

This page is mainly introduced the STSF304 Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of STSF304, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.

Datasheet for Steel Grades Specialsteel STSF304

STSF304 Standard Number:

| ITEM | Standard Number | Descriptions |
|------|-----------------|---|
| 1 | D 4115 (2001) | Stainless steel forgings for pressure vessels |

STSF304 Chemical composition (mass fraction) (wt.%)

| Chemical | | Min.(%) | | Max.(%) | | | | | |
|----------|----|---------|----|---------|----|----|----|----|-------|
| C | | | | 0.08 | | | | | |
| Si | | | | 1.00 | | | | | |
| Mn | | | | 2.00 | | | | | |
| P | | | | 0.040 | | | | | |
| S | | | | 0.030 | | | | | |
| Cr | | 18.00 | | 20.00 | | | | | |
| Ni | | 8.00 | | 11.00 | | | | | |
| Mo | | | | | | | | | |
| C | Si | Mn | P | S | Cr | Ni | Mo | V | Ta |
| W | N | Cu | Co | Pb | B | Nb | Al | Ti | Other |

Stainless steel forgings for pressure vessels

STSF304 Physical Properties

| | | |
|------------------|---------|-----------------|
| Tensile strength | 115-234 | σ_b /MPa |
|------------------|---------|-----------------|

| | | |
|----------------|---------|--------------------------|
| Yield Strength | 23 | $\sigma_{0.2} \geq$ /MPa |
| Elongation | 65 | $\delta 5 \geq$ (%) |
| ψ | - | $\psi \geq$ (%) |
| Akv | - | Akv \geq /J |
| HBS | 123-321 | - |
| HRC | 30 | - |

STSF304 Mechanical Properties

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

STSF304 Heat Treatment Regime

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

STSF304 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 Specialsteel the specifications follows: