Material Code:

AISI H13

DE - Brand:

WP5V

Chemical composition:
(Typical analysis in %)

C	Cr	Mo	V				
0,40	5,30	1,40	1,00				

Steel properties:

High strength at elevated temperatures, high hot wear resistance, good toughness, thermal conductivity and resistant to hot cracking, limited water cooling possible. Similar to 1.2344.

Applications:

Standard material for hot forming tools, extrusion tools, forging dies, pressure casting tools, hot shear knives, tools for plastic industry. Also available in EFS and ESR condition where better properties are required.

Condition of delivery:

Soft annealed to max. 229 HB

Physical properties:

Thermal expansion coefficient

$\left[\frac{10^{-6} \cdot m}{m \cdot K}\right]$	68-212°F	68-572°F	68-932°F	68-1292°F
	10,8	12,3	13,0	13,5

Thermal conductivity

$\left[\frac{W}{m \cdot K}\right]$	68°F	662°F	1292°F
	25,6	28,4	29,4

Heat treatment:

Soft annealing

Temperature	Cooling	Hardness
1380 - 1470°F	furnace	max. 229 HB

Stress relief annealing

Temperature	Cooling	
1110 - 1200°F	furnace	

Hardening

Temperature	Cooling	Tempering
1860 - 1940°F	oil, pressure gas (N_2), air or hot bath 930 - 1020°F	see tempering diagram

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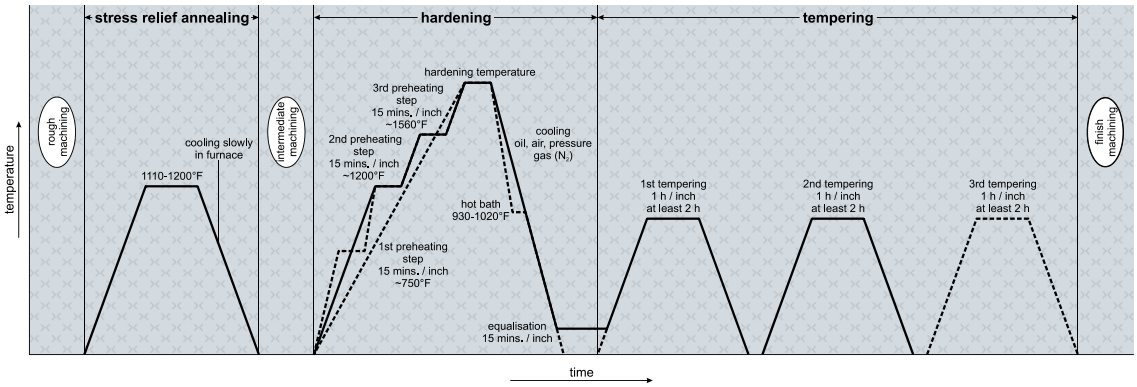
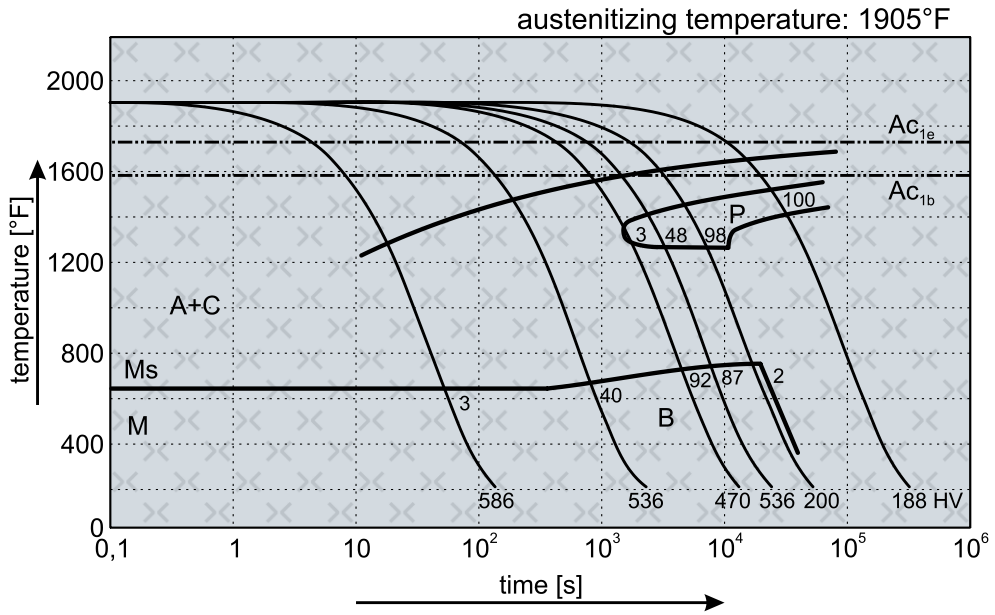
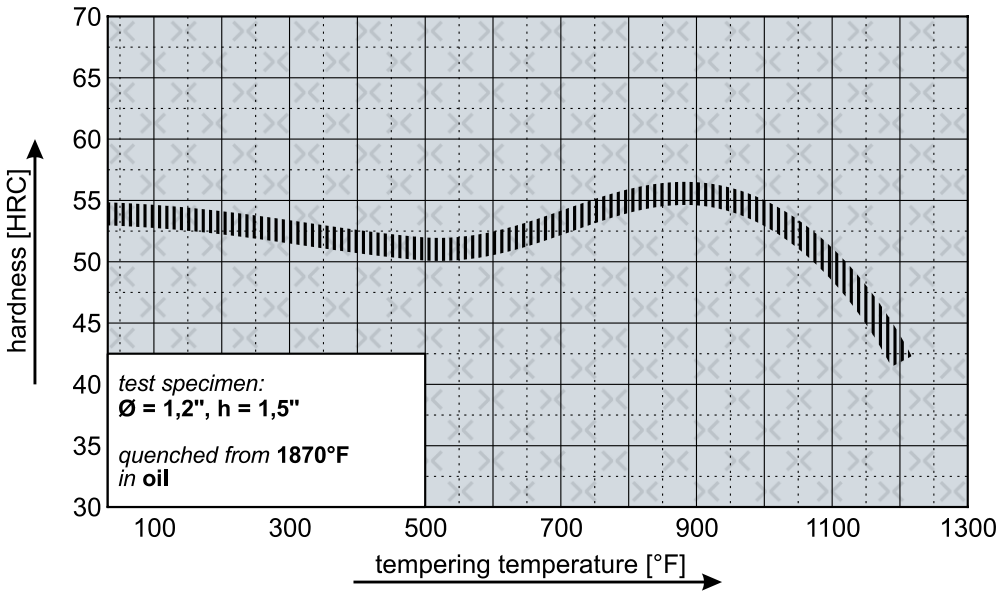
(AISI H13) Thermal Cycle Diagram



Continuous Cooling Transformation Diagram (CCT)



Tempering Diagram



Remarks: All technical information is for reference only.