

Quality 20CrMo5

According to Standard Werkstoff

Number 1.7264



Comparable Standards German DIN France AFNOR Spain UNE China GB U.K. B.S. Russia GOST USA AISI - SAE Japan JIS

20CrMnMo SCM 421

Chemical Analysis C% max Si% max Mn% max P% max S% max Ni% max Cr% max Mo%
 0.18 - 0.23 0.15 - 0.35 0.90 - 1.20 0.035 0.035 1.10 - 1.40 0.20 - 0.30

Hot Work and Heat Treatment Temperatures

Temperature °C

| Hot - Forming | Core Hardening | Soft Annealing +A | Isothermal Annealing +I | Carburizing | Hardening Carburizing surf. | Stress-relieving +SR after welding |
|---------------|---------------------------|---------------------------------|-------------------------|--------------------|-----------------------------|--|
| 1050 - 850 | 850 water , oil , polymer | 680 - 700 cooling 15°C/h to 600 | | 860 - 900 | 810 - 830 oil - | Welding must be carried out on the annealed state & before carburizing |
| | (HRC 45) | then air (HB max 217) | | oil , polymer , sb | polymer salt bath | |

Mechanical Properties at Room Temperature

Hot Rolled mechanical properties after case hardening in core

| size mm | | Testing at room temperature (Longitudinal) | | | | | | | | |
|---------|----|--|-----------------|---------|---------|-----------|-----------|---------------|--|--|
| from | to | R N/mm2 | Rp 0.2 %mm2 min | A% min. | C% min. | Kv J min. | HB | | | |
| | 11 | 1080 - 1370 | 735 | 7 | 30 | 24 | 327 - 394 | for info only | | |
| | 30 | 980 - 1270 | 685 | 8 | 35 | 24 | 295 - 373 | for info only | | |
| | 63 | 780 - 1080 | 540 | 10 | 35 | | 232 - 327 | | | |