BS1501–223–490A/B Pressure Vessel Steel plate

1.Pressure Vessel Steel Home Page

BS 1501

161-360A/B | 161-430A/B | 223-490A/B | 224-460A/B | 224-490A/B | 225-490A/B

2.BS1501-223-490A & B has been replaced with the Euro Norm specifcation EN 10028. BS1501-223-490A/B is steel grade ideally suited for use in the fabrication of weldable pressure vessels & boilers. The standard which is provided by the British Standards Institute has now been replaced with the European standard EN10028

3.Although BS-223-490A/B is no longer a currently active spec for pressure vessel steel it is still widely referred to in the industry and for this reason we have included details on our website for cross referencing purposes.

4.There are two types of BS1501-223-490 available which are ...

Type A :Denotes specified min. room temperature tensile properties

Type B :As per Type A but with elevated temperature properties

Please refer to technical details for BS-223-490A/B in the tables below. There are no comparable specifications available for this particular grade.

5.Table 1: Chemical Composition of BS1501-223-490A/B

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Element | | BS1501-223-490A/B | Element | | BS1501-223-490A/B |
| Carbon (C) | max. | 0.20%\* | Niobium (Ni) | min. | 0.010% |
| Silicon (Si) | min. | 0.10% |  | max. | 0.060% |
|  | max. | 0.50% | Copper (Cu) | max. | 0.30% |
| Manganese (Mn) | min. | 0.90% | Molybdenum | max. | 0.10% |
|  | max. | 1.60% | Nickel | max. | 0.75% |
| Phosphorus (P) | max. | 0.030% |  | | |
| Sulphur (S) | max. | 0.030% |
| Chromium (Cr) | max. | 0.25% |

\* Maximum carbon content should be 0.22% when samples are subjected to simulated post weld heat treatment

Table 2: Mechanical Properties of BS1501-223-490A/B

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Nominal Plate Thickness: | | Tensile Strength: | | Yield Strength: | Elongation: |
| Over (mm) | Up to and inc. (mm) | min. N/mm² | max. N/mm² | min. N/mm² | min. (%) |
| BS1501-223-490A/B | 3 | 16 | 490 | 610 | 355 | 21 |
| 16 | 40 |  |  | 345 | 21 |
| 40 | 63 |  |  | 340 | 20 |
| 63 | 100 |  |  | \* | 20 |
| 100 | 150 |  |  | \* | 20 |

\* Yield strength values for plates over 63mm shall be same values specified for plate thicknesses between 40mm and 63mm reduced by 1% for each 5mm increase over 63mm

6.(Please note: the technical information above is for guidance only – for exact specifications please cintact our Sales Team)