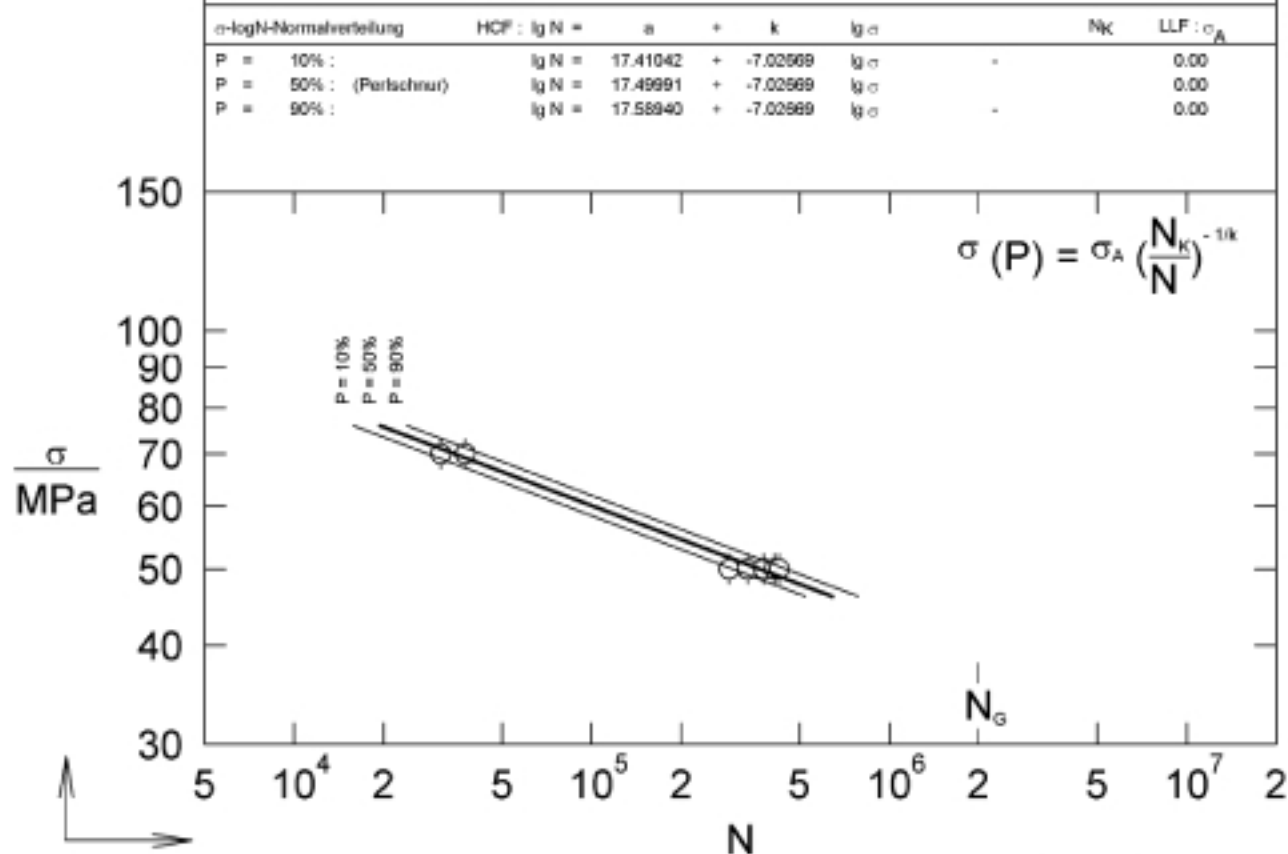




Failed test-pieces



Unfailed run-outs



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 ∅ 2 mm, hole compacted, K_t = 2.8; surface as sintered

Loading mode: axial, R = 0; 25 Hz

Limiting no. of cycles: 2 · 10⁶

Endurance limit: 39.5 MPa (extrapolated)

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

Stress amplitude:	50	70	MPa
Cycles to failure:	289,714	31,187	· 1000
	334,172	37,668	
	378,416		
	412,069		
	426,550		