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STAHLWERK AUGUSTFEHN
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Technical data sheet – 30CrNiMo8 (1.6580)

- High-grade structural steel with high requirements for strength, toughness, elasticity and through-hardenability

Applications: Piston rods, tie rods, coupling rods, rotor axles, hammer axles, motor shafts, general mechanical engineering, apparatus engineering, engine and vehicle construction

Chemical composition (DIN EN ISO 683-2 (09/2018))

	mass fraction in %			
30CrNiMo8	**C** [%]	**Si** [%]	**Mn** [%]	**Cr** [%]
	0,26 - 0,34	0,10 - 0,40	0,50 - 0,80	1,80 - 2,20
	P [%]	**S** [%]	**Mo** [%]	**V** [%]
	max. 0,025	max. 0,035	0,30 - 0,50	0,10 - 0,20
	Ni [%]	**Cu [%]**		
	1,80 – 2,20	max. 0,40		

Addition: Si content can be reduced if alternative agents are used for deoxidation. Better machinability can be achieved by higher sulfur contents up to about 0.10% S (including controlled sulfide morphology) or lead additions. In this case, the upper limit of the Mn content may also be increased by 0.15%.

Mechanical properties (DIN EN ISO 683-2 (09/2018))

Flat products (QT):

Dimensions	0,2% Yield strength (Rp0,2)	Tensile strength (Rm)	Elongation (A 5,65)	Constriction (Z)	ISO-V/ Charpy-V
<= 8 mm	>= 850 MPa	1.030 - 1.230 MPa	>= 12 %	>= 40 %	
8 - 20 mm	>= 850 MPa	1.030 - 1.230 MPa	>= 12 %	>= 40 %	>= 30 J
20 - 60 mm	>= 800 MPa	980 - 1.180 MPa	>= 12 %	>= 45 %	>= 35 J
60 - 100 mm	>= 800 MPa	980 - 1.180 MPa	>= 12 %	>= 50 %	>= 45 J
100 - 160 mm	>= 750 MPa	930 - 1.130 MPa	>= 12 %	>= 50 %	>= 45 J

Round products (QT):

Dimensions	0,2% Yield strength (Rp0,2)	Tensile strength (Rm)	Elongation (A 5,65)	Constriction (Z)	ISO-V/ Charpy-V
<= 16 mm	>= 850 MPa	1.030 - 1.230 MPa	>= 12 %	>= 40 %	
16 - 40 mm	>= 850 MPa	1.030 - 1.230 MPa	>= 12 %	>= 40 %	>= 30 J
40 - 100 mm	>= 800 MPa	980 - 1.180 MPa	>= 12 %	>= 45 %	>= 35 J
100 - 160 mm	>= 800 MPa	980 - 1.180 MPa	>= 12 %	>= 50 %	>= 45 J
160 - 250 mm	>= 750 MPa	930 - 1.130 MPa	>= 12 %	>= 50 %	>= 45 J

Annealed: <= 248 HBW

Achievable surface hardness (inductive/flame hardening):
50-55HRC in >6mm depth