

EHD2 Ultra Thin Film Measurement System

A fully automated bench top, computer controlled instrument for film thickness measurements of lubricants in the elastohydrodynamic (EHD) lubricating regime.

- Measures lubricant film thickness properties in the contact formed between a 3/4" (19.05mm) diameter steel ball and a rotating glass disc using optical interferometry
- Film thickness down to 1nm with a precision of +/- 1 nm
- Traction coefficients can be measured at any slide/roll ratio from pure rolling up to 100%.

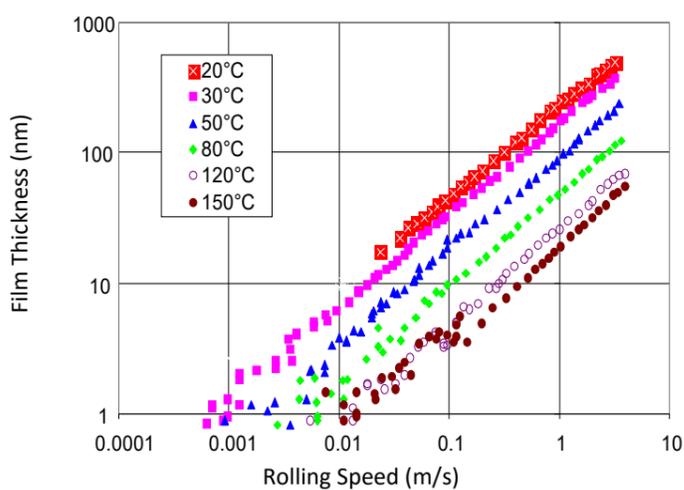
Applications

- Contact pressures and shear rates in this contact are similar to those found in gears, rolling element bearings and cams
- Evaluation of film forming and frictional properties of oils and greases
- Fuel economy prediction of candidate crankcase oils
- Performance prediction of oil in water emulsion rolling mill lubricants
- Fundamental investigations of the high pressure/high shear behaviour of fluids such as liquid crystals



Specifications

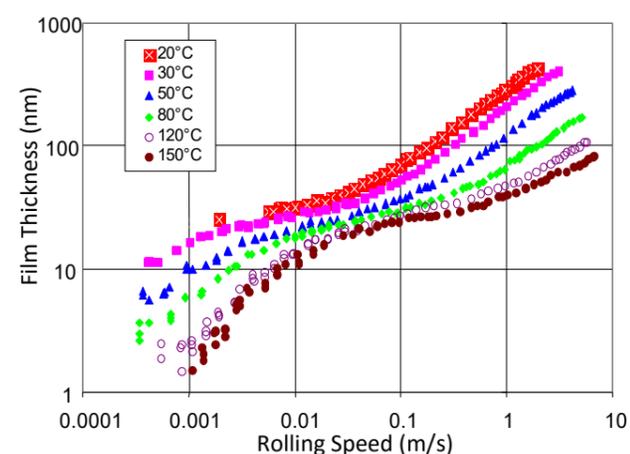
- Film Thickness: 1 to 1000 nm
- Load: 0 to 50 N
- Contact Pressure: 0 to 0.7 GPa, up to 3 GPa (WC on sapphire)
- Speeds: 0 to 4 m/s
- Temperature Range: Ambient to 150°C
- Test Sample Volume: 120 ml



Additive-free 100 solvent neutral base oil



Spherical Roller and Carriage



Base oil with 10% wt of a VI Improver