Doerrenberg

Material No.: 1.2085 Code: X33CrS16 DE - Brand: HC16S

Chemical composition:
(Typical analysis in %)

C	Cr	S					
0,33	16,00	0,08					

Steel properties:

Stainless martensitic steel with excellent machinability.

Applications:

Frames for plastic pressure dies and tools for processing of corrosive materials.

Condition of delivery:

Quenched and tempered, 900 - 1100 MPa

Physical properties:

		68-212°F	68-392°F	68-572°F	68-752°F
Thermal expansion coefficient	$\frac{10^{-6} \cdot m}{m \cdot K}$	10,5	11,0	11,2	11,6
Thermal conductivity	$\frac{W}{m \cdot K}$	68°F			
		17,0			

Heat treatment:

Soft annealing

Temperature	Cooling	Hardness
1380 - 1560°F	furnace	max. 280 HB

Stress relief annealing
The recommendation 930 - 1020°F is valid for quenched and tempered condition.
In the soft annealed condition stress relieving between 1110 - 1200°F is possible.

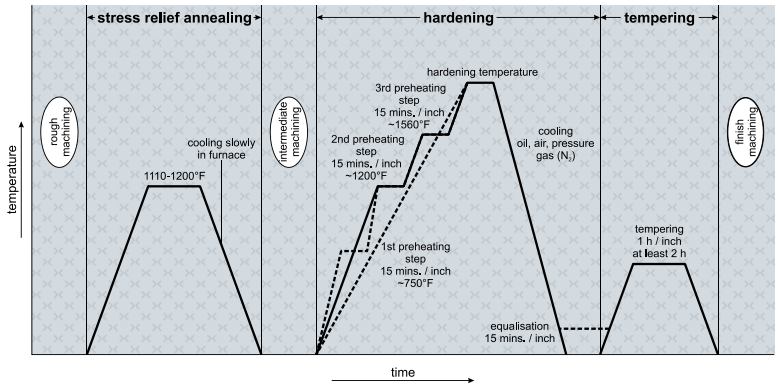
Temperature	Cooling	
930 - 1020°F	furnace	

Hardening

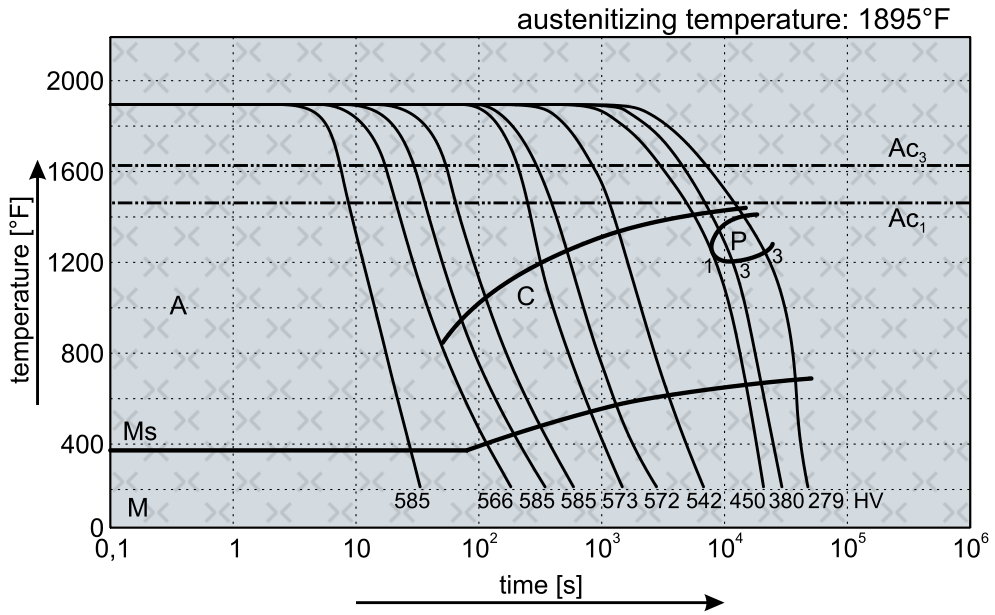
Temperature	Cooling	Tempering
1830 - 1895°F	oil, pressure gas (N_2) or air	see tempering diagram

Dörrenberg Edelstahl GmbH · Hammerweg 7 · D-51766 Engelskirchen
Tel.: +49 22 63 / 79 0 · Fax: +49 22 63 / 79 20 5 · www.doerrenberg.de

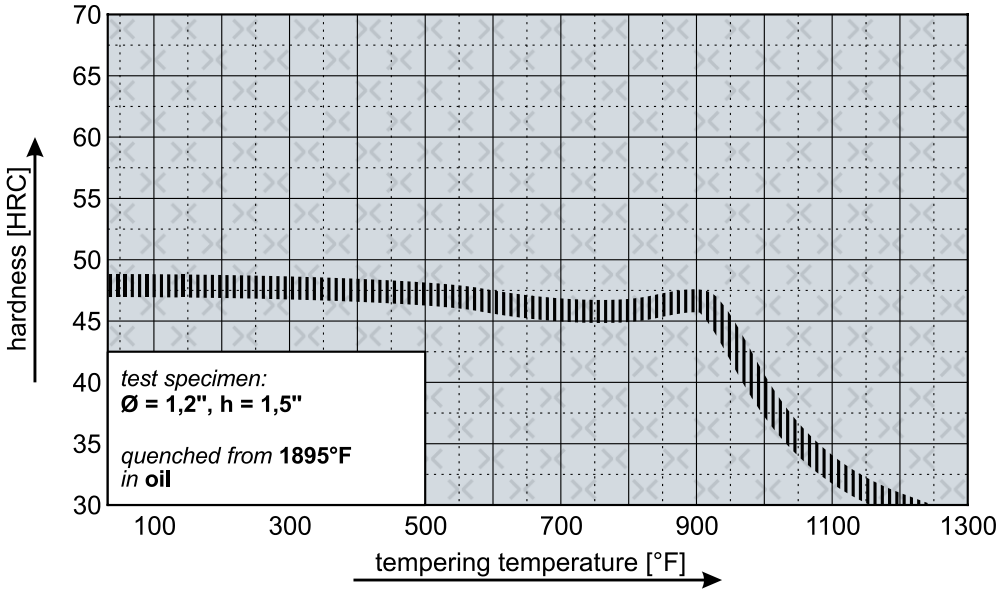
(1.2085) Thermal Cycle Diagram



Continuous Cooling Transformation Diagram (CCT)



Tempering Diagram



Remarks: All technical information is for reference only.