

Material No.: Code:
1.2787 X23CrNi17

DE - Brand:
R18So

Chemical composition:
 (Typical analysis in %)

C	Cr	Ni					
0,23	16,50	1,80					

Steel properties:

Stainless, martensitic tool steel, limited hardness increase. ESR material for glass processing available.

Applications:

Pump shafts, mechanical loaded parts in the food industry, moulds and tools for glass processing (ESR material).

Condition of delivery:

- a) Quenched and tempered, 800 - 950 N/mm²
- b) Quenched and tempered, 950 - 1100 N/mm² (ESR material for glass processing)

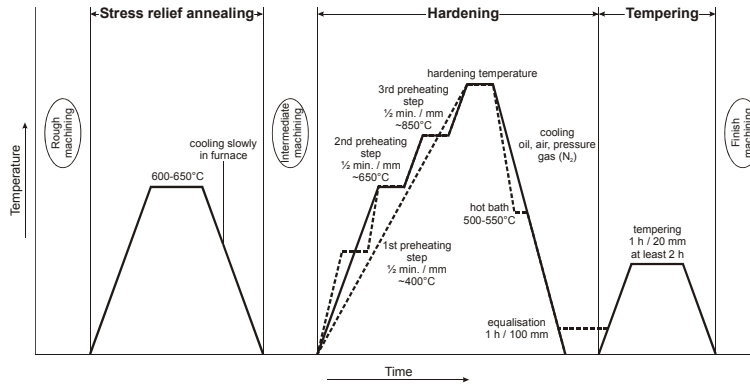
Physical properties:

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
		10,1	10,5	11,2	11,1
Thermal conductivity	$\left[\frac{\text{W}}{\text{m} \cdot \text{K}} \right]$	20°C			
		25			

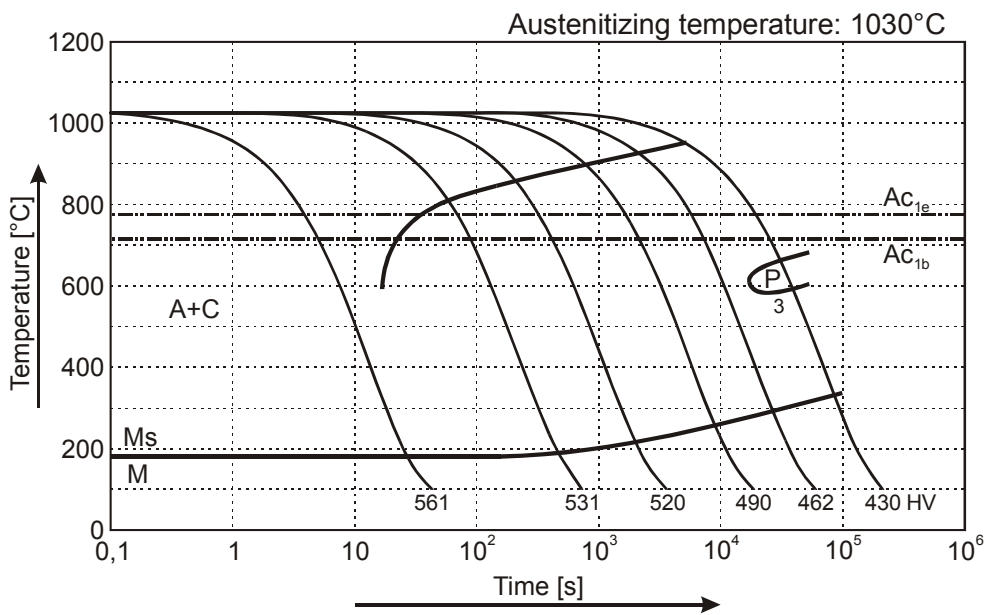
Heat treatment:

Soft annealing	Temperature	Cooling	Hardness
	650 - 750°C	furnace	max. 245 HB
Stress relief annealing This recommendation is related to the soft annealed condition	Temperature	Cooling	
	600 - 650°C	furnace	
Hardening	Temperature	Cooling	Tempering
	1000 - 1050°C	oil, pressure gas (N ₂), air or hot bath 500 - 550°C	see tempering diagram

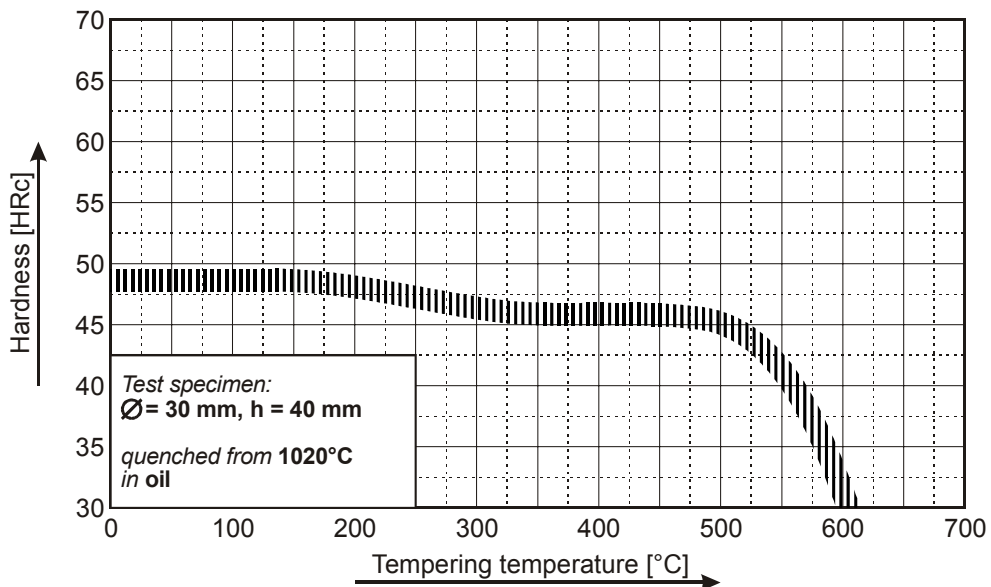
(1.2787) Thermal Cycle Diagram



Continuous Cooling Transformation Diagram (CCT)



Tempering Diagram



Remarks: All technical information is for reference only.