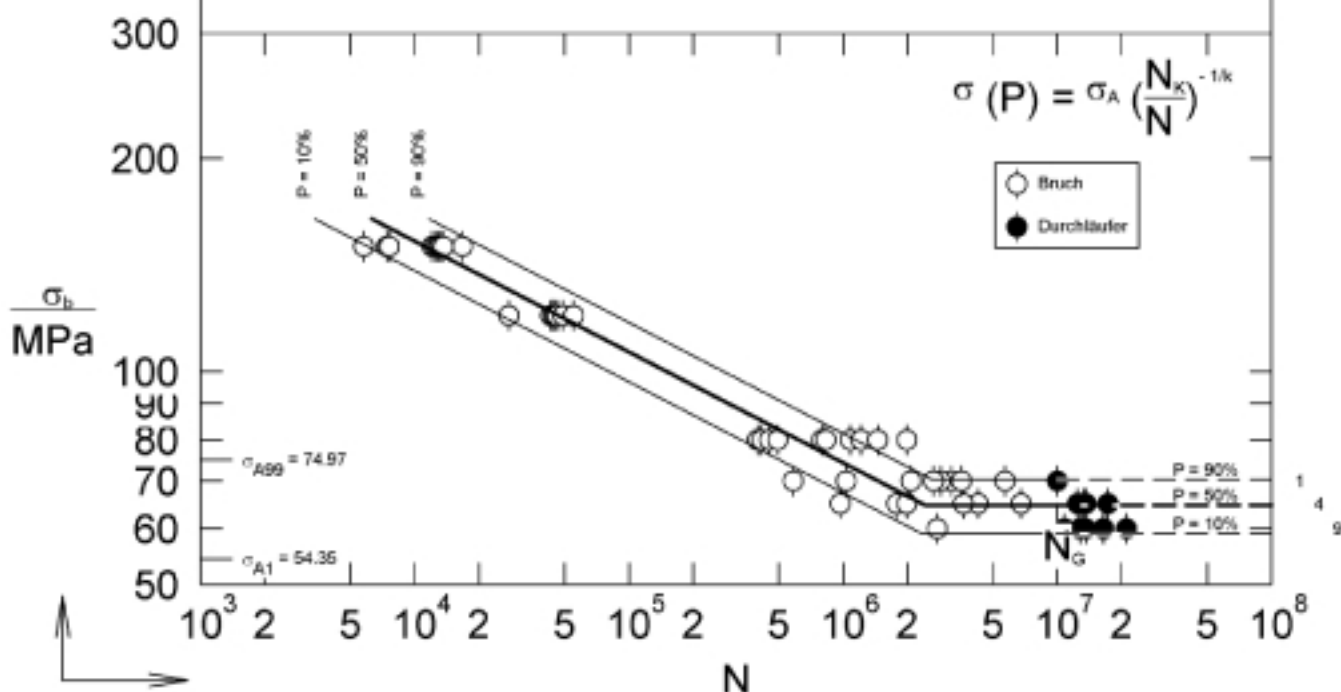


○ Failed test-pieces ● Unfailed run-outs

σ -logN-Normalverteilung	HCF: lg N =	a	+	k	lg σ	N_K	LLF: σ_A
P = 10%:	lg N =	17.67536	+	-6.38466	lg σ	2344708	58.98
P = 50%: (Perlscheur)	lg N =	17.94238	+	-6.38466	lg σ	2410535	64.66
P = 90%:	lg N =	18.20935	+	-6.38466	lg σ	2603887	70.34



Material: Fe-1.5 % Cu-0.6 % C; iron: water atomized carbon; graphite UF4 sintering: ca. 1120 °C, ca. 20 min, 96 % N₂ + 5 % H₂, 0.8 °C/s cooling rate
 heat treatment: -
 density: 6.47 g/cm³
 mech. properties: H = 123 HBW 2.5/62.5, R_{90.2} = -, R_m = -
 Specimen: notched, K_t = 1.8; ISO 3928; surface as sintered
 Loading mode: Plane bending; R = 0; two different types of machines with 50 Hz and 120 Hz
 Limiting no. of cycles: 10⁷
 Endurance limit: 64.7 MPa
 Reference: A. Zafari, P. Beiss; Fatigue Strength of Iron-Copper-Carbon PM steels ;PM Auto 2008, Proc. CD, Isfahan, 2008

Stress amplitude:	60	65	70	80	120	150	MPa
Cycles to failure:	13573.644	17261.305	3206.600	1449.900	46.200	7.600	· 1000
	12835.273	6770.400	5708.700	417.400	45.900	13.600	
	21032.100	12411.222	3193.198	1080.472	49.181	12.403	
	16402.828	1780.500	585.732	796.254	44.609	13.191	
	16410.399	970.100	2858.362	399.300	27.430	16.700	
	16475.700	13310.900	10016.330	1211.085	55.190	12.000	
	10620.170	13623.909	2640.800	1985.100	42.900	13.584	
	12727.000	4273.218	1030.814	832.500	44.300	5.785	
	2750.600	1976.600	2074.900	496.278	46.000	7.418	
	12811.000	3631.499	3571.500	453.000	49.200	12.800	