E250BO – Technical Overview

1. Chemical & Mechanical Properties

A. Chemical Composition

Element	C	Mn	S	P	Si	CE (Max)
Value	0.23	1.50	0.045	0.045	0.45	0.42

B. Mechanical Properties

Property	Value
Yield Strength (YS, min)	250 MPa (for ≤ 20 mm thickness)
Tensile Strength (UTS)	410–540 MPa
Elongation (Gauge length 5.65√A)	≥ 23%
Impact Test	Optional, at room temperature

2. Equivalent / Alternative Grades

Grade Name	Standard	YS (MPa)	UTS (MPa)	Elongation (%)	C	Mn	Si	P	S
S275JR	EN 10025-2	275	410–560	≥ 20	0.21	1.50	0.50	0.035	0.035
ASTM A36	ASTM	250	400–550	≥ 20	0.26	0.80–1.20	0.40	0.04	0.05
Fe410W	IS 1977	250	410–540	≥ 23	0.23	1.50	0.45	0.045	0.045

3. Common Applications

- Structural fabrication (beams, channels, angles)
- Bridges and flyovers
- General construction (buildings, warehouses)
- Equipment and frames
- Railway wagons and rolling stock

4. Conforming Standard

- IS 2062:2011 / 2019 (Indian Standard)

- Category: B0 (Sub-quality B, Fully Killed Steel, Impact Optional)

5. Disclaimer

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