



Material: Fe-1.5 % Cu carbonitrided; iron: water atomised copper
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: rectangular bar 90 x 11 x 5, central hole Ø 2mm, hole compacted, K_t = 2.0; surface as sintered

Loading mode: plane bending, R = -1; 25 Hz

Limiting no. of cycles: 2 · 10⁶

Endurance limit: 220 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:	270	316	MPa
Cycles to failure:	338,041	95,933	· 1000
	421,667	108,136	
	451,825	161,797	
	478,597	209,397	
	590,160		