



Operational Reliability of Slide Bearings

What is influencing the safe operation of slide bearings?

1. Oil film temperature
2. Thickness of oil film
3. Mechanical properties of babbitt metal

The temperature in the oil film is defined by the dimensions of the bearing, the load on it and the viscosity of the lubricant. In addition, all these parameters define the oil film thickness.

If the pressure in the oil film or the temperature is exceeding the mechanical limits of the babbitt metal, damages are expected. If the oil film is too small and the two surfaces are touching each other, the friction losses are increasing dramatically. This is causing an additional increase of temperature, decrease of viscosity and as a result a further drop of oil film thickness – until destruction of the bearing.

Another reason for a bearing damage are dynamic loads and vibrations, which can damage slide bearings within very short time.

If you have any question, you need a new design or have problems with your bearings, do not hesitate to contact us. We do new design, re- design and manufacture all kinds of bearings for all kinds of lubricants (oil, water, air).

The picture above shows an incipient bearing damage of a thrust pad of a hydro generator.

Werner Zeller