

SAFD - Blatt 63 FeCuC-R=0.csv

Material:

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

carbon: not specified; sintering: 1120 °C, 30 min, 70 % N₂ + 30 % H₃

heat treatment: density: 6.60 g/cm3

mech. properties: H = 106 HV10; R_{o0.2} = 263 MPa; R_m = 336 MF

Specimen:

smooth, K_i = 1.0; ISO 3928; surface as sintered

Loading mode:

plane bending, R = 0; 25 Hz

Limiting no. of cycles:

 $2 \cdot 10^{6}$

Endurance limit:

84 MPa (extrapolated)

Referene:

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

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

Stress amplitude	110	120	MPa
Cycles to failure:	162,544	78,338	· 1000
	174,973	84,328	
	183,219	102,087	
	198,139	125,017	
	365,570	143,870	