

**This page is mainly introduced the S20200 Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of S20200, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.**

## Datasheet for Steel Grades Specialsteel S20200

| S20200 Standard Number: |                          |  |
|-------------------------|--------------------------|--|
| ITEM                    | Standard Number          | Descriptions   |
| 1                       | A 213/A 213M (2011)      | Seamless Ferritic and Austenitic Alloy-Steel Boiler, Superheater, and Heat-Exchanger Tubes                             |
| 2                       | A 240/A 240M (2012)      | Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications |
| 3                       | A 249/A 249M (2010)      | Welded Austenitic Steel Boiler, Superheater, Heat-Exchanger, and Condenser Tubes                                       |
| 4                       | A 276 (2010)             | Stainless Steel Bars and Shapes  |
| 5                       | A 314 (2008)             | Stainless Steel Billets and Bars for Forging   |
| 6                       | A 473 (2009)             | Stainless Steel Forgings   |
| 7                       | A 959 (2011)             | Standard Guide for Specifying Harmonized Standard Grade Compositions for Wrought Stainless Steels                      |
| 8                       | SAE AMS-QQ-S-763B (1998) | Steel, Corrosion Resistant, Bars, Wire, Shapes, and Forgings   |
| 9                       | SAE J 405 (1998)         | Chemical compositions of SAE wrought stainless steels  |

| S20200 Chemical composition(mass fraction)(wt.%) |    |         |    |    |    |         |    |    |       |
|--|----|---------|----|----|----|---------|----|----|-------|
| Chemical   |    | Min.(%) |    |    |    | Max.(%) |    |    |       |
| C  |    |         |    |    |    | 0.15    |    |    |       |
| Si   |    |         |    |    |    | 1.00    |    |    |       |
| Mn   |    | 7.50    |    |    |    | 10.0    |    |    |       |
| P  |    |         |    |    |    | 0.06    |    |    |       |
| S  |    |         |    |    |    | 0.03    |    |    |       |
| Cr   |    | 17.0    |    |    |    | 19.0    |    |    |       |
| Ni   |    | 4.00    |    |    |    | 6.00    |    |    |       |
| N  |    |         |    |    |    | 0.25    |    |    |       |
| C  | Si | Mn      | P  | S  | Cr | Ni      | Mo | V  | Ta    |
| W  | N  | Cu      | Co | Pb | B  | Nb      | Al | Ti | Other |

|  |  |  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|--|--|
|  |  |  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|--|--|

## S20200

| S20200 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      | -                        |

| S20200 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      | -                        |

| S20200 Heat Treatment Regime |           |           |             |       |
|------------------------------|-----------|-----------|-------------|-------|
| Annealing                    | Quenching | Tempering | Normalizing | Q & T |
| √                            | √         | √         | √           | √     |

| S20200 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 | Φ8-1200mm*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,<br>Welded Pipes/Tubes | OD:6-219mm x<br>WT:0.5-20.0mm | Hot extrusion, Cold<br>Drawn, Welded | Annealed, Solution and<br>Aging, Q+T, ACID-<br>WASHED |

**We can produce Specialsteel the specifications follows:**