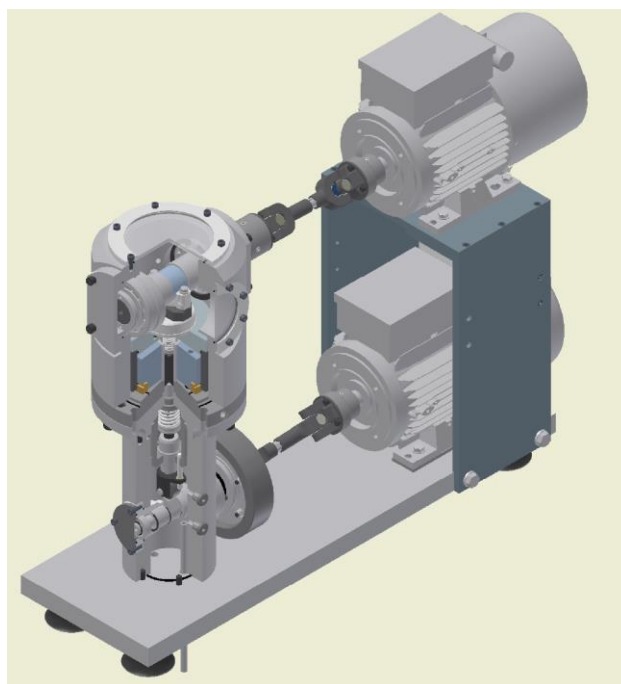


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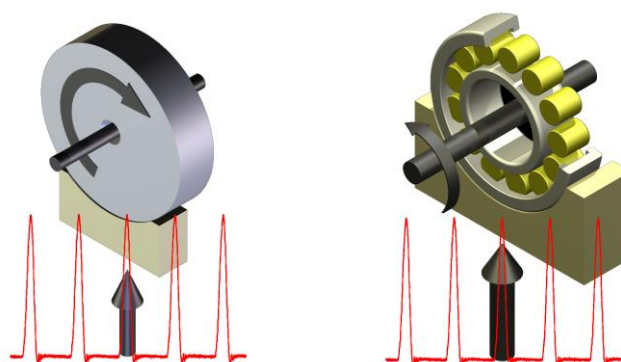
This is the latest issue of our **Tribology Update** newsletter. For further information, we can be contacted by e-mail at info@phoenix-tribology.com.

WORK IN PROGRESS – PRODUCT DEVELOPMENT

Pulse Actuator Bearing Fatigue Rig

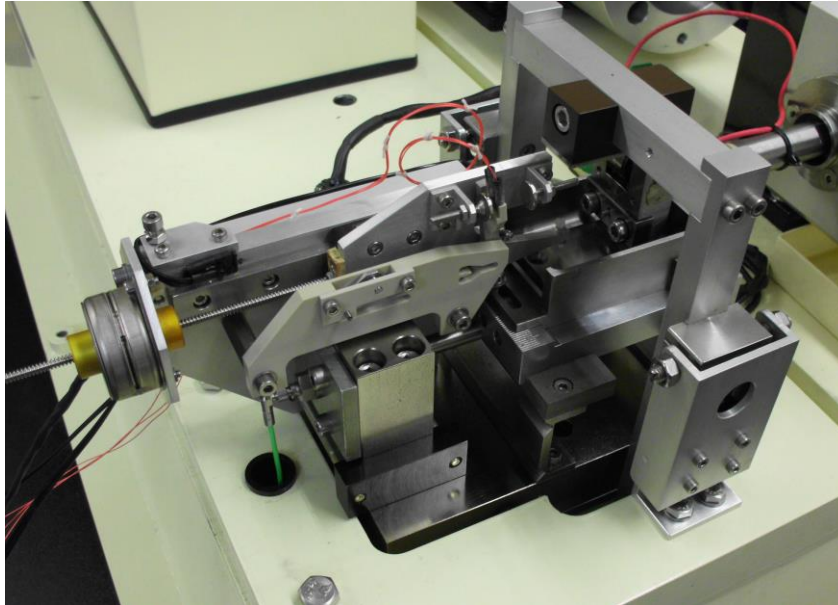


We continue development of the pulse actuator bearing rig and are currently testing tooling for both plain and rolling element bearings.



We are also investigating whether the actuator could be used as the basis for a simplified and low cost Riffel test.

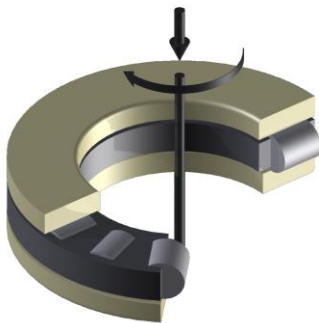
TE 77 - In situ Tactile Profilometer



In recent weeks, development has moved on from prototype to pre-production unit. Live testing continues.

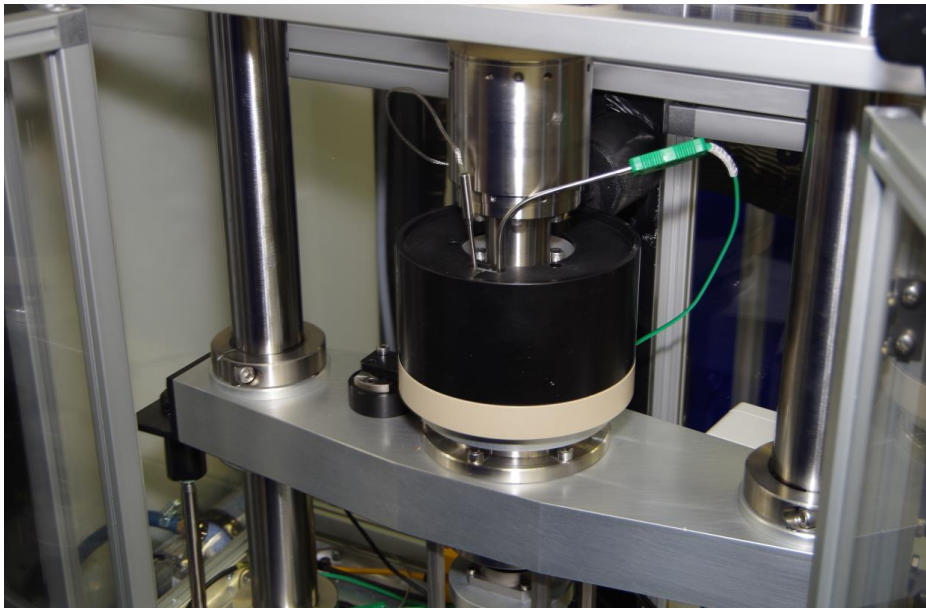
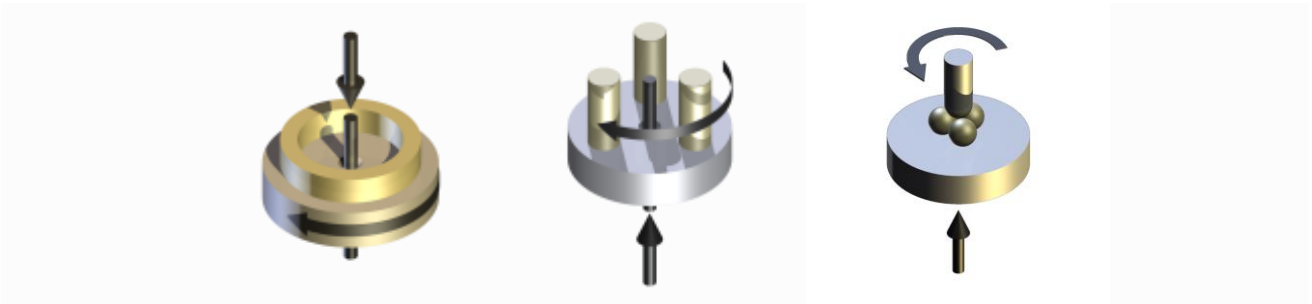
WORK COMPLETED

RCF 2 / TE 92 New Roller Thrust Bearing Adapter



We have recently designed, manufactured and delivered a new roller thrust bearing test adapter. This uses the upper race, rollers and cage of a standard 81208 TN bearing, running against a lower specimen disc sample.

TE 95 Precision Thrust Washer Rig - Low Temperature Enabled



The TE 95 has now been completed and incorporates a number of novel features:

Dual axis, in-line, torque and axial force transducer:

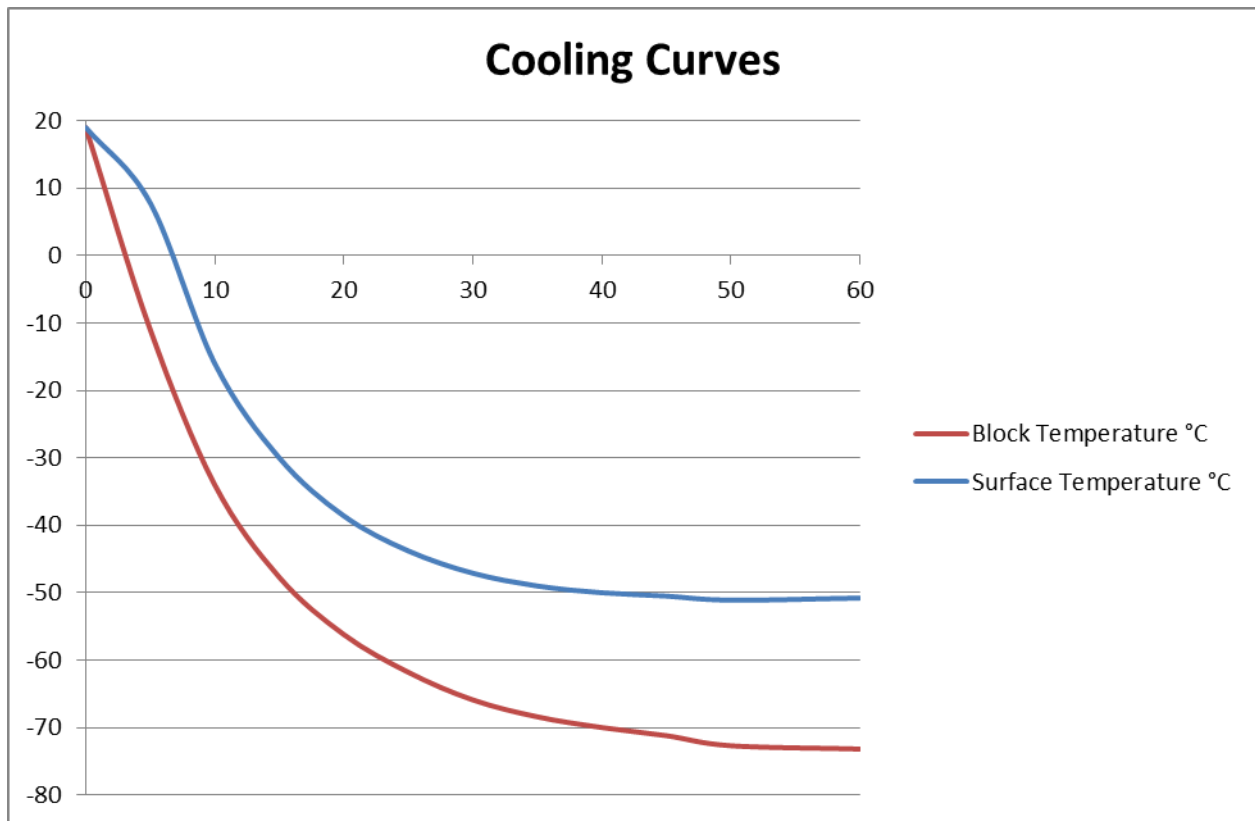
This allows measurement of both axial load and friction torque on the rotating, upper specimen. Measuring the load and friction at the rotating specimen, instead of at the fixed lower specimen, means that the latter can be attached to bulky refrigeration pipes, without inducing unwanted tare forces.

Refrigerant system:

Unlike more conventional systems, cooling does not involve the use of a pumped heat transfer medium. Instead, pressurised refrigerant is delivered direct to the test assembly, where it is expanded in a cooling coil, wrapped around an aluminium cooling block. This provides an efficient means of cooling, having eliminated the heat transfer and pumping losses associated with using a heat transfer fluid.

NC-DVRT sensor:

We have typically used capacitance probes for wear sensing. These, however, are sensitive to liquid collection and frost formation in the measurement gap. The NC-DVRT does not suffer from these problems.



OTHER NEWS

Tribology Silver Medal

The 2017 medal has been awarded to George for his contribution to the science and technology of Tribology.

The medal is award by the Tribology Trust, an independently-funded trust administered by the Institution of Mechanical Engineers, London. The Awards Committee comprises senior representatives from the Institution of Mechanical Engineers, the Institution of Engineering and Technology, the Institute of Materials, Minerals and Mining, the Royal Aeronautical Society and the Department for Business, Energy and Industrial Strategy (BEIS).



The award was presented at the IMechE, by Martin Cox CENG FIMMM, President of the Institute of Materials, Minerals and Mining.

Cambridge Tribology Course 2018

The 26th Cambridge Tribology Course will take place from Monday 10th to Wednesday 12th September 2018.

Exhibition Equipment

For the first time in years, we are planning to have equipment on our exhibition stand at [STLE in Minneapolis](#). We will be bringing a new TE 77 machine, as a demonstration platform for the in situ profilometer. You will appreciate the huge administrative hassle and cost involved in shipping and temporarily importing a machine into the US, then shipping it back to the UK. This can be avoided if we pre-sell the unit. If you are based in the US and are interested in acquiring a new TE 77 machine, at a significant discount, post STLE, please contact us.

George Plint and David Harris

Phoenix Tribology Ltd