

# SS 430F, Type 430F, WNR 1.4104, UNS S43020, AISI 430F, Grade 430F, AFNOR Z 10 CF 17

## Introduction :

Aesteiron continues to expand its product line in UNS S43020 to meet the emerging customer needs, and whereas Aesteiron Steels Pvt. Ltd. is ISO 9001 : 2008 Certified, ASPL has a great Projects in this grade in all parts of the world with renowned suppliers presenting the wide range of services. We pride ourselves in the quality of our products, our competitive pricing and our exceptional customer service. We have been recognized for our outstanding customer service in satisfaction surveys of top- ranked mills in india and all over the world. ASPL, with iron and steel as its main business, manufactures premium steel products with high technologies and a high added value and fosters three major product categories, namely carbon steel, stainless steel and special steel. Through our worldwide marketing network, these premium products not only satisfy the demand on the domestic market but are also exported to more than forty countries and regions in Asia, Africa, Europa and America, extensively applied to various. We are a highly qualified by our customers worldwide as a sustainable and trustworthy to meet their request and need at the right time and the right area. We strive and stand committed to maintain this respectable position by catering to the requirements of our customers in the best possible way leaving no room for complaints.

## Chemical Composition

|            | SS 430F   | TYPE 430F | WNR 1.4104 | UNS S43020 | AISI 430F | GRADE 430F | AFNOR Z 10 CF 17 |
|------------|-----------|-----------|------------|------------|-----------|------------|------------------|
| Carbon     | 0.12 max  | 0.12 max  | 0.12 max   | 0.12 max   | 0.12 max  | 0.12 max   | 0.12 max         |
| Manganese  | 1.25 max  | 1.25 max  | 1.25 max   | 1.25 max   | 1.25 max  | 1.25 max   | 1.25 max         |
| Phosphorus | 0.06 max  | 0.06 max  | 0.06 max   | 0.06 max   | 0.06 max  | 0.06 max   | 0.06 max         |
| Sulfur     | 0.15 min  | 0.15 min  | 0.15 min   | 0.15 min   | 0.15 min  | 0.15 min   | 0.15 min         |
| Silicon    | 1.00 max  | 1.00 max  | 1.00 max   | 1.00 max   | 1.00 max  | 1.00 max   | 1.00 max         |
| Chromium   | 16.0-18.0 | 16.0-18.0 | 16.0-18.0  | 16.0-18.0  | 16.0-18.0 | 16.0-18.0  | 16.0-18.0        |
| Molybdenum | 0.60 max  | 0.60 max  | 0.60 max   | 0.60 max   | 0.60 max  | 0.60 max   | 0.60 max         |
| Iron       | Bal       | Bal       | Bal        | Bal        | Bal       | Bal        | Bal              |

## Mechanical Properties

|                                 | SS 430F | TYPE 430F | WNR 1.4104 | UNS S43020 | AISI 430F | GRADE 430F | AFNOR Z 10 CF 17 |
|---------------------------------|---------|-----------|------------|------------|-----------|------------|------------------|
| Tensile Strength(Mpa)min        | 552     | 552       | 552        | 552        | 552       | 552        | 552              |
| Yield Strength 0.2% Proof (Mpa) | 379     | 379       | 379        | 379        | 379       | 379        | 379              |
| Elongation (% in 50mm)min       | 25      | 25        | 25         | 25         | 25        | 25         | 25               |
| Reduction in Area, %            | -       | -         | -          | -          | -         | -          | -                |
| Hardness, Brinell(HB)           | 262     | 262       | 262        | 262        | 262       | 262        | 262              |

## Standard Available in forms :

ASTM A182/ ASME SA182 Stainless Steel Pipe Fittings  
 ASTM A213 / ASME SA213 Seamless Stainless Steel Pipes  
 ASTM A240/ ASME SA240 Stainless Steels Sheets / Plates  
 ASTM A249/ ASME SA249 Stainless Steel Welded Tubes  
 ASTM A269/ ASME SA269 Stainless Steel Tubes  
 ASTM A270/ ASME SA270 Stainless Steel Sanitary Tubes  
 ASTM A312/ ASME SA312 Stainless Steel Pipes  
 ASTM A403/ ASME SA403 Stainless Steel Pipe Fittings  
 ASTM A554/ ASME SA554 Stainless Steel Welded Tubes  
 ASTM A731/ ASME SA731 Stainless Steel Pipes  
 ASTM A789/ ASME SA789 Stainless Steel Tubes  
 ASTM A790/ ASME SA790 Stainless Steel Pipes  
 ASTM A791/ ASME SA791 Stainless Steel Tubes

## Products Available in forms :

- SS 430F, Type 430F, WNR 1.4104, UNS S43020, AISI 430F Plates
- SS 430F, Type 430F, WNR 1.4104, UNS S43020, AISI 430F Pipes
- SS 430F, Type 430F, WNR 1.4104, UNS S43020, AISI 430F Round Bar
- SS 430F, Type 430F, WNR 1.4104, UNS S43020, AISI 430F Tube
- SS 430F, Type 430F, WNR 1.4104, UNS S43020, AISI 430F Flanges
- SS 430F, Type 430F, WNR 1.4104, UNS S43020, AISI 430F Wire
- SS 430F, Type 430F, WNR 1.4104, UNS S43020, AISI 430F Fittings

## Fabrication and Heat Treatment

### Machinability

- Machining of grade 430F stainless steel can be done with good feeds and speeds.

### Welding

- Grade 430F stainless steel cannot be welded due to its high sulfur content. If necessary, welding can be performed using low heat settings and AWS E/ER430 filler metal.

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## Hot Working

- Grade 430F stainless steel can be hot worked by initially bringing the material to 816°C (1500°F) and then slowly to 1066 to 1149°C (1950 to 2100°F).

## Cold Working

- Grade 430F stainless steel can withstand only moderate cold forming.

## Annealing

- Grade 430F stainless steel can be annealed at temperature ranging from 677 to 760°C (1250 to 1400°F) and then air cooled.

## Hardening

- Grade 430F stainless steel is unresponsive to heat treatment.

## Applications

The following are the major applications of grade 430F stainless steel.

- Fasteners
- Gears
- Shafts
- Pinions



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