

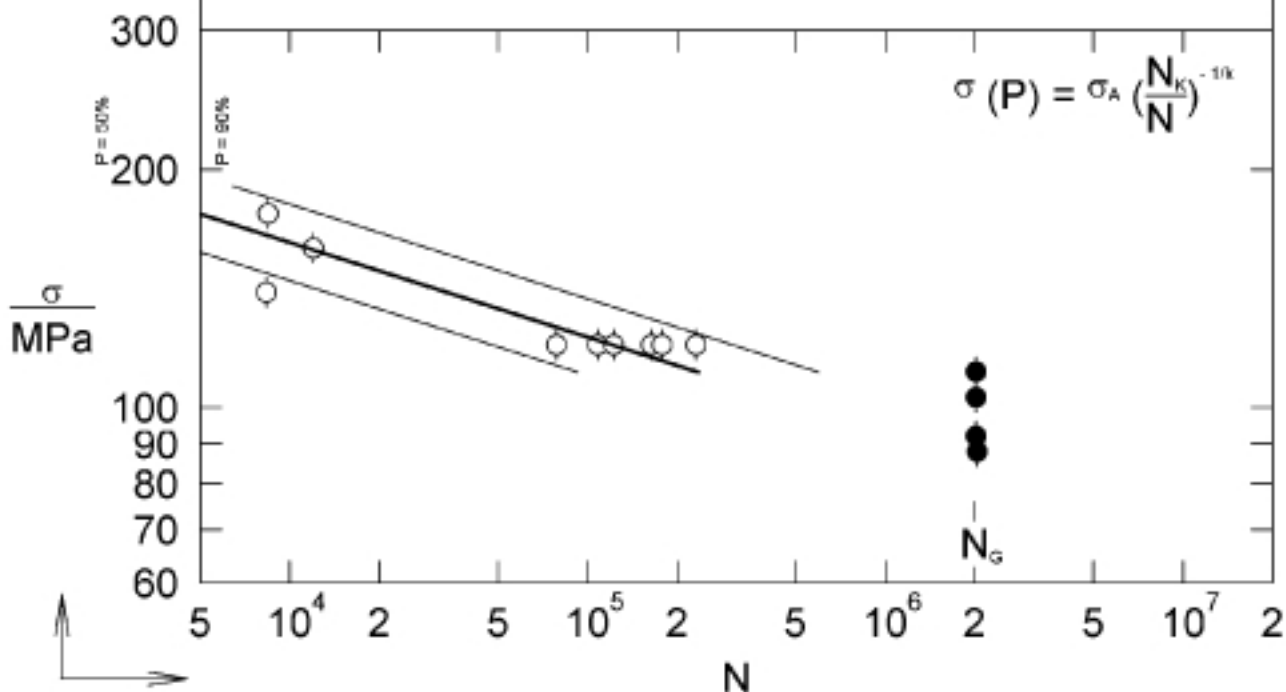


Failed test-pieces



Unfailed run-outs

σ -logN-Normverteilung	HCF: $\lg N =$	σ	+	k	$\lg \sigma$	N_k	LLF: σ_A
P = 10% :	$\lg N =$ 21.98631		+	-8.32485	$\lg \sigma$	-	0.00
P = 50% : (Perlscheur)	$\lg N =$ 22.39012		+	-8.32485	$\lg \sigma$	-	0.00
P = 90% :	$\lg N =$ 22.79392		+	-8.32485	$\lg \sigma$	-	0.00



SAFD - Blatt 84 FeCuC-R=1.csv

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_{90.2} = 263 MPa; R_m = 336 MPa

Specimen: hourglass, Ø 6 mm, shaft Ø 10 mm, curvature R 18, K_t = 1.0; surface machined

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

Limiting no. of cycles: 2 · 10⁶

Endurance limit: 90 MPa

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

Stress amplitude:	88	92	103	111	120	140	159	176	MPa
Cycles to failure:	2036,901	2013,585	2013,585	2013,585	78,518	8,355	12,022	8,452	· 1000
					108,136				
					122,453				
					163,670				
					177,407				
					230,659				