ASTM A387 Grade 9 Class 2 Pressure Vessel Steel PLATE

1.Chrome Moly Plate

ASTM A387

ASTM A387 Grade 5 Class 2 | ASTM A387 Grade 9 Class 2 | ASTM A387 Grade 11 Class 2

ASTM A387 Grade 12 Class 2 | ASTM A387 Grade 22 Class 2 | ASTM A387 Grade 91 Class 2

2.A387 Grade 9 Class 2 chrome molybdenum steel plates.A387 Grade 9 Class 2 – chrome–molybdenum plate is an ideal material for welded pressure vessels and boilers used in elevated temperature service. With excellent resistance to high temperature and corrosion, this type of steel is commonly used in the petrochemical, oil, gas and power generation industry.

3.All plates come with mill test certification and individual stampings. Third party testing can be arranged at the customers request.

Equivalents

|  |  |  |  |
| --- | --- | --- | --- |
| BS | EN | ASTM/ASME | DIN |
| ... | ... | A387-9-2 | ... |

4.Specifications

|  |  |  |
| --- | --- | --- |
| Designation | Nominal ChromiumContent (%) | Nominal MolybdenumContent (%) |
| A387 Grade 9 | 9.00% | 1.00% |

5.Tensile Requirements for Class 2 Plates

|  |  |  |
| --- | --- | --- |
| Designation: | Requirement: | Grade 9 |
| A387 Grade 9 | Tensile strength, ksi [MPA] | 75 to 100 [515 to 690] |
|   | Yield strength, min, ksi [MPa]/(0.2% offset) | 45 [310] |
|   | Elongation in 8 in. [200mm], min % | ... |
|   | Elongation in 2 in. [50mm], min, % | 18 |
|   | Reduction of area, min % | 45 (measured on round test specimens)40 (measured on flat test specimen) |

6.Chemical Requirements

|  |  |  |
| --- | --- | --- |
| Element |   | Chemical Composition (%) inc. Grade & UNS No. |
|   |   | Grade 9 (UNS: K90941) |
| Carbon: | Heat Analysis: | 0.15 max |
|   | Product Analysis: | 0.15 max |
| Manganese: | Heat Analysis: | 0.30 - 0.60 |
|   | Product Analysis: | 0.25 - 0.66 |
| Phosphorus: | Heat Analysis: | 0.030 |
|   | Product Analysis: | 0.030 |
| Sulphur (max): | Heat Analysis: | 0.030 |
|   | Product Analysis: | 0.030 |
| Silicon: | Heat Analysis: | 1.00 max |
|   | Product Analysis: | 1.05 max |
| Chromium: | Heat Analysis: | 8.00 - 10.00 |
|   | Product Analysis: | 7.90 - 10.10 |
| Molybdenum: | Heat Analysis: | 0.90 - 1.10 |
|   | Product Analysis: | 0.85 - 1.15 |
| Vanadium: | Heat Analysis: | 0.04 max |
|   | Product Analysis: | 0.05 max |

7.Tension Test Requirements:

Material shall be tested using a test specimen will confirm to the tensile requirements as outlined in Table 2.

8.Other requirements:

The following requirements and testing procedures (which are not mandatory) are considered suitable for Chrome Molybdenum steel:

Vacuum treatment

Product Analysis

Additional Tension Test

Charpy V-Notch Impact Test

Drop Weight Test

High Temperature Tension Test

Ultrasonic Examination

Magnetic Particle Examination

9.To find out more about Masteel's services and ASTM A387 Grade 12 Class 2 steel plates which we can supply directly to you from stock or from the mill, click contact us.