

This page is mainly introduced the STR446 Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of STR446, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.

Datasheet for Steel Grades Specialsteel STR446

| STR446 Standard Number: | | |
|-------------------------|-----------------|--|
| ITEM | Standard Number | Descriptions |
| 1 | D 3731 (2002) | Heat - resisting steel bars |
| 2 | D 3732 (2002) | Heat - resisting steel plates and sheets |

| STR446 Chemical composition (mass fraction) (wt.%) | | | | | | | | | |
|--|----|---------|----|----|---------|----|----|----|-------|
| Chemical | | Min.(%) | | | Max.(%) | | | | |
| C | | | | | 0.20 | | | | |
| Si | | | | | 1.00 | | | | |
| Mn | | | | | 1.50 | | | | |
| P | | | | | 0.04 | | | | |
| S | | | | | 0.03 | | | | |
| Cr | | 23.00 | | | 27.00 | | | | |
| Ni | | | | | 0.60 | | | | |
| Mo | | | | | | | | | |
| N | | | | | 0.25 | | | | |
| Cu | | | | | 0.30 | | | | |
| C | Si | Mn | P | S | Cr | Ni | Mo | V | Ta |
| W | N | Cu | Co | Pb | B | Nb | Al | Ti | Other |
| | | | | | | | | | |

Heat - resisting steel plates and sheets

STR446 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 | - |

STR446 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 | - |

STR446 Heat Treatment Regime

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

STR446 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, | Φ8-1200mm*L | Forging, hot rolling and | Black, Rough Turning, |

| | | | | |
|---------------|--|----------------------------|-----------------------------------|---|
| | Square Bar | | cold rolling, Cast | 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: