## Material - UNS J91109

## Standard Specification for Austenitic Manganese Steel Casting

Group - Ferrous Austenitic Manganese Steel Alloy
Sub Group - UNS J91109 Austenitic Manganese Steel Casting
Application - Intended for Valve, Pump, General Engineering, Automotive and Other Industries
Grade Belongs to the Industry - Casting

| Chemical Composition |  |  | Heat Treatment |  |
| :---: | :---: | :---: | :---: | :---: |
| Carbon | C \% | 1.050-1.350 | Annealing or Normalising or Hardening + Tempering |  |
| Silicon | Si \% | 1.000 max. |  |  |
| Manganese | Mn \% | 11.000 min . |  |  |
| Phosphorus | P \% | 0.070 max. |  |  |
| Iron | Fe \% | Balance |  |  |
| - | - | - |  |  |
| - | - | - |  |  |
| - | - | - | $\square$ |  |
| - | - | - | Mechanical Properties |  |
| - | - |  | Tensile Strength in Mpa | 880 min . |
| - | - | - | Yield Strength in Mpa | 315 min . |
| - | - | - | Elongation in \% | 40 min . |
| - | - | - | Reduction of Area in \% | - |
| - | - | - | Hardness in BHN | - |
| - | - | - | Impact in Joule | - |


| Cross Reference Table |  |  |  |
| :---: | :---: | :---: | :---: |
| Material | Standard | Country | Grade Belong to the Industry |
| BW10 | BS | British | Casting |
| X 120 Mn 12 | DIN | Germany | Steel |
| 110G13L | GOST | Russia | Casting |
| SCMnH 1 | JIS | Japan | Casting |
| G X 120 Mn 12 | UNI | Italy | Casting |
| Z 120 M 12 | AFNOR NF | France | Steel |
| A128 Grade A | ASTM | USA | Casting |

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