

Material: BS 10213 EN 1.7720

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 % | 0.100 - 0.150 | Normalising or Annealing or Hardening + Tempering | | | | | | | | | | | | | | | |
| Silicon | Si % | 0.450 max. | | | | | | | | | | | | | | | | |
| Manganese | Mn % | 0.400 - 0.700 | | | | | | | | | | | | | | | | |
| Phosphorus | P % | 0.030 max. | | | | | | | | | | | | | | | | |
| Sulphur | S % | 0.020 max. | | | | | | | | | | | | | | | | |
| Chromium | Cr % | 0.300 - 0.500 | | | | | | | | | | | | | | | | |
| Nickel | Ni % | 0.400 max. | | | | | | | | | | | | | | | | |
| Molybdenum | Mo % | 0.400 - 0.600 | | | | | | | | | | | | | | | | |
| Copper | Cu % | 0.300 max. | | | | | | | | | | | | | | | | |
| Vanadium | V % | 0.220 - 0.300 | | | | | | | | | | | | | | | | |
| Tin | Sn % | 0.025 max. | <table border="1"> <thead> <tr> <th colspan="2">Mechanical Properties</th> </tr> </thead> <tbody> <tr> <td>Tensile Strength in Mpa</td> <td>510 - 660</td> </tr> <tr> <td>Yield Strength in Mpa</td> <td>295 min.</td> </tr> <tr> <td>Elongation in %</td> <td>17 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. @ RT</td> </tr> </tbody> </table> | | Mechanical Properties | | Tensile Strength in Mpa | 510 - 660 | Yield Strength in Mpa | 295 min. | Elongation in % | 17 min. | Reduction of Area in % | - | Hardness in BHN | - | Impact in Joule | 27 min. @ RT |
| Mechanical Properties | | | | | | | | | | | | | | | | | | |
| Tensile Strength in Mpa | 510 - 660 | | | | | | | | | | | | | | | | | |
| Yield Strength in Mpa | 295 min. | | | | | | | | | | | | | | | | | |
| Elongation in % | 17 min. | | | | | | | | | | | | | | | | | |
| Reduction of Area in % | - | | | | | | | | | | | | | | | | | |
| Hardness in BHN | - | | | | | | | | | | | | | | | | | |
| Impact in Joule | 27 min. @ RT | | | | | | | | | | | | | | | | | |
| Iron | Fe % | Balance | | | | | | | | | | | | | | | | |
| - | - | - | | | | | | | | | | | | | | | | |
| - | - | - | | | | | | | | | | | | | | | | |
| - | - | - | | | | | | | | | | | | | | | | |
| - | - | - | | | | | | | | | | | | | | | | |

| Cross Reference Table | | | |
|-----------------------|----------|----------------|------------------------------|
| Material | Standard | Country | Grade Belong to the Industry |
| 1.772 | EN | European Union | Casting |
| 1.772 | DIN | Germany | Casting |
| 660 | BS | British | Steel and Plate |
| G 12 MoCrV 5 2 | EN | European Union | Casting |
| G 12 MoCrV 5-2 | DIN | Germany | Casting |
| G12MoCrV5-2 | AFNOR NF | France | Casting |
| G12MoCrV5-2 | UNI | Italy | Casting |

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