



Material: Fe-1.5 % Cu carbonitrided; iron: water atomised

sintering: 1120 °C, 30 min, 70 % N₂ + 30 % H₂

heat treatment: 920 °C, 3.5 h, endogas with 0.17 % CO₂ + NH₃; oil 60 °C;

no tempering mentioned; case depth: through hardened

density: 6.8 ± 0.05 g/cm³

mech. properties: H = 537 HV10; R_{p0.2} = -; R_m = 625 MPa

Specimen: smooth, K_t = 1.0; ISO 3928; surface as sintered

Loading mode: plane bending, R = 0; 25 Hz

Limiting no. of cycles: 2 · 10⁶

Endurance limit: 252 MPa (extrapolated)

Reference: C.M. Sonsino: Schwingfestigkeit von verschiedenen Sinterstählen und Bemessungskriterien für gesinterte Bauteile; LBF-Report No. FB-170; Fraunhofer-Institut für Betriebsfestigkeit, Darmstadt, 1984

Stress amplitude:	269	297	MPa
Cycles to failure:	451,825	74,640	- 1000
	584,750	78,881	
	654,591	85,108	
	790,624	96,376	
	901,509	105,674	
		109,893	