

This page is mainly introduced the S20103 Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of S20103, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.

Datasheet for Steel Grades Specialsteel S20103

| S20103 Standard Number: | | |
|-------------------------|---------------------|--|
| ITEM | Standard Number | Descriptions |
| 1 | A 213/A 213M (2011) | Seamless Ferritic and Austenitic Alloy-Steel Boiler, Superheater, and Heat-Exchanger Tubes |

| S20103 Chemical composition (mass fraction) (wt.%) | | | | | | | | | |
|--|----|---------|----|----|----|---------|----|----|-------|
| Chemical | | Min.(%) | | | | Max.(%) | | | |
| C | | | | | | 0.03 | | | |
| Si | | | | | | 0.75 | | | |
| Mn | | 5.05 | | | | 7.50 | | | |
| P | | | | | | 0.045 | | | |
| S | | | | | | 0.03 | | | |
| Cr | | 16.0 | | | | 18.0 | | | |
| Ni | | 3.50 | | | | 5.50 | | | |
| N | | | | | | 0.25 | | | |
| C | Si | Mn | P | S | Cr | Ni | Mo | V | Ta |
| W | N | Cu | Co | Pb | B | Nb | Al | Ti | Other |
| | | | | | | | | | |

Stainless and heat resisting steels

A 213/A 213M (2011) Seamless Ferritic and Austenitic Alloy-Steel Boiler, Superheater, and Heat-Exchanger Tubes

| S20103 Physical Properties | | |
|----------------------------|---------|-----------------|
| Tensile strength | 115-234 | σ_b /MPa |

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

S20103 Mechanical Properties

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

S20103 Heat Treatment Regime

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

S20103 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: