

JSW **NEOSTEEL**
PURE TMT BARS



TMT BARS

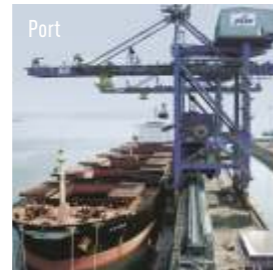




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JSW GROUP



A \$11 billion conglomerate, JSW Group is a part of the O. P. Jindal Group. JSW has set up business facilities in various core sectors of India, with verticals that are exploring innovative and sustainable avenues in steel, energy, infrastructure and cement. The Group is paving the way for India's development as a global superpower.

JSW Steel is India's leading steel producer and among the world's most illustrious steel company. The Group is also leading in every sector that it operates in. By maintaining exemplary operational efficiencies, JSW Energy has grown ten-fold in just three years, while JSW Cement creates the building blocks of India with its environment friendly products. JSW Infrastructure is contributing to the nation's development by providing world class services to clients through state-of-the-art ports, terminals, shipyards and other facilities.

JSW Group is committed to creating more smiles at every step of the journey. JSW Foundation, the Group's CSR and sustainability arm, is in constant pursuit of making life better for communities with its various initiatives in the fields of health, education, livelihood and sports, along with art and culture.

JSW Group is proud to be charting a course to excellence that creates opportunities for every Indian and leads to the creation of a sustainable, dynamic and developed nation.

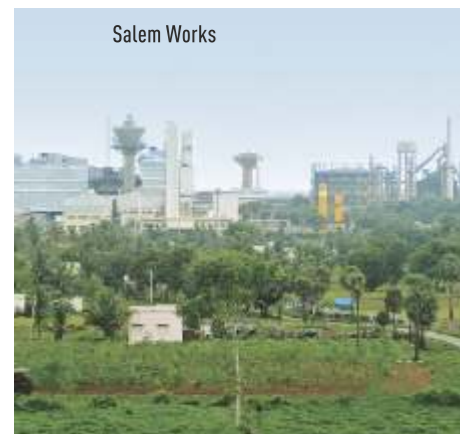


JSW STEEL LTD.

The flagship company of USD 11 billion JSW Group, JSW Steel is one of India's leading integrated steel manufacturers with a capacity of 14.3 MTPA. It is one of the fastest growing companies in India with a footprint in over 140 countries. With state-of-the-art manufacturing facilities located in Karnataka, Tamil Nadu and Maharashtra, it is recognized for its innovation and quality. JSW offers a wide gamut of steel products that includes Hot Rolled, Cold Rolled, Bare & Pre-painted Galvanized & Galvalume®, TMT Rebars, Wire Rods and Special Steel. JSW Steel continues to enhance its capabilities to meet the rapidly changing global market needs. To stay on the leading edge of technical advancement, JSW has entered into technological collaboration with JFE Steel Corp, Japan to manufacture high strength and advanced high strength steel for the automobile sector. JSW Steel has also entered into a joint venture with Marubeni-Itochu Steel Inc. Tokyo, to set up a state-of-the-art steel processing center. To strengthen its global network, the Company has also acquired a Pipe and Plate making steel mill in Baytown, Texas in USA. By 2025, JSW Steel aims to produce 40 million tons of steel annually.

JSW STEEL COATED PRODUCTS LTD.

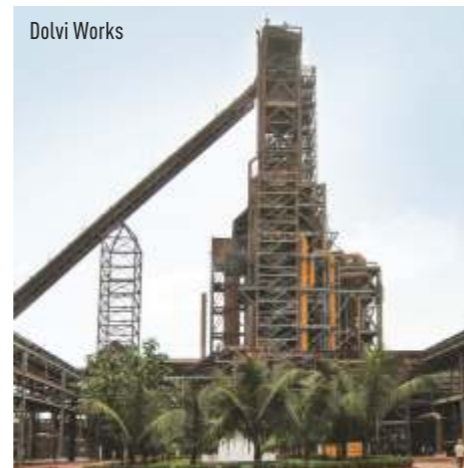
JSW Steel Coated Products Limited is 100% subsidiary company of JSW Steel, having state-of-the-art manufacturing facilities in the state of Maharashtra. JSW Steel Coated Products Ltd. is India's largest manufacturer and exporter of Coated Steel as well as Colour Coated Steel. The production facilities, Tarapur and Vasind Works, are located in the vicinity of major ports. The company's Kalmeshwar Works is centrally located near Nagpur to serve across regions. JSW is an ISO 9001: 2008 Certified Organization and the first licensee producer for Galvalume® in India. The Tarapur plant is specialized in manufacturing Ultra-Thin Coated Products. The company is also a manufacturer of appliance grade colour coated products. JSW's Kalmeshwar Works is the first producer of Galvanized and Colour Coated Steel in India. JSW also has introduced indigenously manufactured Pre-Coated Metal & Vinyl Coated Metal, for the first time in India, as it focuses on the Appliance Industry.



Salem Works



Vijayanagar Works



Dolvi Works



Vasind Works



Tarapur Works

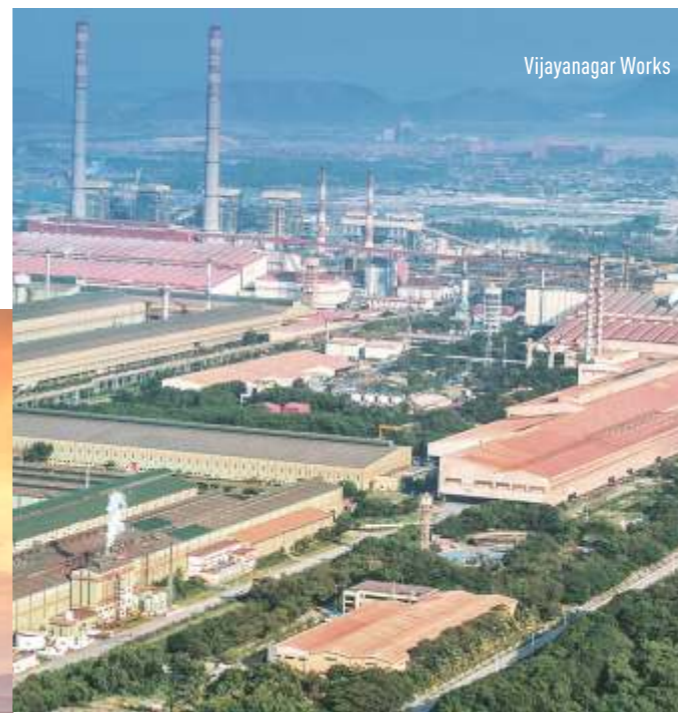


Kalmeshwar Works

Blast Furnace - IV



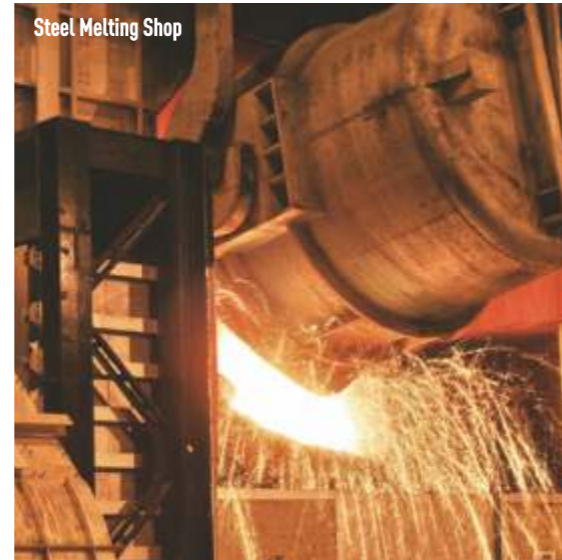
Vijayanagar Works



SETTING BENCHMARKS

- First continuous annealing line in India
- Widest Cold Rolling Mill (upto 1870 mm width)
- India's Largest Coated Steel producer
- First Licensee Galvalume® producer in India
- JSW Steel Salem Works is the largest integrated alloy and special steel plant in India
- Widest Hot Strip Mill in India: 25.4 x 2150 mm
- India's Most Modern and Largest Vertical Caster - 300/260/220 x 2200 mm
- India's Largest Blast Furnace - 3.2 MTPA at Vijayanagar
- India's only Multi-Radii Bloom Caster (12/16/30 m) operational at Salem Works
- ZERO EFFLUENT discharge for greener & cleaner environment
- 1.5 million trees planted at Vijayanagar Works, transforming the area into a green oasis

Steel Melting Shop

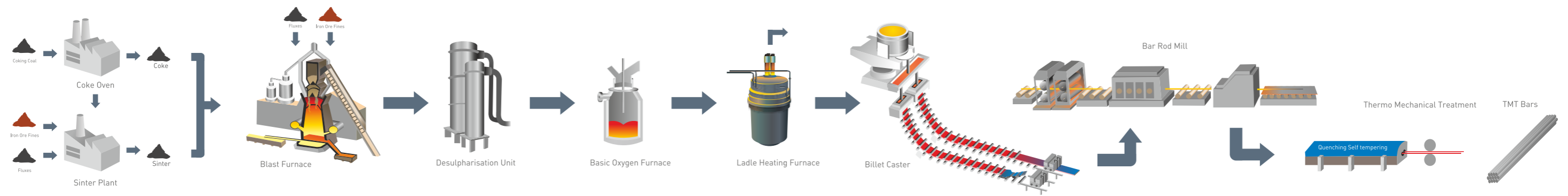


INDIA'S LEADING INTEGRATED
PRIMARY STEEL PRODUCER





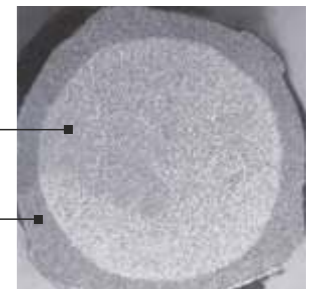
JSW NEOSTEEL TMT bars are manufactured through primary production process to ensure purity and superior quality. The state of the art and technical advanced bar rod mills for the production are supplied by Danieli Italy and Morgan USA. JSW NEOSTEEL is toughened high strength HYQST (High Yield Quenched and Self Tempered) TMT bar conforming to IS 1786:2008. JSW NEOSTEEL bars are available in Fe500, Fe500D, Fe550D , Fe600 and CRS grades.



TYPICAL MACROSTRUCTURE OF JSW NEOSTEEL

Ferrite and Pearlite Core
Result: Tough Surface
and strong fine-grain core

Tempered Martensite
Surface Layer



PATHWAY TO PERFECTION

Process route of Blast Furnace - LD Steel making - Ladle Refining - Continous Casting of billets ensures the right and desired quality with minimum tramp elements and sulphur and phosphorus content of 0.005 - 0.035%. Cast billets are hot rolled in state-of-the-art MORGAN and DANIELI rolling mill, which ensures uniform dimensions and properties in each bar.

Surface finish of each bar is excellent as the mill employs tungsten carbide rolls against conventional rolls. Each bar is thermomechanically treated. After leaving the last stand of the rolling mill, the bars are quenched (rapid cooling) in water from final rolling temperature of about 1050°C. The quenching is partial, only until outer surface layer has been transformed from austenite to martensite. Because of partial quenching, a part of the original heat remains in the core of the steel and on the cooling bed, this migrates towards the surface and results in an automatic self tempering process where the surface layer of martensite is tempered. The resulting tempered - martensite shows improved deformability as compared to quenched martensite.

On atmospheric cooling on cooling bed, austenitic core is transformed into ductile ferrite - pearlite. The core of the heat treated bars consists of ferrite and pearlite while strong outer layer consists of martensite.



Roughing and Intermediate Mill

WORLD-CLASS ROLLING MILLS

REHEATING FURNACE

- Walking Beam Furnace with digitally controlled combustion system
- Uniform heating of Billets gives uniform control on decarburization level in finished products with less scale loss ($\leq 0.5\%$)

ROUGHING AND INTERMEDIATE MILL

- Input Billet Size of $165 \times 165 \text{ mm}^2$
- Patented Oval - Round Pass sequence enables higher reduction ratio resulting in better internal soundness & superior quality steel
- Two-way online slitter ensures high productivity for smaller sizes

VEE NO TWIST MILL

- Two sets of six stand No Twist Mill (NTM) enables controlled temperature rolling to produce superior grain structure



Re-heating furnace BRM2



Cooling Bed



JSW NEO STEEL

CHEMICAL COMPOSITION

	IS 1786 Fe 500 D	JSW NEO STEEL Fe 500 D*	IS 1786 Fe 500 S	JSW NEO STEEL Fe 500 S*	IS 1786 Fe 550 D	JSW NEO STEEL Fe 550 D*	IS 1786 Fe 600	JSW NEO STEEL Fe 600*
% C (Max)	0.25	0.18 -0.23	0.25	0.18 -0.23	0.25	0.18 -0.23	0.25	0.22 -0.26
% S (Max)	0.04	0.03	0.04	0.03	0.04	0.03	0.04	0.04
% P (Max)	0.04	0.03	0.04	0.03	0.04	0.03	0.04	0.04
% S + % P (Max)	0.075	0.06	0.075	0.06	0.075	0.06	0.075	0.075
C.E (Max)	0.42	0.4	0.42	0.4	0.42	0.4	0.42	0.42

*typical values for 95% of heat

MECHANICAL PROPERTIES

	IS 1786 Fe 500 D	JSW NEO STEEL Fe 500 D*	IS 1786 Fe 500 S	JSW NEO STEEL Fe 500 S*	IS 1786 Fe 550 D	JSW NEO STEEL Fe 550 D*	IS 1786 Fe 600	JSW NEO STEEL Fe 600*
Y.S (Min)	500	520	500	520	550	570	600	620
T.S (Min)	565	600	625	650	585	630	660	670
T.S/Y.S (Min)	1.1	1.15	1.25	1.25	1.08	1.1	1.06	1.08
% El (Min)	16	18	18	20	14.5	16	10	12

*typical values

BEND PROPERTIES

		Maximum Mandrel Diameter	
		upto and incl. 20 mm	over 20 mm
JSW NEO STEEL Fe 500 D	IS 1786 Fe 500 D	3d	4d
JSW NEO STEEL Fe 500 S	IS 1786 Fe 500 S	3d	4d
JSW NEO STEEL Fe 550 D	IS 1786 Fe 550 D	4d	5d
JSW NEO STEEL Fe 600	IS 1786 Fe 600	5d	6d

*cl: nominal size for piece in mm

RE-BEND PROPERTIES

		Maximum Mandrel Diameter	
		upto and incl. 20 mm	over 20 mm
JSW NEO STEEL Fe 500 D	IS 1786 Fe 500 D	4d	6d
JSW NEO STEEL Fe 500 S	IS 1786 Fe 500 S	4d	6d
JSW NEO STEEL Fe 550 D	IS 1786 Fe 550 D	6d	7d
JSW NEO STEEL Fe 600	IS 1786 Fe 600	7d	8d

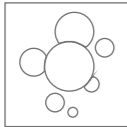
*cl: nominal size for piece in mm

ASTM GRADES

MECHANICAL PROPERTIES

		Y.S (Min)	T.S (Min)	% El (Min)
JSW NEOSTEEL Gr 40	A 615 / A 615 M - Grade 40	280	420	11
JSW NEOSTEEL Gr 60	A 615 / A 615 M - Grade 60	420	620	7

ADVANTAGES 'NEOSTEEL'



Pure Steel – Gives enhanced strength and durability



Leading Primary Steel Producer – JSW Steel is primary and main producer of steel



World-Class Steel Maker - Ranked among the top 10 global Steel producers for last seven consecutive years by World Steel Dynamics



Rib-Pattern – Best in class rib-pattern with highest AR value that bonds best with cement



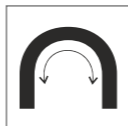
Earthquake Resistant – Excellent combination of strength, bendability, ductility and fatigue resistance is the best match for earthquake prone zones



Easy Weldability – Provides excellent weldability due to low carbon content



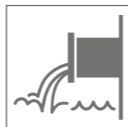
Anti-Corrosive – Unique & uniform microstructure due to HYQST technology that gives higher corrosion resistance



Easy Bendability – JSW Neosteel can be bent into customized shape in spite of having very high strength due to its inherent microstructure with soft ferrite and pearlite core.



Higher Fatigue Resistance – JSW Neosteel is excellent in cyclic loading situations due to uniform & critically designed rib pattern



Green Steel – Plant with zero effluent discharge



JSW NEO STEEL CRS

PRODUCT RANGE AND NOMINAL WEIGHT

Nominal size (mm)	Weight per meter (kg)*	Nominal size (mm)	Weight per meter (Kg)*
8	0.395	25	3.850
10	0.617	28	4.830
12	0.888	32	6.310
16	1.580	36	7.990
20	2.470	40	9.860

*supplies will be in line with weight tolerances as per IS:1786-2008

CHEMICAL COMPOSITION

	IS 1786 Fe 500 D CRS	JSW NEO STEEL Fe 500 D CRS*	IS 1786 Fe 550 D CRS	JSW NEO STEEL Fe 550 D CRS*	IS 1786 Fe 600 CRS	JSW NEO STEEL Fe 600 CRS*
% C (Max)	0.15	0.15	0.15	0.15	0.15	0.15
% S (Max)	0.04	0.03	0.04	0.03	0.04	0.04
% P (Max)	0.12	0.8	0.12	0.8	0.12	0.8
% Cr (Max)	-	0.5	-	0.5	-	0.5
% Cu (Max)	-	0.3	-	0.3	-	0.3
CE (Max)	0.53	0.45	0.53	0.45	0.53	0.45

*typical values

MECHANICAL PROPERTIES

	IS 1786 Fe 500 D CRS	JSW NEO STEEL Fe 500 D CRS*	IS 1786 Fe 550 D CRS	JSW NEO STEEL Fe 550 D CRS*	IS 1786 Fe 600 CRS	JSW NEO STEEL Fe 600 CRS*
Y.S (Min)	500	520	550	570	600	620
T.S (Min)	565	600	585	630	660	670
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JSW NEO STEEL Fe 500 D CRS	IS 1786 Fe 500 D CRS	3d	4d
JSW NEO STEEL Fe 550 D CRS	IS 1786 Fe 550 D CRS	4d	5d
JSW NEO STEEL Fe 600 CRS	IS 1786 Fe 600 CRS	5d	6d

RE-BEND PROPERTIES

		Maximum Mandrel Diameter	
		upto and incl. 20 mm	over 20 mm
JSW NEO STEEL Fe 500 D CRS	IS 1786 Fe 500 D CRS	4d	6d
JSW NEO STEEL Fe 500 S CRS	IS 1786 Fe 500 S CRS	4d	6d
JSW NEO STEEL Fe 550 D CRS	IS 1786 Fe 550 D CRS	6d	7d
JSW NEO STEEL Fe 600 CRS	IS 1786 Fe 600 CRS	7d	8d





THE ULTIMATE TEST

JSW NEOSTEEL finds wide applications for general concrete reinforcements in:

- Residential Buildings
- Airports and Metro Rail
- Roads, Bridges and Flyovers
- Commercial Complexes
- Dams
- Industrial Structures
- Power Plants





SALES OFFICES

AHMEDABAD

410, Abhishilp Complex, Near Keshavbag Party Plot,
Manasi Cross Road, Satellite, Ahmedabad - 380 015
Tel.: 079-40029508, 40029510, 40029509

BENGALURU

The Estate,
3rd Floor, West Wing, 121,
Dickenson Road, Bengaluru - 560 042
Tel : 080-42448888

CHENNAI

Fagun Mansion, 5th Floor,
New No.74, Old No.26, Ethiraj Salai, Egmore,
Chennai - 600 008
Tel.: 044-28297420, 28297422

COIMBATORE

T. V. Swamy Road (West), Coimbatore - 641 002
Tel.: 0422-2541870

DELHI

Thapar House, Janpath, New Delhi - 110 001
Tel.: 011-46050000

FARIDABAD

Plot No. 161, Sector 24, Faridabad - 121 004, Haryana
Tel.: 0129-2239248, 2232387

NOIDA

14A, Industrial Area, Buland Shar Road,
Ghaziabad - 201 009
Tel.: 0120-3262875, 2867142

GUWAHATI

106, 3rd Floor, Meer Market, Maszid Lane, Kamarpatty,
Guwahati - 781 001
Tel.: 0361-2730054

HYDERABAD

7th Floor, Surya Towers, 105, Sardar Patel Road,
Secunderabad - 500 003
Tel.: 040-27846669/79

INDORE

3rd Floor, Lakshya Badgara, 13/1,
New Palasia, Near Curewell Hospital, Indore - 452 001
Tel.: 0731-2532156/57/58/59, 4043613

JAIPUR

Evershine Tower, F-1, 705, 7th floor,
Amarpali Circle, Vaishali Nagar, Jaipur - 302 021
Tel: 0141 4026760/62/63/64

KANPUR

Room No.105, Ratan Esquire, Chunniganj,
Kanpur - 208 001
Tel.: 0512-3271907

KOCHI

Mitsun Enterprise, 30/1854 B4, 1st Floor, Ponnurunni
Road, Chalikkavattom Junction, Vytilla P.O.,
Kochi - 682 019
Tel.: 0484-4026392/ 4063294

KOLKATA

Godrej Waterside, 10th floor, Tower - 1, Unit No. 1003,
Block -DP, Plot -5, Sector V, Salt Lake City, Kolkata - 700 051
Tel : (033) 40002020
Fax: (033) 40002021

LUDHIANA

109, Modelgram, Near Kochar Market, Opp. Malwa
School, Ludhiana - 141 002
Tel.: 0161-6578944, 6450816

MUMBAI

Grande Palladium, 6th Floor, 175,
CST Road, Kalina, Santacruz (East),
Mumbai - 400 098
Tel.: 022-61871000

NAGPUR

Poonam Plaza, Palm Road, Civil Lines, Nagpur-440 001
Tel: 0712- 2520333

PATNA

1, Tilak Nagar East, Behind Patna Diesel, Kankarbagh,
Patna - 800 020
Tel: 08002230517

PUNE

2nd Floor, Mahendra Chambers, Mayfair Building A,
Dhole Patil Road, Pune - 411 001
Tel.: 020-64104547, 27111427

RUDRAPUR

Plot No. 264, By Pass Road, Village Kishanpur, Kichha,
District Udam Singh Nagar Uttrakand - 263 148
Tel.: 05944-263290

