



SAFD - Blatt 42 FeCuC-Rm-1.csv

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: 6.60 g/cm<sup>3</sup>  
mech. properties: H = 106 HV10; R<sub>p0.2</sub> = 263 MPa; R<sub>m</sub> = 336 MPa

Specimen: smooth, K<sub>t</sub> = 1.0; ISO 3928; surface as sintered

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

Limiting no. of cycles: 2 · 10<sup>6</sup>

Endurance limit: 98 MPa (extrapolated)

Reference: C.M. Sonsino: Ermittlung anwendungsrelevanter Kenngrößen für Sintermetalle. LBF-Report No. FB-158; Fraunhofer-Institut für Betriebsfestigkeit, Darmstadt, 1981

Stress amplitude:	115	135	MPa
Cycles to failure:	105,918	25,408	· 1000
	125,594	32,581	
	247,725	33,340	
	283,772	49,087	
	386,340	119,942	
	401,763		
	427,533		