

Material: BS 10213 EN 1.1131

Standard Specification for Steel Castings for Pressure Purposes

Group: Ferrous Mild Steel Alloys

Sub Group: BS 10213 Steel Castings for Pressure Purposes

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

Belongs to the Industry: Casting

| Chemical Composition | | | Heat Treatment | | | | | | | | | | | | | | | |
|-------------------------|-----------------|---------------|---|--|-----------------------|--|-------------------------|-----------|-----------------------|----------|-----------------|---------|------------------------|---|-----------------|---|-----------------|-----------------|
| Carbon | C % | 0.150 - 0.200 | Normalising or Annealing or Hardening + Tempering | | | | | | | | | | | | | | | |
| Silicon | Si % | 0.600 max. | | | | | | | | | | | | | | | | |
| Manganese | Mn % | 1.000 - 1.600 | | | | | | | | | | | | | | | | |
| Phosphorus | P % | 0.020 max. | | | | | | | | | | | | | | | | |
| Sulphur | S % | 0.020 max. | | | | | | | | | | | | | | | | |
| Chromium | Cr % | 0.300 max. | | | | | | | | | | | | | | | | |
| Nickel | Ni % | 0.400 max. | | | | | | | | | | | | | | | | |
| Molybdenum | Mo % | 0.120 max. | | | | | | | | | | | | | | | | |
| Copper | Cu % | 0.300 max. | | | | | | | | | | | | | | | | |
| Vanadium | V % | 0.030 max. | | | | | | | | | | | | | | | | |
| Iron | Fe % | Balance | <table border="1"> <thead> <tr> <th colspan="2">Mechanical Properties</th> </tr> </thead> <tbody> <tr> <td>Tensile Strength in Mpa</td> <td>450 - 600</td> </tr> <tr> <td>Yield Strength in Mpa</td> <td>240 min.</td> </tr> <tr> <td>Elongation in %</td> <td>24 min.</td> </tr> <tr> <td>Reduction of Area in %</td> <td>-</td> </tr> <tr> <td>Hardness in BHN</td> <td>-</td> </tr> <tr> <td>Impact in Joule</td> <td>27 min. @ -40°C</td> </tr> </tbody> </table> | | Mechanical Properties | | Tensile Strength in Mpa | 450 - 600 | Yield Strength in Mpa | 240 min. | Elongation in % | 24 min. | Reduction of Area in % | - | Hardness in BHN | - | Impact in Joule | 27 min. @ -40°C |
| Mechanical Properties | | | | | | | | | | | | | | | | | | |
| Tensile Strength in Mpa | 450 - 600 | | | | | | | | | | | | | | | | | |
| Yield Strength in Mpa | 240 min. | | | | | | | | | | | | | | | | | |
| Elongation in % | 24 min. | | | | | | | | | | | | | | | | | |
| Reduction of Area in % | - | | | | | | | | | | | | | | | | | |
| Hardness in BHN | - | | | | | | | | | | | | | | | | | |
| Impact in Joule | 27 min. @ -40°C | | | | | | | | | | | | | | | | | |
| - | - | - | | | | | | | | | | | | | | | | |
| - | - | - | | | | | | | | | | | | | | | | |
| - | - | - | | | | | | | | | | | | | | | | |
| - | - | - | | | | | | | | | | | | | | | | |
| - | - | - | | | | | | | | | | | | | | | | |

| Cross Reference Table | | | |
|-----------------------|----------|----------------|-------------------------------------|
| Material | Standard | Country | Grade Belong to the Industry |
| SA 216 WCC | ASME | USA | Casting |
| A660 WCC | ASTM | USA | Fusion Welding, Bending and Forming |
| SA 660 WCC | ASME | USA | Centrifugal Casting |
| J02503 | UNS | USA | Casting |
| A216 WCB | ASTM | USA | Casting |
| 1.0619 | EN | European Union | Casting |
| 1.0619 | BS | British | Casting |

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