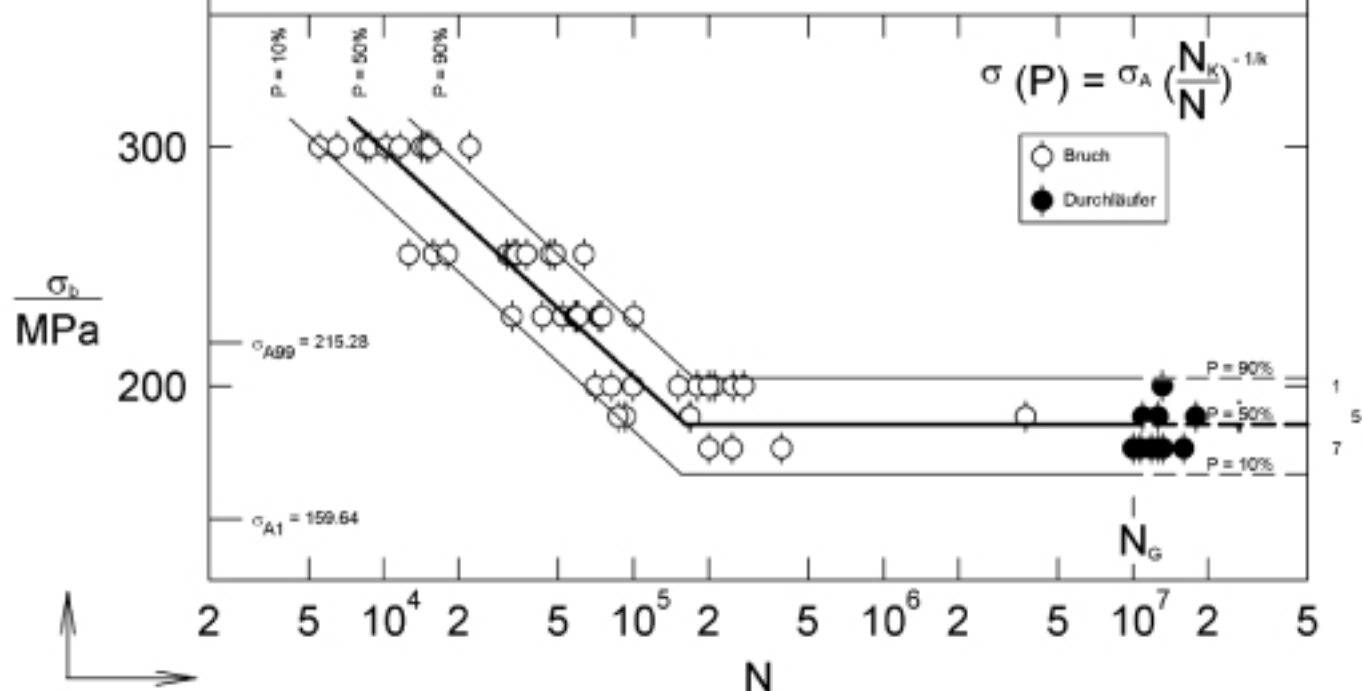


○ Failed test-pieces ● Unfailed run-outs

σ -logN-Normalverteilung	HCF: lg N =	a	+	k	lg σ	[Korr. - Koef.]	N _K	LLF: σ_A
P = 10% :	lg N =	18.57470	+	-5.98502	lg σ	-	155940	172.14
P = 50% :	lg N =	18.81231	+	-5.98502	lg σ	0.9984	161762	187.46
P = 90% :	lg N =	19.04991	+	-5.98502	lg σ	-	174673	202.79



Material: Fe-1.5 % Cu-0.6 % C; iron: water atomized
 heat treatment: quenched and tempered (austenitized 870°C/40min in endogas with 0.6 % carbon potential; oil quenched and tempered 180°C/60min)
 density: 6.81 g/cm³
 mech. properties: H = 373 HBW 2.5/187.5, R_{90.2} = -, R_m = -
Specimen: smooth, K_t = 1.0; ISO 3928; surface as sintered
Loading mode: Plane bending; R = 0
Limiting no. of cycles: 10⁷
Endurance limit: 187.5 MPa
Reference: A. Zafari, P. Beiss; Effect of Different Heat Treatments on the Fatigue Strength of Fe-Cu-C; Proc. EURO PM2007, Vol. 1, p. 175-180; EPMA, Shrewsbury, 2007

Stress amplitude:	180	190	200	225	250	300	MPa
Cycles to failure:	11838.0	12630.0	13076.3	43.1	17.9	5.5	1000
	10723.9	10965.5	70.5	52.0	31.2	10.2	
	248.4	26890.9	151.1	100.3	33.1	8.4	
	391.3	26177.3	180.0	60.0	37.3	11.6	
	10000.0	3711.4	81.5	59.3	15.8	15.3	
	13143.0	167.6	251.5	58.3	48.6	8.8	
	200.0	168.5	276.1	32.5	46.4	6.5	
	11834.3	92.9	209.4	73.4	34.1	14.8	
	15931.4	17855.3	200.6	72.5	12.6	22.1	
	12679.4	86.8	99.2	74.9	63.1	14.2	