ASTM A387 Grade 12 Class 2 Pressure Vessel Steel PLATE

1.Chrome Moly Plate Home Page

ASTM A387

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

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2.We are stockists and suppliers of A387 Grade 12 Class 2 chrome molybdenum steel plates.A387 Grade 12 Class 2 is a high quality chrome molybdenum steel which is ideal for elevated temperature service and offers excellent anti corrosion characteristics.

3.The steel has a wide range of uses including industrial boilers and pressure vessels, especially in environments where high temperature levels are common.

4.Equivalents

|  |  |  |  |
| --- | --- | --- | --- |
| BS | EN | ASTM/ASME | DIN |
| 620 B | 13 CRMO 45 | A387-12-2 | 13 CRMO 44 |

5.Specifications

Chromium & Molybdenum content (according to the ASTM specification):

|  |  |  |
| --- | --- | --- |
| Designation | Nominal Chromium Content (%) | Nominal Molybdenum Content (%) |
| A387 Grade 12 | 1.00% | 0.50% |

6.Tensile Requirements for Class 2 Plates

|  |  |  |
| --- | --- | --- |
| Designation: | Requirement: | Grade 12 |
| A387 Grade 12 | Tensile strength, ksi [MPA] | 65 to 85 [450 to 585] |
|  | Yield strength, min, ksi [MPa]/(0.2% offset) | 40 [275] |
|  | Elongation in 8 in. [200mm], min % | 19 |
|  | Elongation in 2 in. [50mm], min, % | 22 |
|  | Reduction of area, min % | ––– |

7.Chemical Requirements

|  |  |  |
| --- | --- | --- |
| Element |  | Chemical Composition (%) inc. Grade & UNS No. |
|  |  | Grade 12 (UNS: K11757) |
| Carbon: | Heat Analysis: | 0.05 - 0.17 |
|  | Product Analysis: | 0.04 - 0.17 |
| Manganese: | Heat Analysis: | 0.40 - 0.65 |
|  | Product Analysis: | 0.35 - 0.73 |
| Phosphorus: | Heat Analysis: | 0.035 |
|  | Product Analysis: | 0.035 |
| Sulphur (max): | Heat Analysis: | 0.035 |
|  | Product Analysis: | 0.035 |
| Silicon: | Heat Analysis: | 0.15 - 0.40 |
|  | Product Analysis: | 0.13 - 0.45 |
| Chromium: | Heat Analysis: | 0.80 - 1.15 |
|  | Product Analysis: | 0.74 - 1.21 |
| Molybdenum: | Heat Analysis: | 0.45 - 0.60 |
|  | Product Analysis: | 0.40 - 0.65 |

8.Tension Test Requirements:

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

9.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

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