

# Material: ASTM A487 16(A)

## Standard Specification for Steel Castings Suitable for Pressure Service

**Group:** Ferrous Mild Steel Alloys

**Sub Group:** ASTM A487 / AA87M 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 %  | 0.120 max.    | Annealing or Normalising or Hardening + Tempering |  |
| Silicon              | Si % | 0.500 max.    |   |  |
| Manganese            | Mn % | 2.100 max.    |   |  |
| Phosphorus           | P %  | 0.020 max.    |   |  |
| Sulphur              | S %  | 0.020 max.    |   |  |
| Chromium             | Cr % | 0.200 max.    |   |  |
| Nickel               | Ni % | 1.000 - 1.400 |   |  |
| Molybdenum           | Mo % | 0.100 max.    |   |  |
| Copper               | Cu % | 0.200 max.    |   |  |
| Vanadium             | V %  | 0.020 max.    |   |  |
| Tungsten             | W %  | 0.100 max.    |   |  |
| Other                | Ot % | 0.500 max.    |   |  |
| Iron                 | Fe % | Balance       |   |  |
| -                    | -    | -             |   |  |
| -                    | -    | -             |   |  |

  

| Mechanical Properties   |           |
|-------------------------|-----------|
| Tensile Strength in Mpa | 485 - 655 |
| Yield Strength in Mpa   | 275 min.  |
| Elongation in %         | 22 min.   |
| Reduction of Area in %  | 35 min.   |
| Hardness in BHN         | -         |
| Impact in Joule         | -         |

| Cross Reference Table |          |                |                              |
|-----------------------|----------|----------------|------------------------------|
| Material              | Standard | Country        | Grade Belong to the Industry |
| J31200                | UNS      | USA            | Casting                      |
| SA-487 16A            | ASME     | USA            | Casting                      |
| 1.6222                | DIN      | Germany        | Steel                        |
| 1.8932                | EN       | European Union | Forging                      |
| E460DD                | JIS      | Japan          | Plate                        |
| P420NH                | EN       | European Union | Forging                      |
| 9NiMn 5               | DIN      | Germany        | Steel                        |

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