



## Material - AFNOR NF 20NCD12M

Standard Specification for Unalloyed and Low Alloy Structural Cast Steels Suitable for Heat Treatment

**Group - Ferrous Mild Steel Alloys** 

Sub Group - AFNOR NF 20NCD12M Unalloyed and Low Alloy Structural Cast Steels Suitable for Heat Treatment Application - Intended for Valve, Pump, General Engineering, Automotive and Other Industries Grade Belongs to the Industry - Casting

| Chemical Composition |      |               | Heat Treatment                                   |           |
|----------------------|------|---------------|--|-----------|
| Carbon               | C %  | 0.230 max.    | Normalising + Tempering or Hardening + Tempering |           |
| Silicon              | Si % | 0.600 max.    |  |           |
| Manganese            | Mn % | 0.800 max.    |  |           |
| Phosphorus           | Р%   | 0.040 max.    |  |           |
| Sulphur              | S %  | 0.035 max.    |  |           |
| Chromium             | Cr % | 1.350 - 1.850 |  |           |
| Nickel               | Ni % | 2.500 - 3.500 |  |           |
| Molybdenum           | Mo % | 0.350 - 0.600 |  |           |
| Iron                 | Fe % | Balance       | Mechanical Properties                            |           |
| -                    | -    | -             | Tensile Strength in Mpa                          | 750 min.  |
| -                    | -    | -             | Yield Strength in Mpa                            | 500 min.  |
| -                    | -    | -             | Elongation in %                                  | 14 min.   |
| -                    | -    | -             | Reduction of Area in %                           | 3 min.    |
| -                    | -    | -             | Hardness in BHN                                  | 350 - 400 |
| -                    | -    | -             | Impact in Joule                                  | 10 J @ RT |

| Cross Reference Table |          |                |                              |  |
|-----------------------|----------|----------------|------------------------------|--|
| Material              | Standard | Country        | Grade Belong to the Industry |  |
| SA-352 Grade LC2-1    | ASME     | USA            | Casting                      |  |
| 1.6783                | DIN      | Germany        | Casting                      |  |
| J42215                | UNS      | USA            | Casting                      |  |
| T15MoCrNi30R          | STAS     | Romania        | Casting                      |  |
| 1.6783                | EN       | European Union | Casting                      |  |
| J42015                | UNS      | USA            | Casting                      |  |
| A352 LC2-1            | ASTM     | USA            | Casting                      |  |

Further any inquiry to discuss with Gravity Cast Pvt. Ltd. – Gravity Group of Companies team member Call on +918469160029, or email marketing@gravitycastindia.com

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