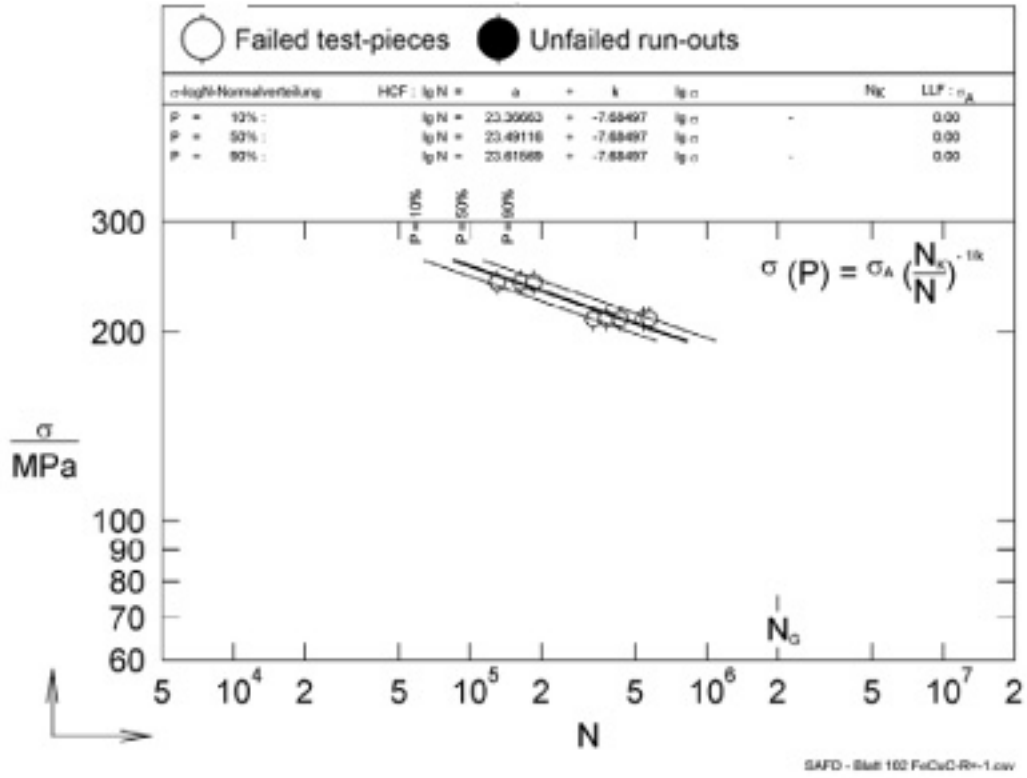


| | |
|---|---|
| Material: | Fe-1.5 % Cu-0.6 % C; iron: water atomised |
| | carbon: not specified; sintering: 1120 °C, 30 min, 70 % $N_2$ + 30 % $H_2$ |
| | heat treatment: 840 °C, 1h; oil 60 °C; 430 °C, 1h |
| | density: 7.1 ± 0.05 g/cm$^3$ |
| | mech. properties: H = 312 HB 2.5/62.5; $R_{p0.2}$ = 773 MPa; $R_m$ = 810 MPa |
| Specimen: | rectangular bar 90 x 11 x 5, central hole ∅ 2 mm, hole compacted, $K_t$ = 2.0; surface as sintered |
| Loading mode: | plane bending, R = -1; 25 Hz |
| Limiting no. of cycles: | $2 \cdot 10^6$ |
| Endurance limit: | 173 MPa (extrapolated) |
| Reference: | C.M. Sonsino: Schwingfestigkeit von verschiedenen Sinterstählen und Bemessungskriterien für gesinterte Bauteile; LBF-Report No. FB-170; Fraunhofer-Institut für Betriebsfestigkeit, Darmstadt, 1984 |

| Stress amplitude: | 210 | 240 | MPa |
|---|---|---|---|
| Cycles to failure: | 331,872 | 130,308 | · 1000 |
| | 376,678 | 163,670 | |
| | 431,489 | 185,768 | |
| | 541,963 | | |
| | 574,077 | | |