

## Material: EN 1.4547

### Standard Specification for Seamless Steel Tubes for Pressure Purposes

**Group:** Ferrous Stainless Steel Alloys

**Sub Group:** EN 1.4547 Seamless Steel Tubes for Pressure Purposes

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

**Grade Belongs to the Industry:** Steel, Bar and Rods

| Chemical Composition |      |                 | Heat Treatment                                                                                                                                                                                                                                     |  |
|----------------------|------|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Carbon               | C %  | 0.020 max.      | Solution Annealing                                                                                                                                                                                                                                 |  |
| Silicon              | Si % | 0.700 max.      |                                                                                                                                                                                                                                                    |  |
| Manganese            | Mn % | 1.000 max.      |                                                                                                                                                                                                                                                    |  |
| Phosphorus           | P %  | 0.030 max.      |                                                                                                                                                                                                                                                    |  |
| Sulphur              | S %  | 0.010 max.      |                                                                                                                                                                                                                                                    |  |
| Chromium             | Cr % | 19.500 - 20.500 |                                                                                                                                                                                                                                                    |  |
| Molybdenum           | Mo % | 6.000 - 7.000   |                                                                                                                                                                                                                                                    |  |
| Nickel               | Ni % | 17.500 - 18.500 |                                                                                                                                                                                                                                                    |  |
| Copper               | Cu % | 0.500 - 1.000   |                                                                                                                                                                                                                                                    |  |
| Nitrogen             | N %  | 0.180 - 0.250   |                                                                                                                                                                                                                                                    |  |
| Iron                 | Fe % | Balance         | <b>Mechanical Properties</b><br>Tensile Strength in Mpa      500 - 2100<br>Yield Strength in Mpa      300 min.<br>Elongation in %      20 min.<br>Reduction of Area in %      -<br>Hardness in BHN      260 max.<br>Impact in Joule      60 J @ RT |  |
| -                    | -    | -               |                                                                                                                                                                                                                                                    |  |
| -                    | -    | -               |                                                                                                                                                                                                                                                    |  |
| -                    | -    | -               |                                                                                                                                                                                                                                                    |  |
| -                    | -    | -               |                                                                                                                                                                                                                                                    |  |
| -                    | -    | -               |                                                                                                                                                                                                                                                    |  |
| -                    | -    | -               |                                                                                                                                                                                                                                                    |  |

| Cross Reference Table |          |         |                               |
|-----------------------|----------|---------|-------------------------------|
| Material              | Standard | Country | Grade Belong to the Industry  |
| 0216-5 EN 1.4547      | BS       | British | Tube                          |
| 1.4547                | DIN      | Germany | Steel, Bar and Rod            |
| X1CrNiMoCuN20-18-7    | AFNOR NF | France  | Steel, Bar and Rod            |
| X1CrNiMoCuN20-18-7    | UNI      | Italy   | Steel, Sheet, Strip and Plate |
| X1CrNiMoCuN20-18-7    | DIN      | Germany | Steel, Sheet, Strip and Plate |
| -                     | -        | -       | -                             |
| -                     | -        | -       | -                             |

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