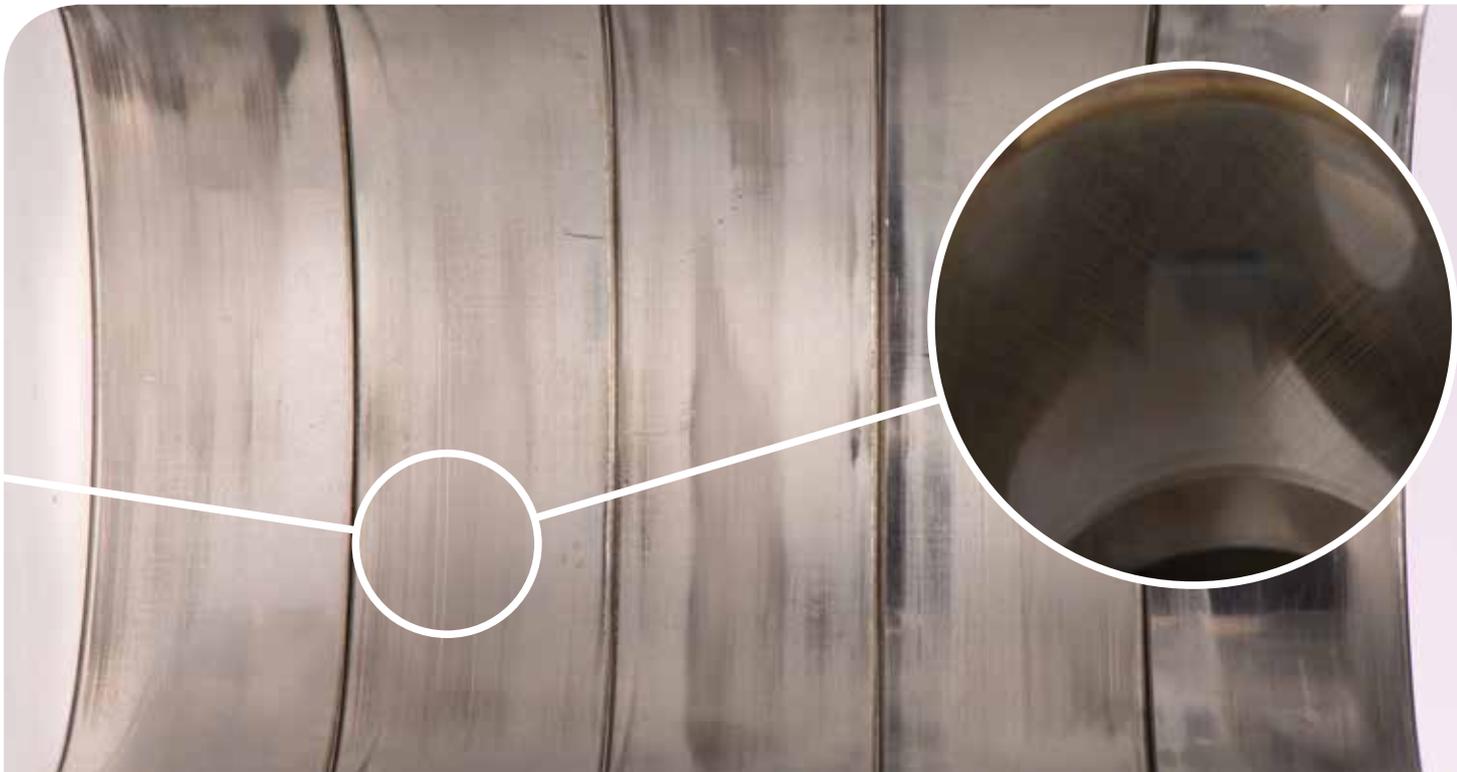


Thin Layer Activation - Component Wear Testing



Valued Quality. Delivered.

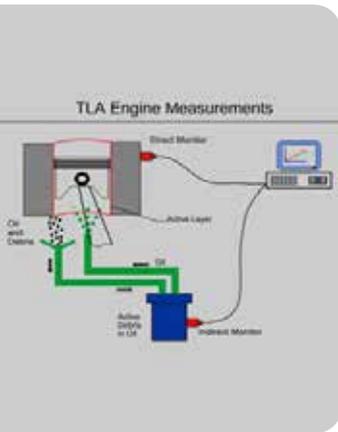


Intertek have added to their testing portfolio, the ability to perform non-intrusive wear testing tribology using the Thin Layer Activation (TLA) technique to accurately measure low levels of wear between components, in real time.

This unique capability means that Intertek is one of the only commercially available test houses in the UK to offer this technique to its client base.

The TLA technique is ideally suited for any kind of lubricant or fuel formulation testing, but can be equally utilized for material or surface coating wear testing, especially in the testing of concealed components or components where access is restricted in normal use (e.g. crankshaft main bearings or piston rings). This technique can also be used to understand surface-to-surface interactions and is ideally suited for use in FMEP testing.

Intertek is now fully licensed at its Milton Keynes test facility for the use of, and disposal of, the radioactive material that is used in this technique and can cater for any kind of fired engine or rig-based testing using this new and unique testing methodology.



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TLA (also known as Radionuclide Testing - RNT) requires the surface of the test components to be irradiated with a unique isotope. These isotopes are chosen dependent on the type and composition of the base material. The irradiation process changes approximately 1 in 1 000 000 000 atoms so does not change the performance of the component's material.

The applied trace level radioactive allows the minute wear taking place between conjoined components to be measured in real time during any kind of test.

The sensitivity of the technique (with measurement accuracy typically as low as 2-4nm/hr), makes it possible to replace long duration durability / wear tests with a TLA test that can be completed in as little as 3 hours. This new technique will mean that Intertek can assist its customers to understand important component durability issues well in advance of more serious and costly long term testing, enabling serious cost savings in test programmes and drastically increasing the number of material/formulation options that can be tested in a short time scale.



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