Stainless Steel Seamless Tubes & U Tubes (High Precision & Heat Exchanger Tubing) – Annealed & Pickled

Product Range:
- Outside Diameter: 6.00 mm to 101.66 mm
- Wall Thickness: 0.75 mm to 8.00 mm
- Grades: TP 304/L, TP 316/L, TP 310/1H/2, TP 317/L, TP 321/9, TP 347/H, TP 405, TP 409, TP 410, TP 430, UNS S 31600, 31605, 32105, 32150, 320660
- Specifications: AISI, JIS, DIN, EN, DIN EN 10297-1, NF, ANSI, JIS, DIN-17458

Applications:
- Heat Exchangers
- Chemical & Petrochemical
- Oil Industry
- Nuclear Power Generation
- Pressure Vessels
- Mechanical Failments
- Food Processing
- Automotive
- Aerospace

Stainless Steel Seamless Tubes (Hydraulic & Instrumentation Tubing) – Bright Annealed

Product Range:
- Outside Diameter: 6.00 mm to 66.00 mm
- Wall Thickness: 0.25 mm to 8.00 mm
- Grades: TP 316 H/L, TP 316 L/AL, TP 310/1H/2, TP 317/L, TP 321/9, TP 347/H, TP 405, TP 409, TP 410, TP 430, UNS S 31600, 31605, 32105, 32150, 32160
- Specifications: AISI, JIS, DIN, EN, DIN EN 10297-1, NF, ANSI, JIS, DIN-17458

Applications:
- Oil & Gas Extraction
- Chemical & Petrochemical
- Nuclear Power
- Food & Beverage Processing
- Automotive
- Aerospace
Stainless Steel Seamless Pipes – Annealed & Pickled

Product Range -

Outside Diameter: 1/8” NPS to 12” NPS
Wall Thickness: SCH 5S to SCH IXS
Grades: TP 304/L/H (304L, 304N and 17-4 PH)
TP 316/L/H/TI (316L, 316N and 17-7PH)
TP 321/H, TP 321/HN, TP 347/HN
UNS S 31603, 31605, 32105, 321060
Specifications: ASTM, ASME, DIN (EN), GERMANY

Applications:
- Oil and Gas, Chemical & Petrochemical
- Power Generation
- Mechanical and Plant Engineering
- Nuclear
- Petrochemical

Stainless Steel Welded Pipes, Tubes & U Tubes (Annealed – Pickled & Bright Annealed)

Product Range -

Outside Diameter: 12.70 mm to 156.30 mm
Wall Thickness: 0.70 mm to 12.70 mm
Grades: TP 304/L/H, TP 316/L/H/TI, TP 317/L, TP 321/L/H
TP 347/H, TP 420, TP 429, TP 410, TP 430
UNS S 31603, 31605, 32105, 321060
Specifications: AS, MS, ASME, DIN (EN), GERMANY, NF, JIS, ASME, JIS (Japan)

Applications:
- Heat Exchangers, Condensers & Pressure Vessels
- Chemical & Petrochemical
- Power Generation
- Pressure Vessels
- Marine Equipment
- Food & Beverage Processing
- Automotive
- Oil & Gas
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### Chemical Composition Of Stainless Steel

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<th>JIS NO.</th>
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<th>P</th>
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<th>Cr</th>
<th>Ni</th>
<th>Mo</th>
<th>Nb</th>
<th>Ti</th>
<th>Cu</th>
<th>Al</th>
<th>W</th>
<th>Mo</th>
<th>Heat Treatment &amp; Temper Condition</th>
</tr>
</thead>
</table>

#### Alloying Elements

- **chrome**: chrome alloy is a major component in stainless steel, providing resistance to corrosion and wear.
- **Mn**: manganese is another key alloying element, enhancing strength and toughness.
- **P**: phosphorus helps in the formation of a solid solution.
- **S**: sulfur is detrimental to the mechanical properties.
- **Si**: silicon is used to improve the machinability of stainless steels.
- **Cr**: chromium is the primary element in stainless steel, providing resistance to corrosion.
- **Ni**: nickel is used to improve the corrosion resistance and toughness.
- **Mo**: molybdenum is added to increase resistance to pitting and stress corrosion cracking.
- **Nb**: niobium improves the creep strength.
- **Ti**: titanium is used to stabilize the austenite phase.
- **Cu**: copper is used to improve properties such as strength and hardness.
- **Al**: aluminum can be used to improve the machinability of stainless steels.
- **W**: tungsten is added to increase hardness and wear resistance.
- **Mo**: molybdenum is added to improve resistance to pitting and stress corrosion cracking.

#### Heat Treatment & Temper Condition

- **1000**: represents a specific heat treatment temperature.
- **1000**: represents a specific temper condition.

#### Process Route

- **Cold Worked**: indicates that the steel has been cold-worked to achieve a higher strength and hardness.
- **Recrystallized**: indicates that the steel has been heat treated to a specific condition to improve its mechanical properties.

#### Surface Condition

- **1000**: represents a specific surface condition.
- **1000**: represents a specific condition.

#### Tolerance

- **< 0.1%**: indicates a tolerance of less than 0.1%.
- **< 0.5%**: indicates a tolerance of less than 0.5%.
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#### Other Details

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