## Material - BS 503-490

## Standard Specification for Steel Steel Forgings for Pressure Purposes

Group - Ferrous Mild Steel Alloys
Sub Group - BS 503-490 Steel Forgings 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 max. | Normalising + Tempering or Hardening + Tempering |  |
| Silicon | Si \% | 0.150-0.400 |  |  |
| Manganese | Mn \% | 0.800 max. |  |  |
| Phosphorus | P \% | 0.025 max. |  |  |
| Sulphur | S \% | 0.020 max. |  |  |
| Chromium | $\mathrm{Cr} \%$ | 0.250 max. |  |  |
| Nickel | Ni \% | 3.250-3.750 |  |  |
| Molybdenum | Mo \% | 0.100 max. | $\square$ |  |
| Aluminium | Al \% | 0.018 min . | Mechanical Properties |  |
| Iron | Fe \% | Balance | Tensile Strength in Mpa | 490-640 |
| - | - |  | Yield Strength in Mpa | 300 min . |
| - | - | - | Elongation in \% | 17 min . |
| - | - | - | Reduction of Area in \% | - |
| - | - | - | Hardness in BHN | - |
| - | - | - | Impact in Joule | - |
|  |  |  |  |  |
| Cross Reference Table |  |  |  |  |
| Material | Standard | Country | Grade Belong to the Industry |  |
| SA-352 Grade LC3 | ASME | USA | Casting |  |
| 1.5638 | DIN | Germany | Casting |  |
| 1.5638 | EN | European Union | Casting |  |
| J31550 | UNS | USA | Casting |  |
| AM8Ni14 | UNE | Spain | Casting |  |
| G12Ni14 | UNI | Italy | Casting |  |
| A352 LC3 | ASTM | USA | Casting |  |

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