

THE OTI FIZEAU INTERFEROMETER

These interferometers can be built to a variety of specifications affording standard accuracy of up to 1/10 wavelength flatness over 80% of the operation reference flat diameter thus offering economy with purpose need.

- ◆ Essentially updated versions of systems introduced by HILGER many years ago, our interferometers are laser illuminated and fitted with a wide angle viewing telescope
- ◆ They are practical and very stable workshop instruments
- ◆ Three aperture sizes are offered as standard 10", 6" and 4" the last finding considerable merit in semi-conductor wafer manufacture
- ◆ Micrometer tilting stages, Polaroid cameras, vacuum chucks and CCTV cameras are offered as optional extras where appropriate

THE OTI FOCIMETER



FUNDAMENTAL PRINCIPLES

The FOCIMETER works on the principle of allowing the unknown lens to form an image of an accurately calibrated illuminated graticule. The SIZE of this image is a direct measure of the lens's EFFECTIVE FOCAL LENGTH (e.f.l.). The Focimeter must therefore contain within its functions the additional ability of performing as a transverse travelling microscope.

The *OTI* FOCIMETER is constructed in the manner shown in Fig 1 and is particularly easy to use taking full advantage of modern digital readout equipment. Furthermore the *OTI* design allows the reading of NEGATIVE as well as POSITIVE lenses without the need to change or introduce compensating systems and their associated scaling factors. It is a direct reading instrument in every case.

BACK FOCAL LENGTH (b.f.l.)

This differs from e.f.l. in that it is the distance from the rear vertex of the unknown lens to the point of focus. The focimeter has the additional capability of performing this duty. For thin lenses b.f.l. is numerically similar to e.f.l. but it is not identical and for lens assemblies can differ very substantially.

OPERATION

The test lens is placed on the cantilever stage and an image of the illuminated graticule found through the eyepiece. Its e.f.l. is measured simply by setting the crossline mark, one of the graticule marks, zeroing the transverse digital clock, and setting onto the neighbouring mark. The indication shown on the digital clock equals the e.f.l.

The b.f.l. is measured by focusing first on the test lens surface, zeroing the LINEAR digital scale then moving the slide back to find the graticule focus. The distance moved is the b.f.l. Note the transverse slide plays no part in this measurement.