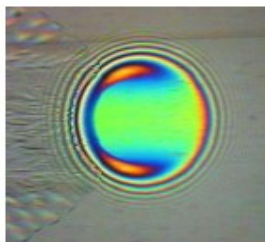


3D SLIM (SPACER LAYER IMAGING METHOD)

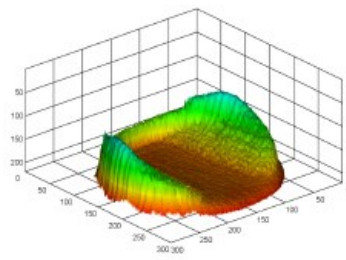
EHD2 VS MTM2

EHD2

A lubricant film is formed between a rotating coated glass disc and 3/4" steel ball. An RGB camera is used to capture a dynamic image of the contact in the elastohydrodynamic region. The SLIM software analyses the image and produces one measurement for the film thickness between the specimens plus the additive build up on the ball. The system can produce a film thickness map of the whole EHD contact in a few seconds.



STAGE 2
Acquire high resolution digital image of contact



STAGE 3
Use colour information to determine film thickness within contact or full contact map

Reducing the speed of the disc until it is stationary and taking an image allows the user to gain a measurement for just the additive build up. In the boundary layer regime, the effect of the glass on metal contact is not easily related to many applications, therefore the [EHD2](#) is predominantly used to research the effects of lubricants within the EHD regime

MTM2

A range of rolling and sliding conditions is created between a rotating 3/4" metal ball and disc. The ball is reverse loaded against a glass window periodically throughout the test. A static image of the ball is captured using an RGB camera. The image is analysed using the SLIM software and a film thickness map of the additive build up in the contact is produced.

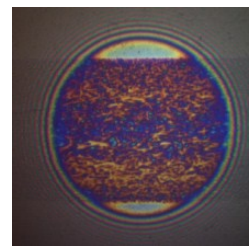
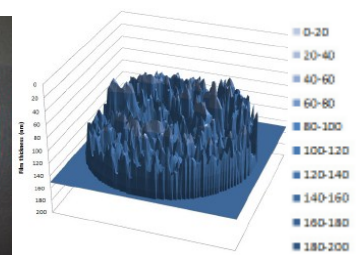


IMAGE TAKEN DURING TEST



3D SURFACE MAP

An array of images is produced throughout the test enabling the user to see the effects of the lubricant additives at varying speeds and temperatures over a period of time. The specimens are available in a wide variety of materials which enables many applications to be mimicked. It is particularly useful for seeing the visual effects of anti wear additives in engine oils.

By combining the capabilities of both SLIMs, the behaviour of lubricants in all regimes can be accurately determined and the results can be displayed visually.

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