Dörrenberg Edelstahl

Material No.: 1.3247 Code: HS2-9-1-8

DE - Brand: EMo9CoH

Chemical composition:
(Typical analysis in %)

C	Cr	Mo	V	W	Co		
1,10	4,10	9,50	1,20	1,50	8,00		

Steel properties:

High Co-Mo-alloyed high-speed steel, high secondary hardness maximum, high wear resistance with good toughness. Similar to AISI M42.

Applications:

Die and engraver's milling cutters, tools for machining of aerospace material (for example Ti-alloys), cold extrusion punches, thread rolling dies and rolls.

Condition of delivery:

Soft annealed to max. 277 HB

Physical properties:

Thermal expansion coefficient

$\left[\frac{10^{-6}\cdot m}{m \cdot K}\right]$	20-100°C	20-200°C	20-300°C	20-400°C
	8,5	9,8	10,8	11,1

Thermal conductivity

$\left[\frac{W}{m \cdot K}\right]$	20°C	350°C	700°C
	27,2	26,8	25,9

Heat treatment:

Soft annealing

Temperature	Cooling	Hardness
820 - 860°C	furnace	max. 277 HB

Stress relief annealing

Temperature	Cooling	
600 - 650°C	furnace	

Hardening

Temperature	Cooling	Tempering
1130 - 1190°C	oil, pressure gas (N_2), air or hot bath 500 - 550°C	see tempering diagram

07/06

Dörrenberg Edelstahl GmbH · Hammerweg 7 · D-51766 Engelskirchen
Tel.: +49 22 63 / 79 1 · Fax: +49 22 63 / 79 20 5 · www.doerrenberg.de

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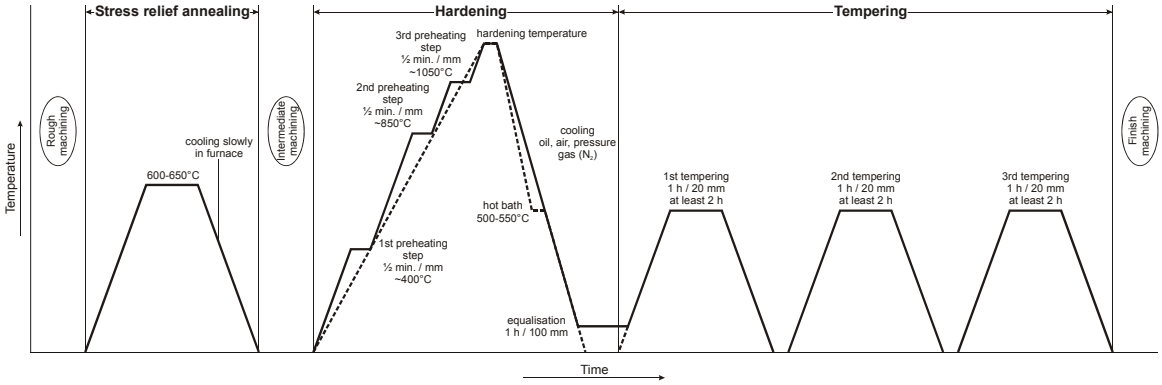
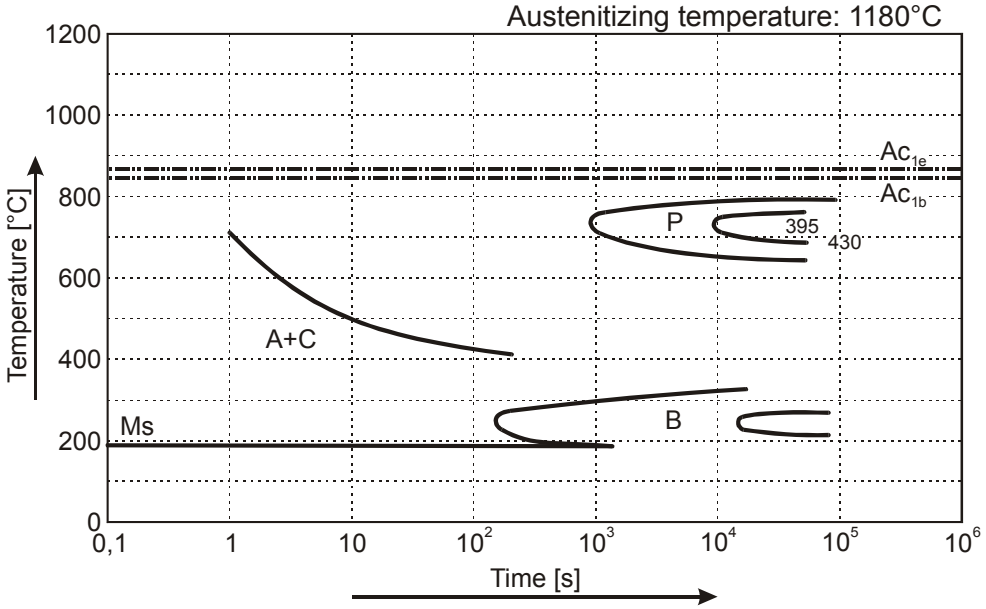
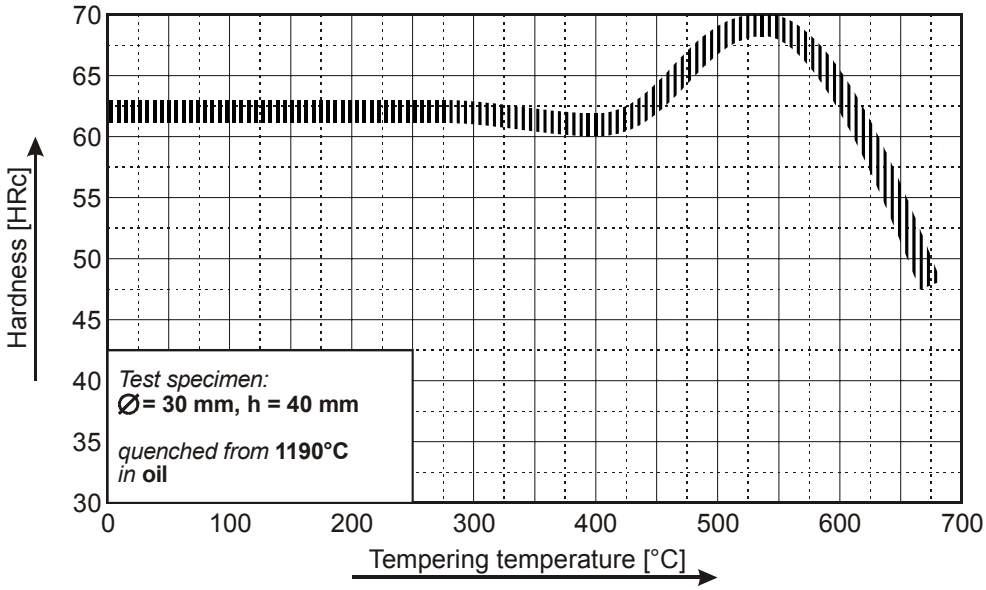
(1.3247) Thermal Cycle Diagram



Time Temperature Transformation Diagram (TTT)



Tempering Diagram



Remarks: All technical information is for reference only.