

IRS M41

WEATHERING STEEL

BOLTING MATERIAL FOR STRUCTURAL PURPOSE

Weathering steel, best-known under the trademark COR-TEN steel and sometimes written without the hyphen as "Corten steel", is a group of steel alloys which were developed to obviate the need for painting, and form a stable rust-like appearance if exposed to the weather for several years.

United States Steel Corporation (USS) holds the registered trademark on the name COR-TEN.[1] Although USS sold its discrete plate business to International Steel Group (now Arcelor-Mittal) in 2003,[2] it still sells COR-TEN branded material in strip-mill plate and sheet forms.

The original COR-TEN received the standard designation A 242 ("COR-TEN A") from the ASTM International standards group. Newer ASTM grades are A 588 ("COR-TEN B") and A 606 for thin sheet. In Indian Standards is applicable as per IRS M-41. All alloys are in common production and use.

Chemical Properties

C	Mn	P	S Max	Si	Cr	Ni	Mo Max	V Max	Cu	Nb Max
0.1 Max	0.25-0.45	0.075-0.14	0.03	0.28-0.72	0.35-0.6	0.2-0.47	0.05	0.05	0.3-0.6	0.04

IRS M41-97 Mechanical Properties

Yield strength	Tensile strength	Elongation	Reduction	Hardness
Mpa	Mpa	%	%	BHN
min	min	min	min	
340	480	22	--	--

IRS M41 Washer Dimensions

Nominal Washer Size	M16	M20	M22	M24	M27	M30	M36
d1	max	18.4	22.5	24.5	26.5	30.5	33.6
	min	18.0	22.0	24.0	26.0	30.0	33.0
d2	max	34.0	42.0	44.0	50.0	56.0	60.0
	min	32.4	40.4	42.4	48.4	54.1	58.1
h	max	4.6	4.6	4.6	4.6	4.6	4.6
	min	3.1	3.1	3.4	3.4	3.4	3.4

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