

STEEL TUBES FOR BOILER APPLICATIONS



BS 3059 : SPECIFICATION FOR STEEL BOILER AND SUPER HEATER TUBES

| | | BS : 3059 PART 1 | | BS 3059 PART 2 | |
|---|--|--|--|--|--|
| | | GRADE 320 | | GRADE 360 | |
| | | ERW 320 | CEW 320 | ERW 360 | CEW 360 |
| | | | | GRADE 440 | |
| | | ERW 440 | CEW 440 | | |
| CHEMICAL COMPOSITION (%) | CARBON | 0.16 MAX | | 0.17 MAX | |
| | MANGANESE | 0.30 / 0.70 | | 0.40 / 0.80 | |
| | SILICON | 0.35 MAX | | 0.10 / 0.35 | |
| | SULPHUR | 0.04 MAX | | 0.035 MAX | |
| | PHOSPHORUS | 0.04 MAX | | 0.035 MAX | |
| MECHANICAL PROPERTIES (N / SQ. MM) | TENSILE STRENGTH | 320 to 480 | | 360 to 500 | |
| | YIELD STRENGTH | 195 MIN | | 235 MIN | |
| | % ELONGATION | 25 MIN | | 24 MIN | |
| WELD TESTS | FLATTENING TEST (t = THICKNESS) NA - NOT APPLICABLE | 3 t MAX | | 3 t MAX | |
| | DRIFT EXPANSION TEST (%) NA - NOT APPLICABLE | 20 MIN | | 20 MIN | |
| DIMENSIONAL TOLERANCES (MM) | OD | ERW 320 | CEW 320 | ERW 360 & 440 | CEW 360 & 440 |
| | | +/- 0.75 % WITH A MINIMUM OF +/- 0.50 mm | +/- 0.50 % WITH MINIMUM OF +/- 0.10 mm | +/- 0.75 WITH A MINIMUM OF +/- 0.30 mm | +/- 0.50 % WITH MINIMUM OF +/- 0.10 mm |
| | THICKNESS UPTO 3.2 mm | +/- 10% | +/- 7.5 % | +/- 10 % | +/- 7.5 % |
| THICKNESS OVER 3.5 mm | +/- 7.50 % | | | | |
| STRAIGHTNESS OF 1 / 600 MAX WILL BE MAINTAINED | | | | | |
| TUBES WILL BE FIN CUT WITH MAXIMUM FIN HEIGHT 0.25 MM | | | | | |
| EACH TUBE WILL BE INSPECTED VISUALLY, HYDRAULICALLY TESTED AND EDDY CURRENT TESTED | | | | | |
| TUBES CAN BE SUPPLIED WITH OUR WTC (OR) ' IBR ' CERTIFICATION | | | | | |

HIGH ENGINEERING TUBULAR SOLUTIONS