

Material: Fe-2 % Cu - 0.2 % C; iron: water atomised ASC 100.29

copper: - 100 mesh, carbon: graphite UF4

sintering: 750 °C, 20 min, 90 % N2 + 10 % H2; repressed; 1120 °C, 30 min, endogas with controlled carbon potential

heat treatment: -

density: 7.18 g/cm3; double pressed, double sintered

mech. properties: -

Specimen: smooth, K_t = 1; ISO 3928; surface as sintered¹

Loading mode: axial; R = -1

Limiting no. of cycles: 2 - 106

Endurance limit: 175 MPa¹ (173 MPa this evaluation)

Reference: A. Bergmark: Materialdata för PM-Stål med Varierade Ytor och Geometrier;

Jernkontorets Forskning Report, Series D, No. 763; Jernkontoret, Stockholm, 1999

162	170	178	186	MPa
2000.000	200.802	403.140	172.281	· 1000
2000.000	357.416	512.144	197.047	
2000.000	442.030	2000.000		
	2000.000	2000.000		
	2000.000			
	2000.000			
	2000.000 2000.000	2000.000 200.802 2000.000 357.416 2000.000 442.030 2000.000 2000.000	2000.000 200.802 403.140 2000.000 357.416 512.144 2000.000 442.030 2000.000 2000.000 2000.000	2000.000 200.802 403.140 172.281 2000.000 357.416 512.144 197.047 2000.000 442.030 2000.000 2000.000 2000.000 2000.000

¹With burs removed by millling, a staircase test with 12 specimens gave an endurance limit of 164 MPa.