



SAFD - Blatt 86 FeCuC-R=-1.osv

Material: Fe-1.5 % Cu-0.6 % C; iron: water atomised  
copper:  
carbon: not specified; sintering: 1120 °C, 30 min, 70 % N<sub>2</sub> + 30 % H<sub>2</sub>  
heat treatment: -  
density: 7.19 g/cm<sup>3</sup>  
mech. properties: H = 142 HV10; R<sub>p0.2</sub> = 389 MPa; R<sub>m</sub> = 483 Mpa  
Specimen: hourglass, ∅ 6 mm, shaft ∅ 10 mm, curvature R 18 , K<sub>t</sub> = 1.0; surface  
Loading mode: torsion; R = -1; 25Hz  
Limiting no. of cycle 2 · 10<sup>6</sup>  
Endurance limit: 119 MPa  
Reference: C.M. Sonsino: Ermittlung anwendungsrelevanter Kenngrößen für Sintermetalle. LBF-Report N 158; Fraunhofer-Institut für Betriebsfestigkeit, Darmstadt, 1981

Stress amplitude:	120	130	133	138	143	155	159	168	170	194	200
Cycles to failure:	2000.000	737.853	420.698	901.509	289.714	121.051	163.670	239.867	93.750	52.356	42.16
		2000.000			1119.381	263.009			115.072	66.217	
									126.756		
									190.095		
									207.955		