

This page is mainly introduced the 17-22-A S chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of 17-22-A S, 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 17-22-A S

| 17-22-A S Standard Number: |                      |   |
|----------------------------|----------------------|---|
| ITEM                       | Standard Number      | Descriptions  |
| 1                          | SAE AMS 6302J (2012) | Low-Alloy Steel, Heat-Resistant, Bars, Forgings, and Tubing 0.65Si - 1.25Cr - 0.50Mo - 0.25V (0.28 - 0.33C)         |
| 2                          | SAE AMS 6385J (2011) | Steel Sheet, Strip, and Plate, Low Alloy, Heat-Resistant 0.65Si - 1.25Cr - 0.50Mo - 0.25V (0.27 - 0.33C)            |
| 3                          | SAE AMS 6458H (2010) | Steel, Welding Wire 0.65Si - 1.25Cr - 0.50Mo - 0.30V (0.28 - 0.33C) Vacuum Melted, Environment Controlled Packaging |
| 4                          | SAE J 467 (1968)     | Special Purpose Alloys ("Superalloys")  |

| 17-22-A S Chemical composition(mass fraction)(wt.%) |           |         |
|---|-----------|---------|
| Chemical  | Min.(%)   | Max.(%) |
| C   |           | 0.45    |
| Si  |           | 0.65    |
| Mn  |           | 0.55    |
| P   |           |         |
| S   |           |         |
| Ni  |           |         |
| Cr  |           | 12.50   |
| Al  |           |         |
| Cu  |           |         |
| Ti  |           |         |
| Fe  | remaining |         |
| V   |           | 0.30    |
| Mo  |           | 0.55    |

| 17-22-A S Physical Properties |         |                          |
|-------------------------------|---------|--------------------------|
| Tensile strength              | 115-234 | $\sigma_b$ /MPa          |
| Yield Strength                | 23      | $\sigma_{0.2} \geq$ /MPa |
| Elongation                    | 65      | $\delta_5 \geq$ (%)      |

|        |         |                 |
|--------|---------|-----------------|
| $\psi$ | -       | $\psi \geq$ (%) |
| Akv    | -       | Akv $\geq$ J    |
| HBS    | 123-321 | -               |
| HRC    | 30      | -               |

### 17-22-A S Mechanical Properties

|                  |         |                          |
|------------------|---------|--------------------------|
| Tensile strength | 231-231 | $\sigma_b$ /MPa          |
| Yield Strength   | 154     | $\sigma_{0.2} \geq$ /MPa |
| Elongation       | 56      | $\delta 5 \geq$ (%)      |
| $\psi$           | -       | $\psi \geq$ (%)          |
| Akv              | -       | Akv $\geq$ J             |
| HBS              | 235-268 | -                        |
| HRC              | 30      | -                        |

### 17-22-A S Heat Treatment Regime

| Annealing | Quenching | Tempering | Normalizing | Q & T |
|-----------|-----------|-----------|-------------|-------|
| √         | √         | √         | √           | √     |

### 17-22-A S 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          | $\Phi$ 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 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 imperfections 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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