



WIRE ROD

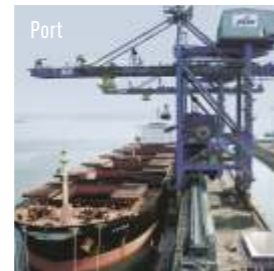




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JSW GROUP



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.

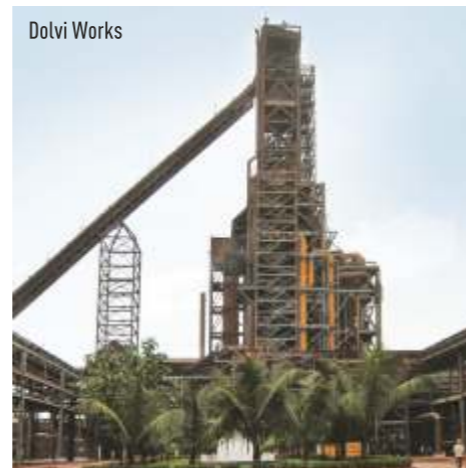
The flagship company of USD 11 billion JSW Group, JSW Steel is one of India's leading integrated steel manufacturers with a capacity of 14.3 MTPA. It is one of the fastest growing companies in India with a footprint in over 140 countries. With state-of-the-art manufacturing facilities located in Karnataka, 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.



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 MOST MODERN
WIRE ROD MILL

THE MANUFACTURING FACILITY

JSW Steel Vijayanagar plant is the first integrated steel plant to reach 10 MTPA capacity at a single location in India. It is the first plant in India to use the Corex technology for hot metal production.

The first hot strip mill at Vijayanagar was commissioned in 1997. Since then it has grown exponentially and now has an installed capacity to produce 10 MTPA of steel.

Located at a remote village Toranagallu, North Karnataka in the Bellary-Hospet iron ore belt, it is fully integrated steel plant and well-connected with both Goa and Chennai ports.

Unique features

- Houses India's largest blast furnace and the widest hot strip mill
- The only plant in India with paircross technology and twin-stand reversible cold-rolling mill
- The highest productivity steel plant in India, producing 800-plus tonnes per person per annum
- Recognised for its 'zero-effluent discharge' status; it reuses more than 95 per cent of process waste
- Low carbon footprint as it recycles 96% of coke oven gas for power generation
- Uses sophisticated ambient air control infrastructure beyond and has reduced gas flaring to lower levels



JSW WIRE ROD

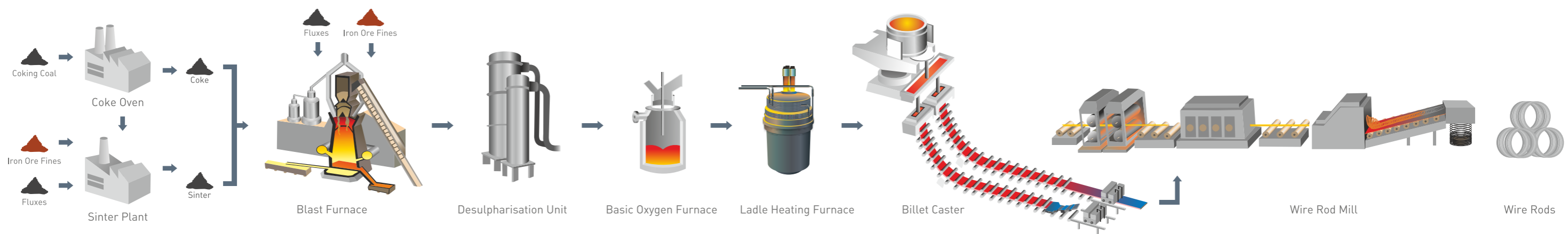
JSW's Wire Rods are produced through the cutting-edge Mill at Vijayanagar. JSW's Wire Rod is manufactured in High/Medium/Low carbon grades, Electrode grade, CHQ grades. Dimensional accuracy is guaranteed by an automatic thickness control system using advanced numerical models.

ADVANTAGE JSW

- High Speed Wire Rod Mill (120mtr/sec)
- Low Sulphur and Phosporous Content (0.005% - 0.035%)
- Low Tramp Elements
- Excellent Mechanical and Consistent Chemical Properties



THE MANUFACTURING PROCESS



FACILITIES AND EQUIPMENTS

Reheating furnace

- State of art walking beam furnace with auto control air fuel ratio of capability 160Ton/Hr
- Minimum scale generation around 0.50% throughout the coil

Descaler

- High pressure Descaler of 230bar(max),ensuring removal of scale deposition on the billets surface

230/150 Rod Tekisun Mill

- 4 Strands with unique facilities which maintains narrow band of ovality and size tolerance

Stelmor Conveyor

- Optiflex control with 180 mts, controlled cooling with uniform mechanical & metallurgical properties. Standard cooling, Retarded cooling and Forced cooling to process different grades

Compacting & Strapping unit

- Compaction at a maximum capacity of 40 Tons, which produce compact coils of superior quality



WIRE ROD PRODUCT SPECIFICATIONS

Coil Particulars

Inner Diameter	: 750 mm (min.)
Outer Diameter	: 1250 mm (max.)
Coil Height	: 2 meter (max.)
Coil Weight	: 2.600 MT (max.)
Packaging	: 4 Steel Straps Binding (min.)

Supply Specifications

Surface Defects	: 1.0% of Diameter (max.)
De-Carburization	: 1.0% of Diameter (max.)
Internal Soundness	: Free from Pits, Seams, Blow holes etc.
Supply Condition	: as per TDC
Control in UTS	: 60 N/mm ² (6Kg/mm ² , within a ring) for High Carbon

Size Range (in mm)

5.2, 5.5, 6.5, 7, 8, 9, 10, 12, 14, 16, 18, 20, 22



DIMENSIONAL TOLERANCE

Diameter (mm)	Tolerance (mm)	Ovality (mm)
5.20 to 8.50	+/- 0.20	0.30 max.
9.00 to 14.00	+/- 0.25	0.40 max.
14.50 to 22.00	+/- 0.30	0.40 max.



GRADES AND SPECIFICATIONS

LOW CARBON WIRE ROD GRADES

GRADE	SIZE (mm)	CHEMICAL COMPOSITION						MECHANICAL PROPERTIES			
		%C (max.)	%Mn (max.)	%S (max.)	%P (max.)	%Si (max.)	Others	UTS N/mm2	%EL (min.)	%RA (min.)	End Applications
SAE 1005	5.20-22.0	0.06	0.35	0.03	0.025	--	--	400 max	25	50	Wire Applications & Fasteners
SAE 1006	5.20-22.0	0.08	0.25-0.45	0.03	0.025	--	--	410 max	25	50	Wire Applications & Fasteners
SAE 1008	5.20-22.0	0.10	0.30-0.50	0.03	0.025	--	--	420 max	25	50	Wire Applications & Fasteners
SAE 1010	5.20-22.0	0.08-0.13	0.30-0.60	0.03	0.025	--	--	430 max	25	50	Wire Applications & Fasteners
SAE 1012	5.20-22.0	0.10-0.15	0.30-0.60	0.03	0.025	--	--	440 max	25	50	Wire Applications & Fasteners
SAE 1015	5.20-22.0	0.13-0.18	0.30-0.60	0.03	0.025	--	--	450 max	25	50	Wire Applications & Fasteners
SAE 1018	5.20-22.0	0.15-0.20	0.60-0.90	0.03	0.025	--	--	500 max	25	50	Wire Applications & Fasteners
SAE 1020	5.20-22.0	0.18-0.23	0.30-0.60	0.03	0.025	--	--	520 max	25	50	Wire Applications & Fasteners
SAE 1022	5.20-22.0	0.18-0.23	0.70-1.00	0.03	0.025	--	--	540 max	20	45	Wire Applications & Fasteners
SAE 1025	5.20-22.0	0.22-0.28	0.30-0.60	0.03	0.025	--	--	520 max	20	45	Wire Applications & Fasteners
SAE 10B25	5.20-22.0	0.23-0.28	0.90-1.20	0.03	0.025	--	B-0.0005 - 0.003	570 max	20	45	Wire Applications & Fasteners

MEDIUM CARBON WIRE ROD GRADES

GRADE	SIZE (mm)	CHEMICAL COMPOSITION							MECHANICAL PROPERTIES			
		%C (max.)	%Mn (max.)	%S (max.)	%P (max.)	%Si (max.)	%Al	N ppm (max.)	UTS N/mm2	%EL (min.)	%RA (min.)	End Applications
SAE1042	5.20-22.00	0.40-0.47	0.60-0.90	0.025	0.025	--	--	--	--	--	--	
SAE1055	5.20-22.00	0.50-0.60	0.60-0.90	0.025	0.025	--	--	--	--	--	--	
SAE1035	5.20-22.00	0.32-0.38	0.60-0.90	0.025	0.025	--	--	--	--	--	--	
SAE1030	5.20-22.00	0.28-0.34	0.60-0.90	0.025	0.025	--	--	--	--	--	--	

HIGH CARBON WIRE ROD GRADES

GRADE	SIZE (mm)	CHEMICAL COMPOSITION						MECHANICAL PROPERTIES		
		%C	%Mn	%S (max.)	%P (max.)	%Si	Others	UTS N/mm2 (min.)	%RA (min.)	End Applications
HC 51/55	5.5	0.51-0.55	0.60-0.90	0.015	0.02	0.15-0.25	-	820	40	Grade II Spring
	6.5							800	40	
HC 58/62	5.5	0.58-0.62	0.60-0.90	0.015	0.02	0.15-0.25	-	920	40	Wire Rope & Fine Wire
	6.5							900	40	
HC 61/65	5.5	0.61-0.65	0.60-0.90	0.015	0.02	0.15-0.25	-	940	40	Grade II Springs, ACSR
	7							920	40	
	8							900	40	
HC 66/70	5.5	0.66-0.70	0.60-0.90	0.015	0.02	0.15-0.25	Cr-0.12 max.	1010	40	Grade II Springs, Tyre Bead
	6.5							1000	40	
HC 68/72	5.5	0.68-0.72	0.60-0.90	0.015	0.02	0.15-0.25	-	1010	40	Tyre Bead
HC 71/75	5.5	0.71-0.75	0.60-0.90	0.015	0.02	0.15-0.25	-	1040	40	Grade II Springs, Card Pins, Card Cloth Wire
	6.5							1040	40	
	7							1020	40	
	8							1020	40	
HC 76/80	5.5	.076-0.80	0.60-0.90	0.015	0.02	0.15-0.25	Cr-0.15-0.25	1130	40	Shutter Wire
	6.5							1120	40	
	7							1110	40	
	8							1100	38	
HC 78/82	5.5	.078-0.82	0.60-0.90	0.015	0.02	0.15-0.25	Cr-0.05-0.15	1160	38	Shutter Wire
	6.5							1140	38	
	7							1130	38	
	8.5							1120	35	
HC 81/85	5.5	0.81-0.85	0.60-0.90	0.015	0.02	0.15-0.25	Cr-0.05-0.15	1150	35	Grade III Springs PC, Strand, Shutter Wire
	6.5							1140	35	
	7							1130	35	
	8							1120	33	
	10							1100	33	
	12							1080	33	
JIS-SWRH 62A	5.5	0.61-0.65	0.30-0.60	0.015	0.02	0.15-0.25	-	880	40	Grade II Springs for Machine Tools, Hydraulic Machines
	6.5							870	40	
JIS-SWRH 62B	5.5	0.61-0.65	0.60-0.90	0.015	0.02	0.15-0.25	-	950	40	Spring Applications in Automobiles and Heavy Machines
	6.5							930	40	

WELDING ELECTRODE WIRE ROD GRADES

GRADE	SIZE (mm)	CHEMICAL COMPOSITION						MECHANICAL PROPERTIES			
		%C (max.)	%Mn	%S (max)	%P (max.)	%Si (max.)	Others (max.)	UTS N/mm2 (min.)	%EL (min.)	%RA (min.)	End Applications
AWSER70S-6	5.5	0.06-0.15	1.40-1.85	0.025	0.025	0.80 - 1.15	Cu-0.50,Ni-0.15,Cr-0.15, Mo-0.15,V-0.03	550	22	78	Electrode Wire applications
IS2879EWNR	5.5 6.5	0.10	0.38-0.62	0.025	0.025	0.03	Cu-0.15,V-0.005,Ti-0.003	400	25	50	Electrode Wire applications

JSW NEOSTEEL TMT WIRE ROD GRADES

JSW STANDARD	BIS SPECIFICATION	SIZE (mm)	CHEMICAL COMPOSITION						MECHANICAL PROPERTIES				
			% C (max.)	% S (max.)	% P (max.)	% Cu (max.)	% Cr (max.)	C.E (max.)	Y.S (min.)	T.S (min.)	T.S/Y.S (min.)	% El (min.)	
JSW NEO Steel Fe 500 D	IS 1786 Fe 500 D	6.0 - 12.0	0.25	0.04	0.04	....	....	0.42	500	565	1.1	16
JSW NEO Steel Fe 500 S	IS 1786 Fe 500 S	6.0 - 12.0	0.25	0.04	0.04	....	....	0.42	500	625	1.25	18
JSW NEO Steel Fe 550 D	IS 1786 Fe 550 D	6.0 - 12.0	0.25	0.04	0.04	....	....	0.42	550	600	1.08	14.5
JSW NEO Steel Fe 600	IS 1786 Fe 600	6.0 - 12.0	0.30	0.04	0.04	....	....	0.42	600	660	1.06	10
JSW NEO Steel Fe 500 D CRS	IS 1786 Fe 500 D CRS	6.0 - 12.0	0.15	0.04	0.12	0.30	0.50	0.53	500	565	1.1	16	
JSW NEO Steel Fe 550 D CRS	IS 1786 Fe 550 D CRS	6.0 - 12.0	0.15	0.04	0.12	0.30	0.50	0.53	550	600	1.08	14.5	
JSW NEO Steel Fe 600 CRS	IS 1786 Fe 600 CRS	6.0 - 12.0	0.15	0.04	0.12	0.30	0.50	0.53	600	660	1.06	10	





TESTING FACILITIES

- Cold Upset Testing Machine
- Universal Testing Machine (UTM)
- Bend/Rebend Test Machine
- Eddy Current Sorter
- Bench Magnifier
- Mobile Spectro
- Micro Ohm Meter
- Stereo Microscope
- Rockwell Hardness Tester
- Metallurgical Microscope

THE ULTIMATE TEST

Wire Rods Coils are used in a variety of applications

- Automobile - Hot & Cold Forming
- Infrastructure viz Power, Roads
- Dams, Bridges, Ports, Refineries
- Railways
- General Engineering
- Machine & Equipment Building

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, Masjid 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 - 700 091
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

