

# Material: UNS G15220

## Standard Specification for Seamless Steel Tubes for Pressure Purposes

**Group:** Ferrous Mild Steel Alloys

**Sub Group:** UNS G15220 Seamless Steel Tubes for Pressure Purposes

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

**Grade Belongs to the Industry:** Forging, Rolling, Bar and Tube

| Chemical Composition |      |               | Heat Treatment  |  |
|----------------------|------|---------------|---|--|
| Carbon               | C %  | 0.180 - 0.240 | Normalizing Forming   |  |
| Manganese            | Mn % | 1.100 - 1.400 |   |  |
| Phosphorus           | P %  | 0.030 max.    |   |  |
| Sulphur              | S %  | 0.050 max.    |   |  |
| Iron                 | Fe % | Balance       |   |  |
| -                    | -    | -             | <b>Mechanical Properties</b><br>Tensile Strength in Mpa 510 - 850<br>Yield Strength in Mpa 295 min.<br>Elongation in % 12 min.<br>Reduction of Area in % -<br>Hardness in HB 146 - 255<br>Impact in Joule 35 J @ RT |  |
| -                    | -    | -             |   |  |
| -                    | -    | -             |   |  |
| -                    | -    | -             |   |  |
| -                    | -    | -             |   |  |
| -                    | -    | -             |   |  |
| -                    | -    | -             |   |  |
| -                    | -    | -             |   |  |
| -                    | -    | -             |   |  |
| -                    | -    | -             |   |  |

| Cross Reference Table |          |                |                                |
|-----------------------|----------|----------------|--------------------------------|
| Material              | Standard | Country        | Grade Belong to the Industry   |
| 1.0471                | EN       | European Union | Steel and Tube                 |
| 1.0471                | DIN      | Germany        | Steel and Tube                 |
| 1.0471                | DIN      | Germany        | Steel and Tube                 |
| 1522                  | AISI     | USA            | Forging, Rolling, Bar and Tube |
| 150M19                | BS       | British        | Steel and Tube                 |
| SMn21                 | JIS      | Japan          | Forging and Rolling            |
| 21MnSi5               | DIN      | Germany        | Steel and Tube                 |

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