

Material: ASTM A757 Grade E2N1, E2Q1

Standard Specification for Steel Castings, Ferritic and Martensitic, for Pressure-Containing and Other Applications, for Low-Temperature Service

Group: Ferrous Mild Steel Alloys

Sub Group: ASTM A757 / A757M Ferritic and Martensitic Steel Castings for Pressure-Containing and Low-Temperature Service

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

Belongs to the Industry: Casting

| Chemical Composition | | | Heat Treatment | |
|----------------------|------|---------------|---|--|
| Carbon | C % | 0.200 max. | Normalising or Annealing or Hardening + Tempering | |
| Silicon | Si % | 0.600 max. | | |
| Manganese | Mn % | 0.400 - 0.700 | | |
| Phosphorus | P % | 0.020 max. | | |
| Sulphur | S % | 0.020 max. | | |
| Chromium | Cr % | 1.500 - 2.000 | | |
| Nickel | Ni % | 2.750 - 3.900 | | |
| Molybdenum | Mo % | 0.400 - 0.600 | | |
| Vanadium | V % | 0.030 max. | | |
| Copper | Cu % | 0.500 max. | | |
| Tungsten | W % | 0.100 max. | | |
| Other | Ot % | 0.700 max. | | |
| Iron | Fe % | Balance | | |
| - | - | - | | |
| - | - | - | | |

| Mechanical Properties | |
|-------------------------|-----------------|
| Tensile Strength in Mpa | 620 - 825 |
| Yield Strength in Mpa | 485 min. |
| Elongation in % | 18 min. |
| Reduction of Area in % | 35 min. |
| Hardness in BHN | - |
| Impact in Joule | 41 min. @ -73°C |

| Cross Reference Table | | | |
|-----------------------|----------|----------------|------------------------------|
| Material | Standard | Country | Grade Belong to the Industry |
| J42220 | UNS | USA | Casting |
| 1.6783 | EN | European Union | Casting |
| 1.6783 | DIN | Germany | Casting |
| G 19 NiCrMo 12 6 | EN | European Union | Casting |
| G 19 NiCrMo 12 6 | DIN | Germany | Casting |
| A757 Grade E2N1, E2Q1 | ASTM | USA | Casting |
| A757 Grade E2N2, E2Q2 | ASTM | USA | Casting |

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