

Special Steel

DE - Brand:

CP72

Chemical composition:
(Typical analysis in %)

C	Cr	Mo	V	W			
1,10	7,50	1,50	2,10	1,10			

Steel properties:

Cold work steel, high vanadium and tungsten, very good secondary hardness, good toughness, minimal size changes.

Applications:

Cutting tools, bending tools, pressure- profile rolls, thread rolling dies, stamping tools.

Condition of delivery:

Soft annealed to max. 250 HB

Physical properties:

Thermal expansion coefficient	$\left[\frac{10^{-6} \cdot \text{m}}{\text{m} \cdot \text{K}} \right]$	20-100°C	20-200°C	20-300°C	20-400°C
		11,4	11,7	12,1	12,3
Thermal conductivity	$\left[\frac{\text{W}}{\text{m} \cdot \text{K}} \right]$	20°C			
		24,8			

Heat treatment:

Soft annealing

Temperature	Cooling	Hardness
800 - 840°C	furnace	max. 250 HB

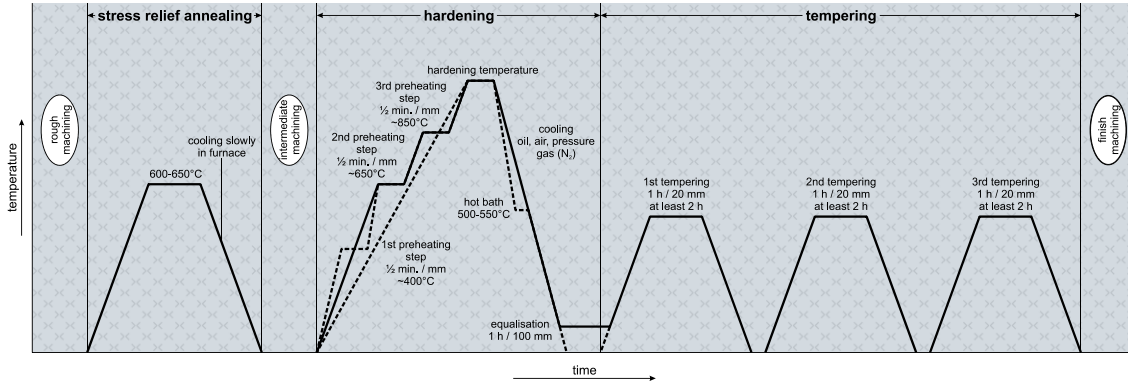
Stress relief annealing

Temperature	Cooling	
600 - 650°C	furnace	

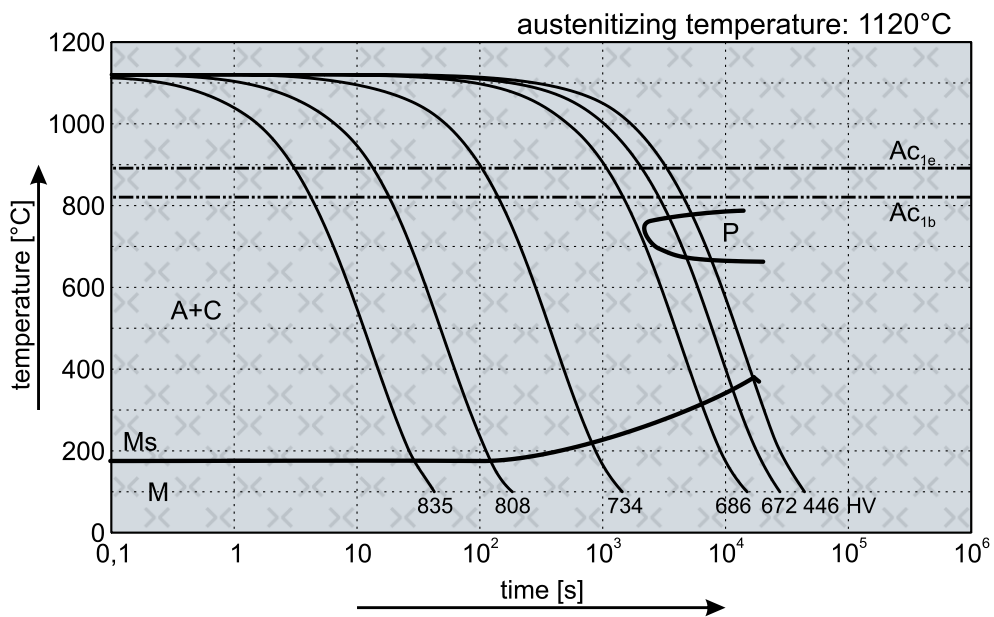
Hardening

Temperature	Cooling	Tempering
1120 - 1140°C	oil, pressure gas (N ₂), air or hot bath 500 - 550°C	see tempering diagram

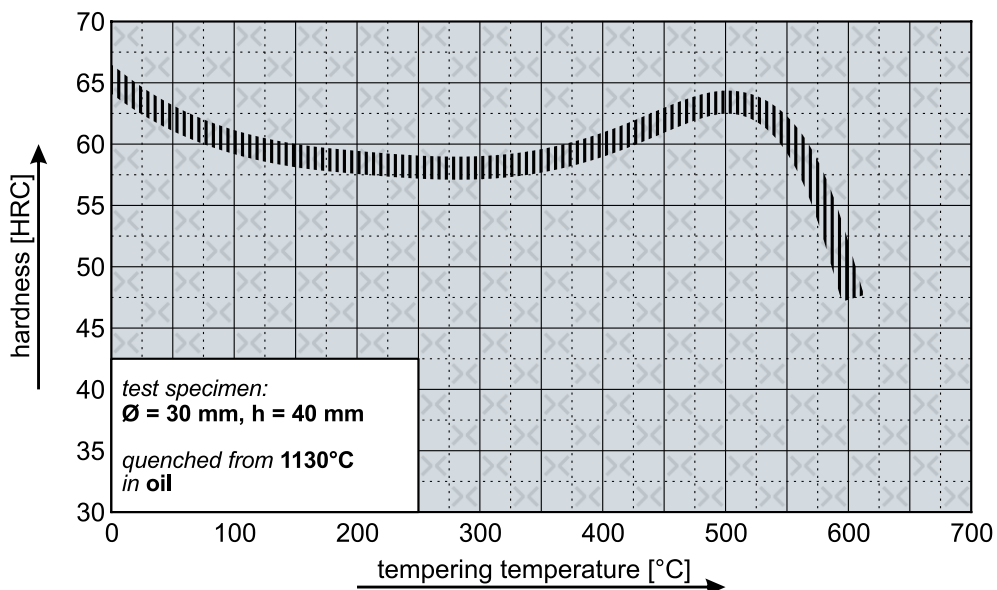
(CP72) Thermal Cycle Diagram



Continuous Cooling Transformation Diagram (CCT)



Tempering Diagram



Remarks: All technical information is for reference only.