

# Material: ASTM A487 Grade 11

## Standard Specification for Steel Castings Suitable for Pressure Service

**Group:** Ferrous Mild Steel Alloys

**Sub Group:** ASTM A487 Grade 11 Steel Castings Suitable for Pressure Service

**Application:** Intended for Valve, Pump, General Engineering, Automotive and Other Industries

**Grade Belongs to the Industry:** Casting

| Chemical Composition |      |               | Heat Treatment                                    |           |
|----------------------|------|---------------|---------------------------------------------------|-----------|
| Carbon               | C %  | 0.050 - 0.200 | Normalizing or Annealing or Hardening + Tempering |           |
| Silicon              | Si % | 0.600 max.    |                                                   |           |
| Manganese            | Mn % | 0.500 - 0.800 |                                                   |           |
| Phosphorus           | P %  | 0.035 max.    |                                                   |           |
| Sulphur              | S %  | 0.035 max.    |                                                   |           |
| Chromium             | Cr % | 0.500 - 0.800 |                                                   |           |
| Nickel               | Ni % | 0.700 - 1.100 |                                                   |           |
| Molybdenum           | Mo % | 0.450 - 0.650 |                                                   |           |
| Copper               | Cu % | 0.500 max.    | Mechanical Properties                             |           |
| Tungsten             | W %  | 0.100 max.    | Tensile Strength in Mpa                           | 484 - 655 |
| Other                | Ot % | 0.500 max.    | Yield Strength in Mpa                             | 275 min.  |
| Iron                 | Fe % | Balance       | Elongation in %                                   | 20 min.   |
| -                    | -    | -             | Reduction of Area in %                            | 35 min.   |
| -                    | -    | -             | Hardness in BHN                                   | -         |
| -                    | -    | -             | Impact in Joule                                   | -         |

| Cross Reference Table |          |         |                              |
|-----------------------|----------|---------|------------------------------|
| Material              | Standard | Country | Grade Belong to the Industry |
| SA217 Grade WC4       | ASME     | USA     | Casting                      |
| J12082                | UNS      | USA     | Casting                      |
| SA487 Grade 11A       | ASME     | USA     | Casting                      |
| SA487 Grade 11B       | ASME     | USA     | Casting                      |
| A217 Grade WC4        | ASTM     | USA     | Casting                      |
| -                     | -        | -       | -                            |
| -                     | -        | -       | -                            |

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