



Material: Fe-1.5 % Cu-0.6 % C; iron: water atomised

carbon: not specified; sintering: 1120 °C, 30 min, endogas plus propane, reheated to 1120 °C in N₂, powder forged

heat treatment: -

density: 7.76 g/cm³

mech. properties: H = 272 HB 2.5/187.5; R_{90.2} = 587 ÷ 598 MPa; R_m = 851 MPa

Specimen: rectangular bar 90 x 11 x 4, central hole ∅ 2mm, hole drilled, K_t = 2.8; surface machined

Loading mode: axial, R = -1; 25 Hz

Limiting no. of cycles: 2 · 10⁶

Endurance limit: 154 MPa (extrapolated)

Reference: C.M. Sonsino: Einfluss sintertechnischer Grenzen für die Herstellung von schwingbeanspruchten Bauteilen aus Sinterstahl; LBF-Report No. FB-184; Fraunhofer-Institut für Betriebsfestigkeit, Darmstadt, 1989

Stress amplitude:	181	222	260	MPa
Cycles to failure:	410,176	154,871	58,340	· 1000
	431,489	161,797	61,797	
	478,597	192,296	68,544	
	677,595	200,895	77,263	
	851,079		84,522	
	1255.943		88,505	