



SAFD - Blatt 64 FeCuC-Rn-1.cdw

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

carbon: not specified; sintering: 1120 °C, 30 min, 70 % N₂ + 30 % H₂

heat treatment: -

density: 6.60 g/cm³

mech. properties: H = 106 HV10; R_{p0.2} = 263 MPa; R_m = 336 MPa

Specimen: rectangular bar 90 x 11 x 5, central hole Ø 2 mm, 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: 85 MPa (extrapolated)

Quelle : C.M. Sonsino: Ermittlung anwendungsrelevanter Kenngrößen für Sintermetalle. LBF-Report No.

FB-158: Fraunhofer-Institut für Betriebsfestigkeit, Darmstadt, 1981

Stress amplitude:	130	141	160	181	MPa
Cycles to failure:	81,841	64,710	12,105	14,961	· 1000
	84,717		19,497		
	87,694		26,728		
	95,273		31,840		
	102,558				
	133,036				