

Material: Fe-1.5 % Cu; sponge iron

sintering: 1120 °C, 35 min, endogas

heat treatment: case hardened with 0.8 % carbon potential; 900 °C, 60 min + 850 °C, 30 min; oil quench; 180 °C, 90 min

density: 6.28 g/cm3

mech. properties: H = 23.2 HRC; R<sub>p0.2</sub> = -; R<sub>m</sub> = 393 MPa

Specimen: smooth, K<sub>t</sub> = 1.0; surface machined

Loading mode: rotary bending, R = -1

Limiting no. of cycles: 10<sup>7</sup>

Endurance limit: 174 MPa

Reference: M. Onoda: Fatigue Strength of Sintered Structural Component Materials; Japan

Powder Metallurgical Association, Tokyo, 1983 (in Japanese)

Stress amplitude:	174	191	201	218	232	247	263	275	MPa
Cycles to failure:	10185.910	2494.595	739.605	274.157	166.725	69.984	50.582	13.804	- 1000