



WEST BENGAL STATE ELECTRICITY DISTRIBUTION COMPANY LIMITED

(A GOVT. OF WEST BENGAL ENTERPRISE)

TECHNICAL SPECIFICATION FOR 13M/11M HOT ROLLED STEEL BEAMS (JOISTS)

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5. EMBOSSING ON EACH JOIST:

Following distinct non-erasable embossing to be made on each Steel Beams (Joists):

- Name & Logo of the manufacturer.
- ISI mark.
- Designation of steel and Size of the JOIST

TS STEEL BEAM (JOIST)

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GENERAL TECHNICAL PARTICULARS

FOR

Hot Rolled Steel Beams (Joists)

1. Steel Beams (Joists):

1.1 Dimensions and Properties:

| Sl.no. | Particulars | SC150 | Manufacturer's Data |
|--------|---|----------------|----------------------|
| 1 | Length of Joist in Mtr. | 11/13Mtr | |
| 2 | Weight Kg/m | 37.1kg/m | |
| 3 | Depth (D) of section in mm | 152mm | |
| 4 | Width(W) of section in mm | 152mm | |
| 5 | Thickness of flange(T) in mm | 11.9mm | |
| 6 | Thickness of web (t) in mm | 7.9mm | |
| 7 | Root radius in mm | R ₁ | 11.7mm |
| | | R ₂ | 3mm |
| 8 | Moment of Inertia I _x (cm ⁴) I _y (cm ⁴) | | 1970 cm ⁴ |
| | | | 700 cm ⁴ |
| 9 | Radius of Gyration (cm) r _x r _y | | 6.45cm |
| | | | 3.84cm |
| 10 | Sectional modulus Z _x (cm ³) Z _y (cm ³) | | 259 cm ³ |
| | | | 91.9 cm ³ |

1.2 Mechanical properties:

| Sl.no. | Test | Requirement as per IS 2062:2011 with Grade Designation: E250 (Fe 410) and Quality: "A" | Manufacturer's Data |
|--------|--|--|---------------------|
| A | Tensile Test: | Min250 | |
| | i. Yield Stress (MPa) | | |
| | ii. Tensile Strength(MPa) | Min 410 | |
| | iii. Percentage Elongation A, Min at Gauge Length, L _o =5.65 | 23 | |
| B | Bend test: The test piece at room temperature shall withstand bending without cracking through 180° to an internal diameter not greater than: | Internal Bend Diameter: 2XThickness of test piece. | |

GTP STEEL BEAMS (JOIST)

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1.3 Chemical properties:

| Sl.no. | Test | Requirement as per IS 2062:2011 with Grade Designation: E250 (Fe 410) and Quality: "A" | Manufacturer's Data |
|--------|----------------------------|--|---------------------|
| 1 | Carbon% | 0.23 | |
| 2 | Manganese% | 1.5 | |
| 3 | Sulphur% | 0.045 | |
| 4 | Phosphorous% | 0.045 | |
| 5 | Silicon% | 0.4 | |
| 6 | Carbon equivalent %(Max.) | 0.42 | |
| 7 | Mode of De-oxidation | Semi-killed or killed | |

Signature of the Bidder with Company Seal

**This form is to be duly filled in by the Bidder and submitted along with the Tender

GTP STEEL BEAMS (JOIST)

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