



SAFD - Blatt 48 FeCuC-R=-1.csv

Material: Fe-1.5 % Cu-0.6 % C; iron: water atomised
copper: FS
carbon: not specified; sintering: 1120 °C, 30 min, 70 % N₂ + 30 % H₂
heat treatment: -
density: 7.19 g/cm³
mech. properties: H = 142 HV10; R_{g0.2} = 389 MPa; R_m = 483 Mpa

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

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

Limiting no. of cycles: 2 · 10⁶

Endurance limit: 166 MPa from staircase with 20 specimens

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

Stress amplitude:	180	190	221	MPa
Cycles to failure:	153,451	75,330	19,632	· 1000
	232,258	171,779	22,028	
	285,082	181,121	24,659	
	602,518	189,221	34,912	
	651,583	198,139	35,972	
	1686.437	233,868		
		240,420		
		287,058		
		314,753		
		334,942		