



DE - Brand:

Special Steel

MSMoV

Chemical composition: (Typical analysis in %)

C	Si	Mn	Cr	Mo	V		
0,70	1,00	0,90	1,10	0,30	0,20		

Steel properties:

Cold work tool steel, good toughness, high elasticity in tempered condition, excellent surface hardenability.

Applications:

Clamping chucks, face plates, split chucks, trimming dies, ejectors, die plates, cold bending tools.

Condition of delivery:

Soft annealed to max. 255 HB

Heat treatment:

Soft annealing

Temperature	Cooling	Hardness
700 - 750°C	furnace	max. 255 HB

Stress relief annealing

Temperature	Cooling	
600 - 650°C	furnace	

Hardening

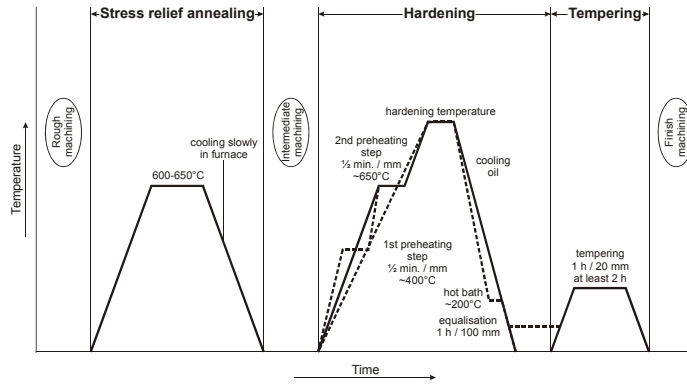
Temperature	Cooling	Tempering
850 - 920°C	oil or hot bath 180 - 220°C	see tempering diagram

Surface treatment:

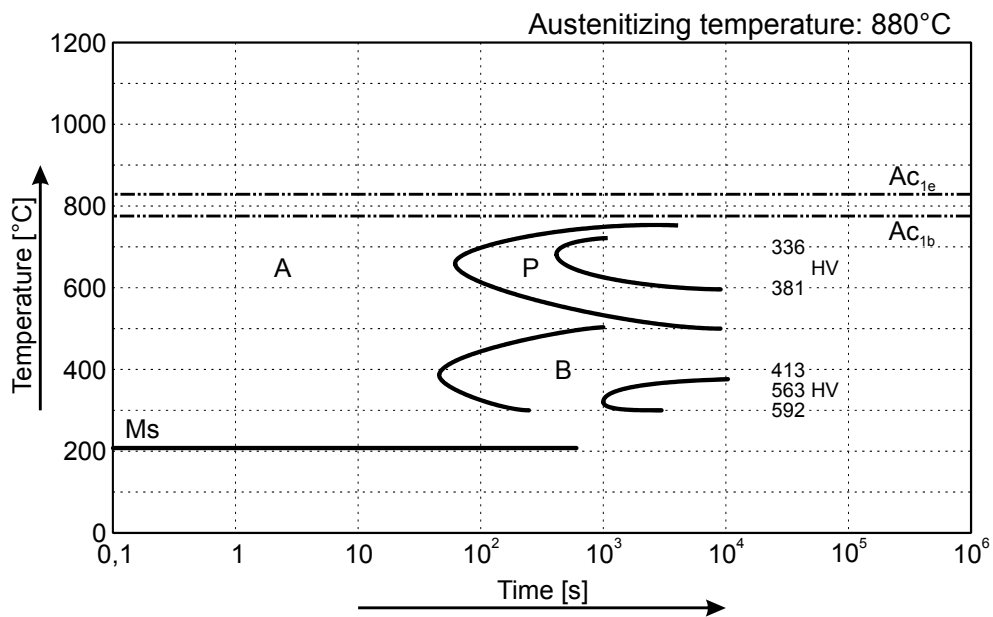
Surface hardening

Process	Temperature	Cooling
flame	850 - 1070°C	air

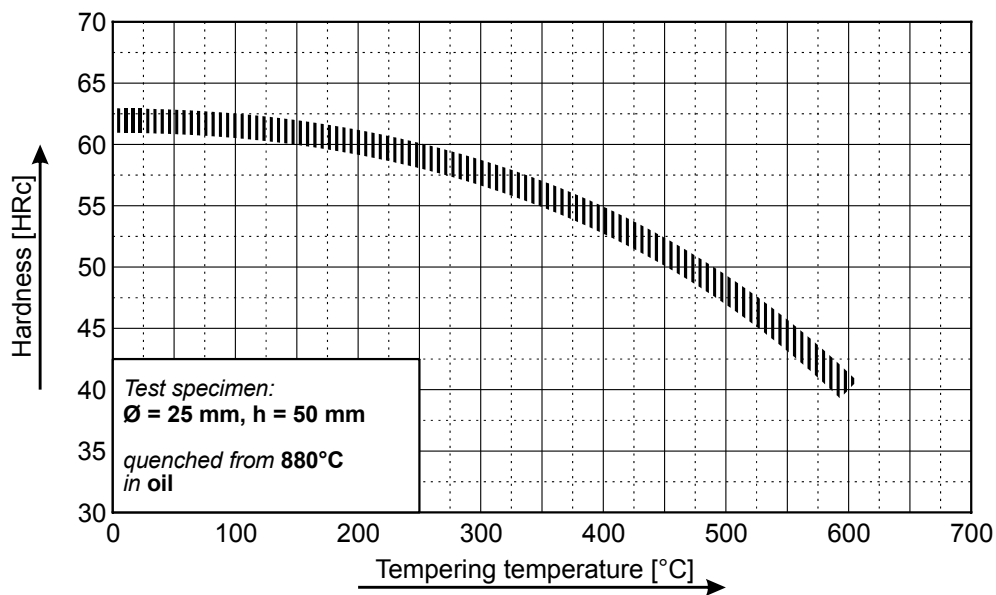
(MSMoV) Thermal Cycle Diagram



Time Temperature Transformation Diagram (TTT)



Tempering Diagram



Remarks: All technical information is for reference only.