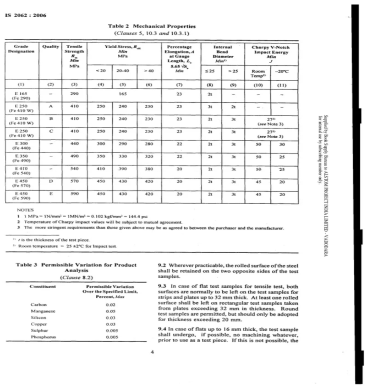


IS 2062 : 2006

Table 2 Mechanical Properties
(*Clauses* 5, 10.3 *and* 10.3.1)

Grade Designation	Quality	Tensile Strength R_m Min MPa	Yield Stress, R_{eH} Min MPa			Percentage Elongation, A at Gauge Length, L_o 5.65 $\sqrt{S_o}$ Min	Internal Bend Diameter Min[1)]		Charpy V-Notch Impact Energy Min J	
			< 20	20-40	> 40		≤ 25	> 25	Room Temp[2)]	-20°C
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
E 165 (Fe 290)	–	290	165			23	2t	–	–	–
E 250 (Fe 410 W)	A	410	250	240	230	23	3t	2t	–	–
E 250 (Fe 410 W)	B	410	250	240	230	23	2t	3t	27[2)] (see Note 3)	
E 250 (Fe 410 W)	C	410	250	240	230	23	2t	3t	27[2)] (see Note 3)	
E 300 (Fe 440)	–	440	300	290	280	22	2t	3t	50	30
E 350 (Fe 490)	–	490	350	330	320	22	2t	3t	50	25
E 410 (Fe 540)	–	540	410	390	380	20	2t	3t	50	25
E 450 (Fe 570)	D	570	450	430	420	20	2t	3t	45	20
E 450 (Fe 590)	E	590	450	430	420	20	2t	3t	45	20

NOTES
1 1 MPa = 1N/mm² = 1MN/m² = 0.102 kgf/mm² = 144.4 psi
2 Temperature of Charpy impact values will be subject to mutual agreement.
3 The more stringent requirements than those given above may be as agreed to between the purchaser and the manufacturer.

[1)] t is the thickness of the test piece.
[2)] Room temperature = 25 ±2°C for Impact test.

Table 3 Permissible Variation for Product Analysis
(*Clause* 8.2)

Constituent	Permissible Variation Over the Specified Limit, Percent, Max
Carbon	0.02
Manganese	0.05
Silicon	0.03
Copper	0.03
Sulphur	0.005
Phosphorus	0.005

9.2 Wherever practicable, the rolled surface of the steel shall be retained on the two opposite sides of the test samples.

9.3 In case of flat test samples for tensile test, both surfaces are normally to be left on the test samples for strips and plates up to 32 mm thick. At least one rolled surface shall be left on rectangular test samples taken from plates exceeding 32 mm in thickness. Round test samples are permitted, but should only be adopted for thickness exceeding 20 mm.

9.4 In case of flats up to 16 mm thick, the test sample shall undergo, if possible, no machining whatever, prior to use as a test piece. If this is not possible, the

4

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IS 2062:2006 à¤¸à¥•à¤?à¥?à¤² à¤?à¥•à¤°à¥?à¤¡ â?? à¤¸à¤?à¤ªà¥?à¤°à¥•à¤£ à¤¤à¥•à¤²à¤¨à¤¾ à¤?à¤¾à¤?à¤¡

Steelmet Industries, Bright Bars, Alloy Steels, Free Cutting Steels, Stainless Steels

à¤µà¤¿à¤µà¤°à¤£

IS 2062:2006 **à¤¹à¥?à¤?-à¤°à¥?à¤²à¥•à¤¡ à¤¸à¤?à¤°à¤?à¤¨à¤¾à¤¤à¥•à¤®à¤? à¤¸à¥•à¤?à¥?à¤²** à¤?à¥? à¤¨à¤¿à¤¯à¤?à¤¤à¥•à¤°à¤¿à¤¤ à¤?à¤°à¤¨à¥? à¤µà¤¾à¤²à¤¾ à¤à¤¾à¤°à¤¤à¥?à¤¯ à¤®à¤¾à¤¨à¤? à¤¹à¥?, à¤?à¥? IS 1977:1996 à¤?à¤° IS 8500:1991 à¤?à¤¾ à¤¸à¥•à¤¥à¤¾à¤¨ à¤²à¥?à¤¤à¤¾ à¤¹à¥?à¥¤ à¤¯à¤¹ à¤?à¤¾à¤?à¤¡ à¤¸à¤à¥? 9 à¤?à¥•à¤°à¥?à¤¡ (E165-E650) à¤?à¤° à¤?à¤¨à¤?à¥? à¤?à¤ª-à¤?à¥•à¤£à¥?à¤? (sub-qualities) à¤?à¥? à¤¤à¥•à¤²à¤¨à¤¾ à¤?à¤°à¤¤à¤¾ à¤¹à¥? à¤¤à¤¾à¤?à¤¿ à¤®à¤¦à¤¦ à¤®à¤¿à¤² à¤¸à¤?à¥?:

- à¤¸à¤?à¤°à¤?à¤¨à¤¾à¤¤à¥•à¤®à¤? à¤ªà¤°à¤¿à¤¯à¥?à¤?à¤¨à¤¾à¤?à¤? à¤?à¥? à¤²à¤¿à¤• à¤¸à¤°à¥•à¤µà¥?à¤¤à¥•à¤¤à¤® à¤?à¥•à¤°à¥?à¤¡ à¤?à¤¾ à¤?à¤¯à¤¨ à¤?à¤°à¤¨à¥? à¤®à¥?à¤?
- à¤°à¤¾à¤¸à¤¾à¤¯à¤¨à¤¿à¤? à¤?à¤° à¤¯à¤¾à¤?à¤¤à¥•à¤°à¤¿à¤? à¤?à¥•à¤£à¥?à¤? à¤?à¥? à¤à¤?à¤¤à¤° à¤?à¥? à¤¸à¤®à¤•à¤¨à¥? à¤®à¥?à¤?
- à¤ªà¥•à¤°à¤¤à¥•à¤¯à¥?à¤? à¤µà¥?à¤°à¤¿à¤•à¤?à¤? à¤?à¥? à¤²à¤¿à¤• à¤?à¤ªà¤¯à¥•à¤?à¥•à¤¤à¤ à¤¨à¥•à¤ªà¥•à¤°à¤¯à¥?à¤?à¥?à¤? à¤?à¥? à¤ªà¤¹à¤?à¤¾à¤¨ à¤?à¤°à¤¨à¥? à¤®à¥?à¤?

Steelmet Industries à¤¸à¤à¥? IS 2062:2006 à¤?à¥•à¤°à¥?à¤¡à¥•à¤¸ à¤?à¤¾ à¤¨à¤¿à¤°à¥• à¤®à¤¾à¤£ à¤¨à¤¿à¤®à¥•à¤¨à¤²à¤¿à¤?à¤¿à¤¤ à¤°à¥?à¤ªà¥?à¤? à¤®à¥?à¤? à¤?à¤°à¤¤à¥? à¤¹à¥?:
â? à¤¸à¥•à¤?à¥?à¤² à¤ªà¥•à¤²à¥?à¤?à¥•à¤¸ (3-100 à¤®à¤¿à¤®à¥? à¤®à¥?à¤?à¤¾à¤?)
â? à¤¸à¤?à¤°à¤?à¤¨à¤¾à¤¤à¥•à¤®à¤? à¤¸à¥?à¤?à¥•à¤¶à¤?à¤¸ (à¤¬à¥?à¤®, à¤?à¥?à¤¨à¤², à¤• à¤?à¤?à¤²)
â? à¤°à¤¾à¤?à¤?à¤¡/à¤¸à¥•à¤?à¥•à¤µà¤¾à¤¯à¤°/à¤«à¥à¤²à¥?à¤? à¤¬à¤¾à¤°à¥•à¤¸ (Ã?5-300 à¤®à¤¿à¤®à¥?)

à¤?à¥•à¤°à¥?à¤¡ à¤µà¤°à¥•à¤?à¥?à¤?à¤°à¤£ à¤ªà¥•à¤°à¤£à¤¾à¤²à¥?

à¤?à¥• à¤°à¥?à¤¡	à¤ªà¥• à¤°à¤¾à¤¨à¤¾ à¤¨à¤¾à¤®à¤¾à¤¨à¥•	à¤¨à¥?à¤²à¥• à¤¡ à¤¶à¤?à¥• à¤¤à¤¿ (MPa)	à¤?à¤ª-à¤?à¥•à¤£ (Sub-Qualities)	à¤ªà¥•à¤°à¤®à¥•à¤? à¤µà¤¿à¤¶à¥?à¤·à¤¤à¤¾à¤•à¤¾
E165	Fe 290	165	â??	à¤¬à¥•à¤¨à¤¿à¤¯à¤¾à¤¦à¥? à¤¸à¤?à¤°à¤?à¤¨à¤¾à¤¤à¥•à¤®à¤? à¤?à¥•à¤°à¥?à¤¡
E250	Fe 410 W	250	A, B, C	à¤?à¥•à¤µà¤¾à¤²à¤¿à¤?à¥? C à¤®à¥?à¤? à¤¬à¥?à¤¹à¤¤à¤° à¤µà¥?à¤²à¥• à¤¡à¥?à¤¬à¤¿à¤²à¤?à¤?à¥?
E300	Fe 440	300	â??	à¤®à¤§à¥•à¤¯à¤® à¤¶à¤?à¥¤à¤¿
E350	Fe 490	350	â??	à¤¸à¤¾à¤®à¤¾à¤¨à¥•à¤¯ à¤¨à¤¿à¤°à¥•à¤®à¤¾à¤£ à¤?à¥• à¤°à¥?à¤¡
E410	Fe 540	410	â??	à¤?à¤?à¥•à¤? à¤¶à¤?à¥•à¤¤à¤¿
E450	Fe 570/590	450	D, E	à¤®à¤¾à¤?à¤?à¥•à¤°à¥?-à¤ à¤²à¥?à¤¯à¤¾à¤¨à¤• à¤?à¤?

à¤?à¤ª-à¤?à¥•à¤£ (Sub-Quality) à¤¸à¥•à¤ª-à¥•à¤?à¥?à¤?à¤°à¤£:

- **A**: à¤®à¤¾à¤¨à¤? à¤?à¥•à¤£à¤µà¤¤à¥•à¤¤à¤¾ (à¤¸à¥?à¤®à¥?-à¤?à¤¿à¤²à¥•à¤¡/à¤?à¤¿à¤²à¥•à¤¡)
- **B**: à¤?à¤®à¤°à¥? à¤?à¥? à¤¤à¤¾à¤ª à¤®à¤¾à¤¨ à¤?à¥? à¤?à¤®à¥•à¤ª à¥?à¤?à¥•à¤? à¤ª à¤°à¥?à¤¯à¤² à¤?à¥? à¤¸à¤¾à¤¥ à¤?à¤¿à¤²à¥•à¤¡ à¤¸à¥•à¤?à¥?à¤²
- **C**: -20Â°C à¤?à¤®à¥•à¤ª à¥?à¤?à¥•à¤? à¤ª à¤°à¥?à¤?à¥•à¤·à¤£ à¤?à¥? à¤¸à¤¾à¤¥ à¤?à¤¿à¤²à¥•à¤¡ à¤¸à¥•à¤?à¥?à¤²
- **D/E**: à¤®à¤¾à¤?à¤?à¥•à¤°à¥?-à¤ à¤²à¥?à¤¯à¤¾à¤¨à¤• à¤?à¤?à¥¥à¤?-à¤¶à¤?à¥•à¤¤à¤¿ à¤¸à¤?à¤¸à¥• à¤?à¤°à¤£

à¤ª à¥•à¤°à¤®à¥•à¤? à¤¤à¥•à¤²à¤¨à¤¾ à¤¤à¤¾à¤²à¤¿à¤?à¤?à¤¾à¤•à¥•à¤•

1. à¤°à¤¾à¤¸à¤¾à¤¯à¤¨à¤¿à¤? à¤¸à¤?à¤°à¤?à¤¨à¤¾ (à¤?à¤¯à¤¿à¤¤ à¤?à¥¥à¤°à¥?à¤¯)

Steelmet Industries - Bright Bars, Alloy Steels, Free Cutting Steels, Stainless Steels

à¤¤à¤¤à¥•à¤µ	E165	E250B	E350	E450E
C (à¤ à¤§à¤¿à¤?à¤¤à¤®)	0.25	0.22	0.20	0.22
Mn (à¤ à¤§à¤¿à¤?à¤¤à¤®)	1.25	1.50	1.50	1.80
P (à¤ à¤§à¤¿à¤?à¤¤à¤®)	0.045	0.045	0.045	0.045
S (à¤ à¤§à¤¿à¤?à¤¤à¤®)	0.045	0.045	0.045	0.045
CE (à¤ à¤§à¤¿à¤?à¤¤à¤®)	â??	0.41	0.42	0.48

à¤¨à¥?à¤?: à¤?à¥•à¤µà¤¾à¤²à¤¿à¤?à¥? C à¤?à¥? à¤²à¤¿à¤• à¤¸à¤?à¥•à¤¤ à¤¸à¥?à¤®à¤¾à¤•à¤• à¤²à¤¾à¤?à¥? à¤¹à¥?à¤¤à¥? à¤¹à¥?à¤? (P/S â?¤0.040%)

2. à¤¯à¤¾à¤?à¤¤à¥à¤°à¤¿à¤? à¤?à¥•à¤£

à¤?à¥•à¤°à¥?à¤¡	à¤¤à¤¨à¥•à¤¯ à¤¶à¤?à¥• à¤¤à¤¾à¤¿ (MPa)	à¤¯à¥?à¤²à¥•à¤¡ à¤¶à¤?à¥•à¤¤à¤¿ (MPa)	à¤¬à¤¢à¤¼à¤¾à¤µ (%)	à¤?à¤®à¥•à¤ª à¥?à¤?à¥• à¤? à¤ª à¤°à¥?à¤?à¥• à¤·à¤£
E165	290	165	23	à¤?à¤µà¤¶à¥•à¤¯à¤? à¤¨à¤¹à¥?à¤?
E250B	410	250	23	27J @ RT
E350	490	350	22	â??
E450E	590	450	20	20J @ RT

Steelmet Industries - Bright Bars, Alloy Steels, Free Cutting Steels, Stainless Steels

à¤ à¤¨à¥•à¤ª à¥•à¤¯à¤?à¤? à¤?à¤¾à¤?à¤¡

à¤?à¥• à¤°à¥?à¤¡	à¤¸à¤°à¥•à¤µà¥?à¤¤à¥•à¤¤à¤® à¤?à¤ª à¤¯à¥?à¤?à¤?	à¤?à¤ª à¤²à¤¿à¤?à¤¤à¥?à¤?à¤¤à¥•à¤µ à¤°à¥?à¤?à¤ª
E165	à¤¹à¤²à¥•à¤?à¥? à¤¸à¤?à¤°à¤?à¤¨à¤¾à¤•à¤•, à¤?à¤¤ à¤¨à¤¿à¤°à¥•à¤®à¤¾à¤£	à¤ª à¥•à¤²à¥?à¤?à¥•à¤¸, à¤¬à¤¾à¤°à¥•à¤¸
E250C	à¤µà¥?à¤²à¥•à¤¡à¥?à¤¡ à¤ª à¥•à¤², à¤?à¥• à¤°à¤¾à¤¯à¥?à¤?à¥?à¤¨à¤¿à¤?	à¤ª à¥•à¤²à¥?à¤?à¥•à¤¸, à¤¸à¥?à¤?à¥•à¤¶à¤?à¤¸
E350	à¤¬à¤¿à¤²à¥•à¤¡à¤¿à¤?à¤? à¤«à¥•à¤°à¥?à¤®, à¤?à¥•à¤°à¥?à¤¨	à¤¸à¤à¥? à¤°à¥?à¤ª
E450D/E	à¤à¤¾à¤°à¥? à¤?à¤¨à¤¨ à¤?à¤ª à¤?à¤°à¤£	à¤ª à¥•à¤²à¥?à¤?à¥•à¤¸, à¤µà¤¿à¤¶à¥?à¤· à¤¸à¥?à¤?à¥• à¤¶à¤?à¤¸

Steelmet Industries à¤?à¥? à¤?à¥•à¤¯à¥?à¤? à¤?à¥•à¤¨à¥?à¤??

à¤¹à¤® à¤ª à¥•à¤°à¤¦à¤¾à¤¨ à¤?à¤°à¤¤à¥? à¤¹à¥?à¤?:
â?? IS 2062:2006 à¤?à¥•à¤°à¥?à¤¡à¥•à¤¸ à¤?à¥? à¤ª à¥?à¤?à¤°à¥? à¤¶à¥•à¤°à¥?à¤?à¤?à¤²à¤¾
â?? à¤?à¤¸à¥•à¤?à¤® à¤ª à¥•à¤°à¥?à¤¸à¥?à¤¸à¤¿à¤?à¤? (à¤?à¤?à¤¿à¤?à¤?, à¤¡à¥•à¤¿à¤²à¤¿à¤?à¤?, à¤¬à¤¾à¤?à¤¿à¤¿à¤?à¤?)
â?? EN 10204 3.1 à¤?à¥? à¤ à¤¨à¥•à¤¸à¤¾à¤° à¤®à¤¿à¤² à¤?à¥?à¤¸à¥•à¤? à¤¸à¤°à¥•

à¤?à¤¿à¤«à¤¿à¤?à¥?à¤? (MTC)
â?? à¤ªà¥?à¤°à¥? à¤à¤¾à¤°à¤¤ à¤®à¥?à¤? à¤?à¤¸à¥•à¤?-à¤?à¤¨-à¤?à¤¾à¤?à¤®
à¤¡à¤¿à¤²à¥?à¤µà¤°à¥?

à¤ à¤ªà¤¨à¥? à¤ªà¥•à¤°à¥?à¤?à¥?à¤?à¥•à¤? à¤ªà¤°à¥?à¤?à¥•à¤·à¤£ à¤?à¥? à¤²à¤¿à¤• à¤?à¤?à¤¿à¤¸à¥? à¤à¥? IS 2062 à¤?à¥•à¤°à¥?à¤¡ à¤?à¥? **à¤¸à¥?à¤?à¤ªà¤² à¤?à¤¾ à¤ à¤¨à¥• à¤°à¥?à¤§ à¤?à¤°à¥?à¤?**!

à¤ à¤?à¥•à¤¸à¤° à¤ªà¥?à¤?à¥? à¤?à¤¾à¤¨à¥? à¤µà¤¾à¤²à¥? à¤ªà¥•à¤°à¤¶à¥•à¤¨ (FAQ)

à¤ªà¥•à¤°: à¤?à¥•à¤¯à¤¾ E250A à¤?à¤¾ à¤?à¤ªà¤¯à¥?à¤? à¤µà¥?à¤²à¥à¤¡à¥?à¤¡ à¤¸à¤?à¤°à¤?à¤¨à¤¾à¤?à¤? à¤?à¥? à¤²à¤¿à¤?à¤• à¤?à¤¿à¤¯à¤¾ à¤¸à¤?à¤¤à¤¾ à¤¹à¥??
à¤?: à¤¹à¤¾à¤•, à¤²à¥?à¤?à¤¿à¤¨ -20Â°C à¤?à¤®à¥•à¤ªà¥?à¤?à¥•à¤? à¤?à¤«à¤¨à¥?à¤¸ à¤?à¥? à¤?à¤¾à¤°à¤£ à¤µà¥?à¤²à¥•à¤¡ à¤?à¥? à¤²à¤¿à¤?à¤• E250C à¤?à¥? à¤¸à¤¿à¤«à¤¾à¤°à¤¿à¤¶ à¤?à¥? à¤¾à¤?à¥¤

à¤ªà¥•à¤°: E450D à¤?à¤° E450E à¤?à¥? à¤¬à¥?à¤? à¤?à¥•à¤¯à¤¾ à¤ à¤?à¤¤à¤° à¤¹à¥??
à¤?: à¤¬à¥?à¤¹à¤¤à¤° à¤®à¤?à¤¬à¥?à¤¤à¥? à¤?à¥? à¤²à¤¿à¤?à¤• E450E à¤®à¥?à¤? à¤®à¥?à¤?à¤?à¤¨à¥?à¤? à¤?à¥? à¤®à¤¾à¤¨à¥•à¤°à¤¾ à¤ à¤§à¤¿à¤? (1.80% à¤¬à¤¨à¤¾à¤® 1.60%) à¤¹à¥?à¤¤à¥? à¤¹à¥?à¥¤

à¤¨à¤¿à¤·à¥•à¤?à¤°à¥•à¤·

IS 2062:2006 à¤?à¥•à¤°à¥?à¤¡ à¤?à¥? à¤ à¤?à¤¤à¤°à¥?à¤? à¤?à¥? à¤¸à¤®à¤•à¤¨à¤¾ à¤¸à¤?à¤°à¤?à¤¨à¤¾à¤¤à¤?à¤• à¤ à¤?à¤?à¤¡à¤¡à¤¾ à¤?à¥? à¤²à¤¿à¤?à¤• à¤¸à¤°à¥•à¤µà¥?à¤¤à¥• à¤¤à¤® à¤¸à¤¾à¤®à¤?à¤?à¥•à¤°à¥? à¤?à¤¯à¤¾ à¤?à¤¾à¤¨ à¤¸à¥?à¤?à¤¿à¤¨à¥?à¤?à¤¿à¤¨ à¤?à¤°à¤¾à¤¤à¤¾ **Steelmet Industries** E165 à¤¸à¥? E650 à¤¤à¤? à¤¸à¤¤à¥? à¤?à¥•à¤°à¥?à¤¡ à¤¸à¥• à¤?à¥?à¤? à¤?à¤°à¤¤à¥? à¤¹à¥? â?? à¤ªà¤°à¤¿à¤¯à¥?à¤?à¤¨à¤¾à¤¤à¥?à¤?à¤¿à¤¤ à¤?à¤¨à¥•à¤¶à¤?à¤¸à¥?à¤?à¤? à¤?à¤¾à¤¨à¥? à¤¹à¥? à¤?à¥? à¤?à¤¸à¥?à¤?à¤¾à¤?à¤¿à¤¤ à¤?à¤°à¤¤à¤¾ à¤?à¥?à¤?à¤¿à¤¨à¥?à¤?à¤¿à¤¨ à¤¸à¥? à¤¸à¤?à¤?à¤°à¥•à¤?à¥?

à¤¶à¥•à¤°à¥?à¤£à¥?

1. à¤?à¥•à¤°à¥?à¤¡ à¤?à¤¾à¤?à¤¡
2. Posts

à¤?à¥?à¤?à¥•à¤¸

1. construction steel grades
2. E250 steel
3. E410 steel
4. Fe 490 steel
5. high tensile steel
6. IS 2062 steel
7. steel plates India

Steelmet Industries, Bright Bars, Alloy Steels, Free Cutting Steels, Stainless Steels

8. steel sections
9. Steelmet Industries
10. structural steel grades

Date
12/11/2026
à¤²à¥?à¤?à¤?
admin

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