RAUNAQ
TRUSTED STEEL

E300BR – Technical Datasheet

1. Chemical & Mechanical Properties

Property	Value
C	≤ 0.20%
Mn	≤ 1.60%
P	≤ 0.045%
S	≤ 0.040%
Si	≤ 0.45%
Cu	≤ 0.20%
Yield Strength (YS)	≥ 300 MPa
Tensile Strength (TS)	460 – 590 MPa
Elongation	≥ 22%
Hardness	150 – 180 HB
Impact Test	27J min at 20°C (Charpy V-Notch)

2. Equivalent / Alternative Grades

Standard	Grade	C (%)	Mn (%)	P (%)	S (%)	Si (%)	Cu (%)	Yield Strength (MPa)	Tensile Strength (MPa)	Elongation / Impact
IS 2062	E300BR	≤ 0.20	≤ 1.60	≤ 0.045	≤ 0.040	≤ 0.45	≤ 0.20	≥ 300	460 – 590	≥ 22% / 27J @ 20°C
EN 10025-2	S275JR	≤ 0.22	≤ 1.60	≤ 0.035	≤ 0.035	≤ 0.55	-	≥ 275	410 – 560	≥ 23% / 27J @ 20°C
ASTM A572	Gr 42	≤ 0.23	≤ 1.35	≤ 0.040	≤ 0.050	≤ 0.40	-	≥ 290	415 – 550	≥ 23% / 20J @ RT

3. Common Applications

- Structural steel used in construction

- Bridges and load-bearing structures

- Heavy machinery frames

- Automotive chassis parts

- Shipbuilding

4. Standard Conformance

IS 2062:2011 – Indian Standard for Hot Rolled Medium and High Tensile Structural Steel.

Grade Code Meaning:

E: Killed steel; 300: Minimum yield strength in MPa; BR: Thermo-mechanically rolled grade

5. Disclaimer

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