# Rene 41

These products have been used typically for parts requiring high strength up to 1600 °F (871 °C) and oxidation resistance up to 1800 °F (982 °C), but usage is not limited to such applications Rene 41 steel chemical information,mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, We can produce round bars, forged rings, forged cakes, flat bars, tubes, sheets, plates, steel wires, steel strips, steel coils, etc. The size can be customized, the maximum order quantity is 100Kg. It also contains the use of **Rene 41**,such as it is commonly used in bars, sheet,plates, steel coils, steel pipes,forged and other materials application.

## Data Table for Grades Stainless Steels - Special Steels These products have been used typically for parts requiring high strength up to 1600 °F (871 °C) and oxidation resistance up to 1800 °F (982 °C), but usage is not limited to such applications Rene 41

| Rene 41 Standard Number | | |
|---|---|---|
| ITEM | Standard Number | Descriptions |
| 1 | SAE AMS 5399D (2006) | Nickel Alloy, Corrosion and Heat-Resistant, Investment Castings 52Ni - 19Cr - 11Co - 9.8Mo - 3.2Ti - 1.6Al - 0.006B Vacuum-Melted, Vacuum-Cast, Solution Heat Treated |
| 2 | SAE AMS 5545F (2010) | Nickel Alloy, Corrosion and Heat-Resistant, Sheet, Strip, and Plate 54Ni - 19Cr - 11Co - 9.8Mo - 3.2Ti - 1.5Al - 0.006B Vacuum Induction and Consumable Electrode Melted, Solution Heat Treatable Precipitation Heat Treated |
| 3 | SAE AMS 5712J (2006) | Nickel Alloy, Corrosion and Heat-Resistant, Bars, Forgings, and Rings 53Ni - 19Cr - 11Co - 9.8Mo - 3.2Ti - 1.6Al - 0.006B Vacuum Melted, Solution Heat Treated Precipitation Hardenable |
| 4 | SAE AMS 5713J (2007) | Nickel Alloy, Corrosion and Heat-Resistant, Bars, Forgings, and Rings 53Ni - 19Cr - 11Co - 9.8Mo - 3.2Ti - 1.6Al - 0.006B Vacuum Melted, Solution and Precipitation Heat Treated |
| 5 | SAE AMS 5800F (2006) | Nickel Alloy, Corrosion and Heat-Resistant, Welding Wire 54Ni - 19Cr - 11Co - 10Mo - 3.2Ti - 1.5Al - 0.006B Vacuum Induction Melted |
| 6 | SAE J 467 (1968) | Special Purpose Alloys ("Superalloys") |

| Rene 41 Chemical composition(mass fraction)(wt.%) | | |
|---|---|---|
| Chemical | Min.(%) | Max.(%) |
| Al | 1.40 | 1.60 |
| B | 0.0030 | 0.0100 |
| C | | 0.12 |
| Co | 10.00 | 12.00 |
| Cr | 18.00 | 20.00 |
| Cu | | 0.50 |
| Fe | | 5.0 |
| Mn | | 0.10 |
| Mo | 9.0 | 10.50 |
| Ni | | Remainder |
| S | | 0.0150 |
| Si | | 0.5000 |
| Ti | 3.0 | 3.3 |

| Rene 41 Physical Properties | | |
|---|---|---|
| Tensile strength | 115-234 | ?b/MPa |
| Yield Strength | 23 | ? 0.2 ?/MPa |
| Elongation | 65 | ?5? (%) |
| ? | - | ?? (%) |
| Akv | - | Akv?/J |
| HBS | 123-321 | - |
| HRC | 30 | - |

| Rene 41 Mechanical Properties | | |
|---|---|---|
| Tensile strength | 231-231 | ?b/MPa |
| Yield Strength | 154 | ? 0.2 ?/MPa |
| Elongation | 56 | ?5?(%) |

| | | |
|---|---|---|
| ? | - | ??(%) |
| Akv | - | Akv?/J |
| HBS | 235-268 | - |
| HRC | 30 | - |

| Rene 41 Heat Treatment Regime | | | | |
|---|---|---|---|---|
| Annealing | Quenching | Tempering | Normalizing | Q & T |
| ? | ? | ? | ? | ? |

| Rene 41 Range of products | | | | |
|---|---|---|---|---|
| Product type | Products | Dimension | Processes | Deliver Status |
| Plates / Sheets | Plates / Sheets | 0.08-200mm(T)*W*L | Forging, hot rolling and cold rolling | Annealed, Solution and Aging, Q+T, ACID-WASHED, Shot Blasting |
| Steel Bar | Round Bar, Flat Bar, Square Bar | ?8-1200mm*L | Forging, hot rolling and cold rolling, Cast | Black, Rough Turning, Shot Blasting, |
| Coil / Strip | Steel Coil /Steel Strip | 0.03-16.0x1200mm | Cold-Rolled & Hot-Rolled | Annealed, Solution and Aging, Q+T, ACID-WASHED, Shot Blasting |
| Pipes / Tubes | Seamless Pipes/Tubes, Welded Pipes/Tubes | OD:6-219mm x WT:0.5-20.0mm | Hot extrusion, Cold Drawn, Welded | Annealed, Solution and Aging, Q+T, ACID-WASHED |

## We can produce Stainless Steels - Special Steels the specifications follows:

Note:
(1) listed in the table apex diameter (d), to steel thickness (a) multiples said.
(2) in the ASTM A6 standard specified scope can meet any additional conditions.
(3) from the standard for 50 mm (2 in).
Mechanical properties
Mechanische Eigenschaften
Caracteristiques mecaniques
ReH Minimum yield strength / Mindestwert der oberen Streckgrenze / Limite d'elasticite minimale

Rm Tensile strength / Zugfestigkeit / Resistance a la traction
A Minimum elongation / Mindestwert der Bruchdehnung / Allongement minimal
J Notch impact test / Kerbschlagbiegeversuch / Essai de flexion par choc

Round bar:
Diameter : 1mm-2000mm
Square bar:
Size:  50mm * 50mm-600mm *600mm
Plate steel/flat bar:
Size: Thickness:  0.1mm-800mm Width: 10mm to 1500mm
Tube/pipe:
Size: OD:  6-219mm  WT: 1-35 mm.
Cold-rolled sheet: Thickness:  2-5mm Width:1000mm Length: 2000mm
Hot-rolled sheet: Thickness:6-80mm Width: 210-610mm
Length:  We can supply any length based on the customer's requirement.
Forging/hot rolling/ extrusion of steel.
Forging: Shafts with flanks/pipes/tubes/slugs/donuts/cubes/other shapes
Finished goods condition:  hot forging/hot rolling + annealing/normalizing + tempering/quenching + tempering/any conditions based on the customer's requirement
Surface conditions:  scaled (hot working finish)/ground/rough machining/fine machining/based on the customer's requirement
Furnaces for metallurgical processing:  electrode arc + LF/VD/VOD/ESR/Vacuum consumable electrode.
Ultrasonic inspection:  100% ultrasonic inspection for any inperfections or based on the customer's requirement.
UTS according to SEP 1921 C/c,D/d,E/e;A388 or GB/T 6402
Excellent service for all kinds of industries, with advantages of technologies,  equipment and price.
We serve you with our honesty,  integrity,  and professionality.