marubeni Itochu Steel since 2011
- · Steel service centres across North, West and South India, further expanding footprint
- Efficient and reliable just-in-time solutions to key industries such as automotive, general engineering, pipe & tubes, white goods, infrastructure and construction

## **Plant-wise Steel Capacity**

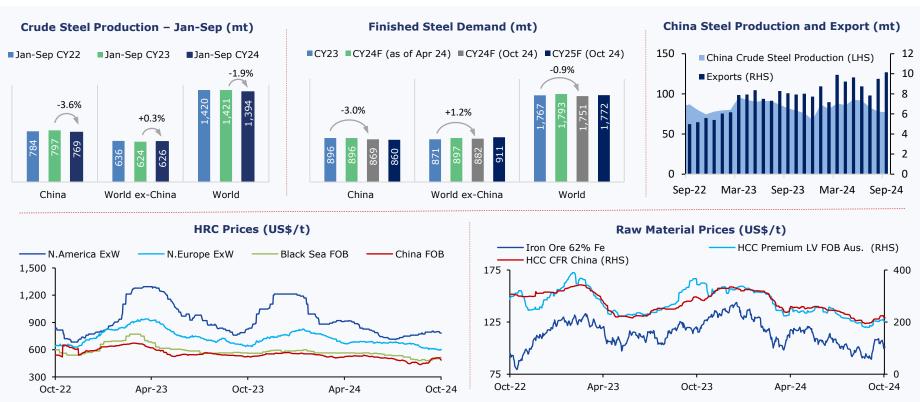


In million metric tonnes per annum

Plant	Current	Approved Expansion	Sep'27	
Vijayanagar*	17.5	2.0	19.5	
Dolvi	10.0	5.0	15.0	
BPSL - Jharsuguda	4.5	0.5	5.0	
Salem	1.0	-	1.0	
Raigarh	0.95	0.3	1.25	
Raipur	0.25	-	0.25	
India Operations	34.2	7.8	42.0	
USA Ohio Operations	1.5	-	1.5	
Total JSW Steel	35.7	7.8	43.5	

### **Global Steel**

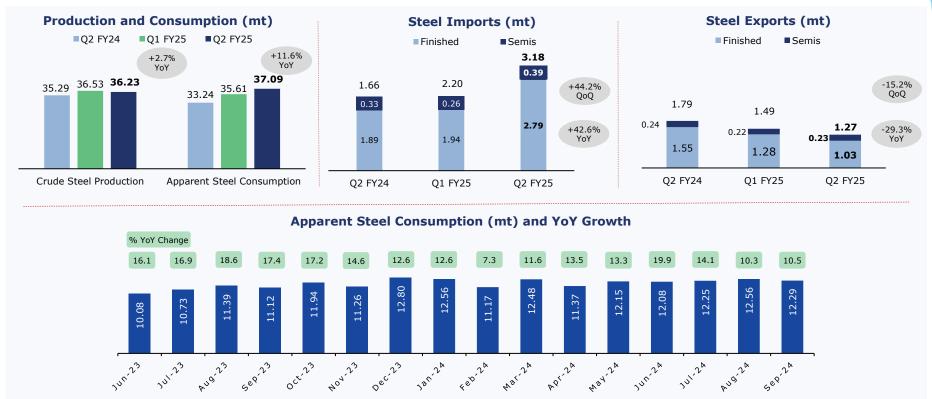




China stimulus boosted steel and RM prices; demand recovery in China to be monitored

### **Indian Steel**





Healthy domestic demand; elevated net imports continue to remain a concern

## **Q1 FY25 Production and Sales**



In million metric tonnes

Particulars	Crude Steel Production			Sales		
	Q2 FY25	Q2 FY24	YoY	Q2 FY25	Q2 FY24	YoY
Consolidated India Operations	6.63	6.20	7%	5.96*	6.18	-4%
USA – Ohio Operations	0.14	0.14	3%	0.17	0.16	9%
JSW Steel Consolidated Operations	6.77	6.34	7%	6.13*	6.34	-3%
	H1 FY25	H1 FY24	YoY	H1 FY25	H1 FY24	YoY
Consolidated India Operations	12.75	12.38	3%	11.86*	11.66	2%
USA – Ohio Operations	0.37	0.38	-2%	0.39	0.39	-1%
JSW Steel Consolidated Operations	13.12	12.76	3%	12.25*	12.05	2%

**Guidance of Total Combined Volumes for FY25: Production 28.40mt & Sales 27.00mt** 

<sup>\*</sup> Includes sales of 0.03mt from trial run in Q2 FY25

## **Awards and Recognitions**















Awarded one of India's Best
Workplaces for Women,
Health and Wellness and
Best Employers among
Nation-Builders



JSW becomes **fastest growing brand in India over the last 10 years** - Interbrand



Received the **Iconic Brands of India 2024 Award** from ET NOW

## Our Steel is Helping Build Key Infrastructure in India





Rail

**High Speed Rail** (Mumbai-Ahmedabad Bullet Train)

### 879 km Railway Freight Corridors

(Mumbai-Haryana WDFC & Ludhiana-West Bengal EDFC)



**Pipelines** 

Water Pipelines 2,428 km

Oil & Gas Pipelines 1,531 km



Metro

48 km Metro Projects (Mumbai, Pune

(Mumbai, Pune, Nagpur, Bengaluru, Ahmedabad, Chennai, Indore, Kochi & Delhi)



Infra

Expressways and Highways 845 km Roads & 140 km Bridges

**Airports** Navi Mumbai, Jewar (Noida)



Renewables

2.0 GW Solar Projects

1.2 GW Wind Projects



Nuclear

747 MW Nuclear Power Plants (Kudamkulam, Tarapur and Kakrapar Power Projects)



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