

General Information	Ni-Cr-Mo steel characterized by high level harden ability and. toughness, good resistance to repeated shocks, fairly good insensitivity to thermal shocks and good wear resistance.							
Comparable standards	AISI/SAE	DIN	W.N	AFNOR	BS	SIAU		
	/	56NiCrMoV7	1.2714	/	/	M10EX		
Chemical analysis (%)	C	Mn	Si	Cr	Ni	Mo	V	P / S
	0.50-0.60	0.65-0.95	0.10-0.40	1.00-1.20	1.50-1.80	0.45-0.55	0.07-0.12	≤0.03

Heat Treatment

Isothermal annealing:

- Heat to 800°C and hold at temperature for 1/2 h to 1 h;
- Furnace cooling to 670°C and hold at temperature for at least 10 hours;
- Cool by 10°C/h to 630°C;
- Cooling in air.

Maximum hardness: ≤240 HB

Stress relieving:

To be carried out after machining before the final heat treatment.

- Heat to 600÷650°C, hold for 4÷6 hours;
- Cooling in furnace to 300÷350°C;
- Cooling in air

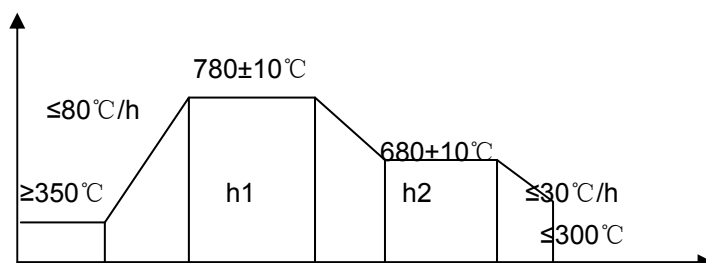
Hardening:

- Initial preheating to 350÷450°C;
- Second preheating to 650÷750°C;
- Heat to hardening temperature 860÷890°C and hold at temperature;
- Cooling in hot oil (40÷60°C); oil quenched hardness: 54÷59HRC;

Tempering:

Tempering must be carried out within one hour from hardening(warm part) in the range 550÷630°C for 4÷6 hours according to hardness required, the dimensions of the parts and operating conditions.

Tempering Curve (only for reference):



Remark: $\Phi \geq 200 \sim 299\text{mm}$, $h_1=10$, $h_2=40$