

**CCTTC - 1Cr17Mn6Ni5N Datasheet, Chemical Composition** Nickel steel grade, instead of number 1 cr17ni7 and magnetism after cold working, used in railway vehicle, etc 1Cr17Mn6Ni5N Mechanical properties, Physical properties, Mechanical properties, Heat treatment, 1Cr17Mn6Ni5N Supplier

Nickel steel grade, instead of number 1 cr17ni7 and magnetism after cold working, used in railway vehicle, etc 1Cr17Mn6Ni5N 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 1Cr17Mn6Ni5N,such as it is commonly used in bars, sheet,plates, steel coils, steel pipes,forged and other materials application.

Data Table for Materials Stainless Steels & Special Steels Nickel steel grade, instead of number 1 cr17ni7 and magnetism after cold working, used in railway vehicle, etc <u>1Cr17Mn6Ni5N</u>

| <u>1Cr17Mn6Ni5N</u> Standard Number |                  |   |  |  |  |
|-------------------------------------|------------------|---|--|--|--|
| ITEM                                | Standard Number  | Descriptions  |  |  |  |
| 1                                   | GB/T 1220 (1992) | Stainless steel bars  |  |  |  |
| 2                                   | GB/T 3280 (1992) | Cold rolled stainless steel sheets and plates               |  |  |  |
| 3                                   | GB/T 4237 (1992) | Hot rolled stainless steel sheets and plates                |  |  |  |
| 4                                   | GB/T 4239 (1991) | Cold rolled stainless steel and heat resisting steel strips |  |  |  |
| 5                                   | GB/T 4356 (2002) | Stainless steel wire rods                                   |  |  |  |

| <u>1Cr17Mn6Ni5N</u> Chemical composition(mass fraction)(wt.%) |    |    |         |       |    |         |        |   |    |
|---|----|----|---------|-------|----|---------|--------|---|----|
| Chemical  |    |    | Min.(%) |       |    | Max.(%) |        |   |    |
| С   |    |    |         |       |    | 0.15    |        |   |    |
| Si  |    |    |         |       |    |         | 1.00   |   |    |
| Mn  |    |    | 5.50    |       |    |         | 7.50   |   |    |
| Р   |    |    |         |       |    | 0.060   |        |   |    |
| S   |    |    |         |       |    |         | 0.030  |   |    |
|   | Ni |    |         | 3.50  |    |         | 5.50   |   |    |
|   | Cr |    |         | 16.00 |    |         | 18.00  |   |    |
| Ν   |    |    |         |       |    |         | 0.2500 |   |    |
| С   | Si | Mn | Р       | S     | Cr | Ni      | Мо     | V | Та |
|   |    |    |         |       |    |         |        |   |    |



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| W | Ν | Cu | Со | Pb | В | Nb | Al | Ti | Other |
|---|---|----|----|----|---|----|----|----|-------|
|   |   |    |    |    |   |    |    |    |       |

| 1Cr17Mn6Ni5N Physical Properties |         |             |  |  |  |  |  |
|----------------------------------|---------|-------------|--|--|--|--|--|
| Tensile strength                 | 115-234 | σb/MPa      |  |  |  |  |  |
| Yield Strength                   | 23      | σ 0.2 ≥/MPa |  |  |  |  |  |
| Elongation                       | 65      | δ5≥ (%)     |  |  |  |  |  |
| Ψ                                | -       | ψ≥ (%)      |  |  |  |  |  |
| Akv                              | -       | Akv≥/J      |  |  |  |  |  |
| HBS                              | 123-321 |             |  |  |  |  |  |
| HRC                              | 30      | -           |  |  |  |  |  |

| 1Cr17Mn6Ni5N Mechanical Properties |         |             |  |  |  |  |
|------------------------------------|---------|-------------|--|--|--|--|
| Tensile strength                   | 231-231 | σb/MPa      |  |  |  |  |
| Yield Strength                     | 154     | σ 0.2 ≥/MPa |  |  |  |  |
| Elongation                         | 56      | δ5≥(%)      |  |  |  |  |
| Ψ                                  |         | ψ≥(%)       |  |  |  |  |
| Akv                                | -       | Akv≥/J      |  |  |  |  |
| HBS                                | 235-268 | -           |  |  |  |  |
| HRC                                | 30      | -           |  |  |  |  |

| 1Cr17Mn6Ni5N Heat Treatment Regime |   |              |              |              |  |  |  |
|------------------------------------|---|--------------|--------------|--------------|--|--|--|
| Annealing                          | Annealing Quenching Tempering Normalizing Q & T |              |              |              |  |  |  |
| $\checkmark$                       | $\checkmark$                                    | $\checkmark$ | $\checkmark$ | $\checkmark$ |  |  |  |

| 1Cr17Mn6Ni5N Range of products |                 |                   |                      |                    |  |  |
|--------------------------------|-----------------|-------------------|----------------------|--------------------|--|--|
| Product type                   | Products        | Dimension         | Processes            | Deliver Status     |  |  |
| Plates / Sheets                | Plates / Sheets | 0.08-200mm(T)*W*L | Forging, hot rolling | Annealed, Solution |  |  |

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|               |  |                               | and cold rolling                                  | and Aging, Q+T,<br>ACID-WASHED, Shot<br>Blasting                       |
|---------------|--|-------------------------------|---|--|
| Steel Bar     | Round Bar, Flat Bar,<br>Square Bar             | Φ8-1200mm*L                   | Forging, hot rolling<br>and cold rolling,<br>Cast | Black, Rough<br>Turning, Shot<br>Blasting,                             |
| Coil / Strip  | Steel Coil /Steel<br>Strip                     | 0.03-16.0x1200mm              | Cold-Rolled & Hot-<br>Rolled                      | Annealed, Solution<br>and Aging, Q+T,<br>ACID-WASHED, Shot<br>Blasting |
| Pipes / Tubes | Seamless<br>Pipes/Tubes, Welded<br>Pipes/Tubes | OD:6-219mm x<br>WT:0.5-20.0mm | Hot extrusion, Cold<br>Drawn, Welded              | Annealed, Solution<br>and Aging, Q+T,<br>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



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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

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