

**AM/NS
INDIA**

ArcelorMittal Nippon Steel India

AM/NS Polar
Cold Rolled Steel

**/ THE POWER TO
BE PERFECT**



ABOUT **AM/NS INDIA**



AM/NS India, a joint venture between ArcelorMittal and Nippon Steel – two of the world's leading steel companies – is an integrated flat carbon steel manufacturer – from iron ore to ready-to-market products. It's a partnership forged to build a better world by creating smarter and sustainable steel for India and beyond.

To do this, it places safety, innovation, sustainability, strength and

technology at the heart of its manufacturing operations and product development.

Established in December 2019, the company's manufacturing facilities comprise iron making, steel making and downstream facilities across India and offers more than 300 grades of steel with the power of international quality standards. The steel made at AM/NS India is trusted all over.

ABOUT HAZIRA FACILITY



Hazira Steel Plant is located in Gujarat, India. It is a well-planned, sophisticated and environment-friendly facility with a highly integrated and modern complex.

With an achievable capacity of 9 Million Tonnes Per Annum (MTPA), the company holds the distinction of owning and operating one of the largest single-location flat steel plants in the world. The plant

comprises a comprehensive infrastructure set up, including power plants, lime and oxygen plants, a township and a captive port that can handle capsized vessels and is equipped with modern handling equipment.

This inclusion makes the complex entirely self-sufficient, eliminating the dependency on external inputs and forms the core of AM/NS India's integrated processes.

PRODUCT DESCRIPTION



Inspired by the perfection flaunted by Polar Bears, we designed a new range of Cold Rolled Steel. Just like a Polar Bear, it's steel made with razor-sharp precision. Steel that adapts to different conditions yet is consistent in tolerance.

Steel made not only to outshine but also to shine under pressure. It is steel of superior quality, excellent formability, drawability and surface

finish for superior paintability. Its steel designed to look flawless and yet be fearsome. It is steel designed to be perfect.

AM/NS Polar is a high-quality cold rolled (CRCA) flat steel produced by AM/NS India. It meets a variety of standards & offers customizable sizes of cut to length, cut to size, and cut to sheet to cater the critical needs of the industry.

GRADE PROPERTIES

Grade	Equivalent Specification			
	IS513 Part 1: 2016*	JISG31341: 2005	ASTM 1008: 2009	EN10130: 2006
Drawing Quality D Grade	CR2	SPCD	DS	DC03

*For Retail Segment AMNS shall guarantee as per IS513 CR2.

DIMENSIONAL TOLERANCES

General Information

Parameter	Range
Width, mm	900 – 1550*
Thickness, mm	0.35 – 3.2
Inner Diameter of Coil, mm	508/610

*Max width shall change according to thickness.

Thickness Tolerance

Thickness mm	Nominal Tolerance mm
Upto 0.80	+ / - 0.030
0.80 – 1.00	+ / - 0.035
1.00 – 1.25	+ / - 0.040
1.25 – 1.60	+ / - 0.045
1.60 – 2.00	+ / - 0.050
2.00 – 2.50	+ / - 0.055
2.50 – 3.00	+ / - 0.060
3.00 – 3.20	+ / - 0.070

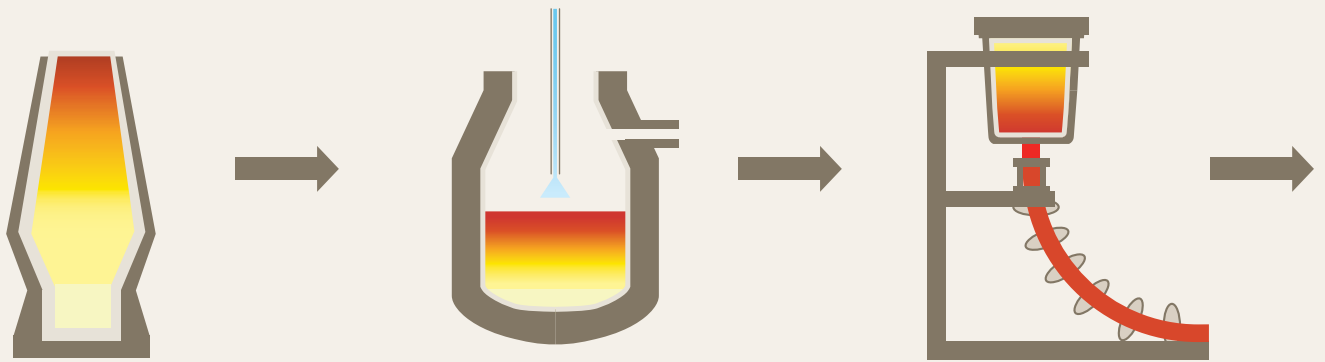
Width Tolerance

Description	Nominal Tolerance mm
CR Mill Edge	-0, +20
With HR Trimming	-0,+7
With CR Trimming	-0,+3

PRODUCT SPECIFICATION

Properties	IS 513 Part 1:2016 CR 2	AM/NS
Yield Strength, MPa	240 Max	140 – 240
Tensile Strength, MPa	370 Max	270 – 370
Elongation, GL = 80mm	30% Min	30% Min
Hardness, HRB	65 Max	65 Max
Surface Roughness, Ra	-	0.60 – 1.60

MANUFACTURING PROCESS



IRON MAKING

3 ROUTES
IRON MAKING

**HBI/DRI
COREX
BLAST FURNACE**

Controlled chemistry
(P & S) for manufacturing
high quality clean steel.

STEEL MAKING

ACHIEVING
STRINGENT
CHEMISTRY

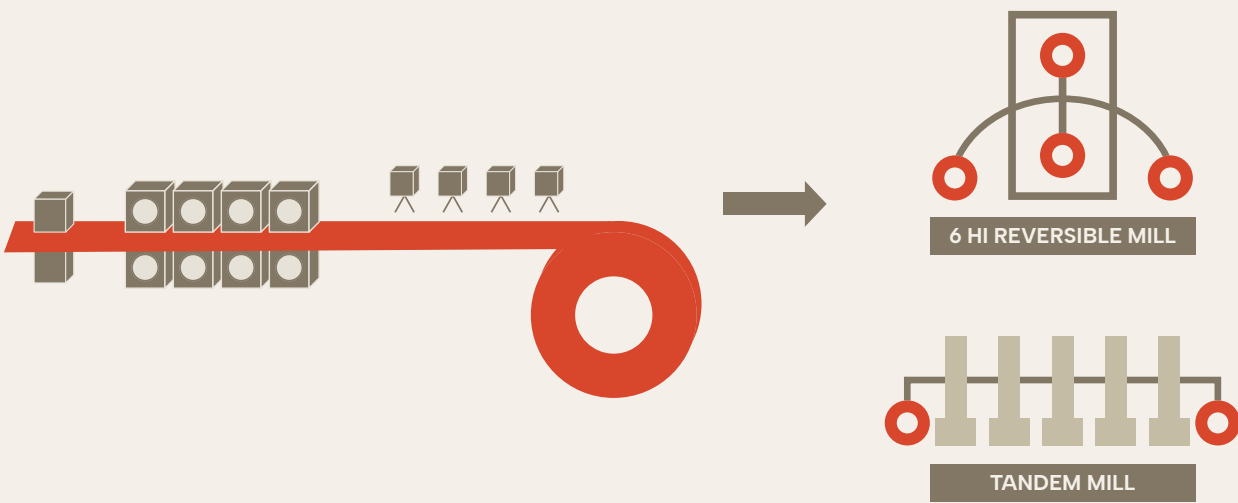
**CONARC
ELECTRIC ARC
FURNACE**

For melting Hot DRI/HBI
and Hot Metal.
Clean Steel Technology:
Vacuum Degassing,
Secondary Refining and
Calcium Treatment

CASTING

SOLIDIFICATION
OF STEEL

Continuous Caster with
Automatic controls for
attaining superior internal
soundness of steel.



HOT ROLLED STEEL

CONSISTENCY
IN QUALITY

HOT STRIP MILL & COMPACT STRIP MILL

Uniform Properties
Best In Class Tolerance
Guaranteed Flatness

COLD ROLLED STEEL

SUPERIOR SURFACE
FINISH

Uniform mechanical
properties
Controlled chemistry and
cleanliness
Superior surface finish

PRODUCT BENEFITS



High - Surface Quality

This ensures better paint adhesion which in turn helps prevent rust formation on the end applications. The same technology enhances the visual appearance of the finished product. Also, with better paint, the aesthetics of the finished product is enhanced



Uniform Mechanical Properties

The cold-rolling technology ensures consistent and excellent properties throughout the coil. This makes the customer generate the best yield for the desired sizes.



Consistent Tolerance

Uniform thickness provided by our state-of-the-art cold rolling mill ensures a high yield to the customers. Minimal thickness variation leads to consistent performance at the component level



Superior Flatness

The equipment at the facility ensures absolute flatness of the coil making the material performance more effective at the time of laser cutting. The superior paint adhesion makes the product aesthetically appealing

APPLICATIONS



CONTROL PANELS

Critical Attribute

Flatness and Good Surface Finish



CANOPY FOR GENERATORS

Critical Attribute

Flatness and Good Surface Finish



RADIATORS AND TRANSFORMERS

Critical Attribute

Mechanical Properties (Drawability)



FURNITURE

Critical Attribute

Good Surface Finish and Mechanical Properties



PRECISION TUBES

Critical Attribute

Surface Finish



ELECTRICAL STAMPINGS

Critical Attribute

Flatness



PRESS PARTS FOR AUTO

Critical Attribute

Consistency in Mechanical Properties, Surface Finish and Dimensional Accuracy



DRUM & BARREL

Critical Attribute

Mechanical Properties and Surface Finish (Drums will be painted)

TECHNOLOGY PROVIDERS

Equipment	Supplier
6 Hi Reversible Rolling Mill	HITACHI, Japan
Continuous Tandem Cold Rolling Mill 4 Hi 5 Stands	VAI CLECIM, France
Batch Annealing Furnace	EBNER, Austria LOI, Belgium SECO WARWICK – Germany Alied – India
Electrolytic Cleaning Line	VAI CLECIM, France
4 Hi Cold Skin Pass Mill	VAI CLECIM, France

CERTIFICATIONS AND ACCREDITATIONS





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