

# Thermal imaging reveals hot air at No. 10

ITV'S TONIGHT PROGRAMME, 'MONEY TO BURN' ANALYSED THE ENERGY USAGE AND ENERGY WASTAGE OF DOMESTIC HOMES, AND WAS ALSO GRANTED PERMISSION TO TAKE THERMAL IMAGES OF NO. 10 DOWNING STREET AND THE HOUSES OF PARLIAMENT. THE RESULTS, NOT SURPRISINGLY SHOWED HOW BETTER INSULATION HELPED REDUCE BILLS IN DOMESTIC SITUATIONS, BUT ALSO HOW INEFFICIENT OLDER BUILDINGS CAN BE; INCLUDING, IRONICALLY, THE BUILDING HOUSING THE DEPARTMENT OF ENVIRONMENT AND CLIMATE CHANGE.

Duncan Webb, Thermal Imaging expert at ERIKS used the latest Flir thermal imaging camera to record images of both domestic houses and large government and municipal buildings.

"It is the same equipment and process that we use to analyse the efficiency and health of a wide range of industrial equipment,

**"ERIKS thermal surveys reveal the integrity of heat insulation at No.10 Downing Street and the Houses of Parliament for ITV's TONIGHT program."**

from electrical power distribution, and power transmission equipment to mechanical devices such as bearings and gearboxes. Excess heat usually tells us that there is a problem; elevated temperatures mean higher resistance in circuits and motors, and higher friction in

rotating machinery. Commonly these are spotted when we are working as part of a proactive maintenance service using predictive maintenance techniques to identify problems early on and fix them in order to reduce downtime."

Duncan continues, "We also use the cameras to minimise energy loss. For example we can spot faulty insulation in cold refrigerated rooms and similar problems in commercial ovens and kilns. The images showed there is probably scope to improve the insulation at No. 10 as the entire building was giving off quite a strong heat signature, but insulating listed buildings can be tricky to do."

"On the camera, blue is cold, and then the colour changes through yellow, orange and red as it gets hotter, with white showing the hottest areas. Bearing in mind how the domestic buildings we looked at performed much better after some basic insulation work was done, the more recent government buildings appeared to be good candidates for similar work. Having said



that the largest heat signature was from the Houses of Parliament, but then again I don't think Pugin had energy efficiency at the top of his mind when he designed it!"

Thermal imaging plays a key role in ERIKS maintenance know-how, helping to deliver energy saving, efficiency improvements' repair and replacement work, in addition to full thermographic surveys employed on large manufacturing and process sites, where ERIKS is responsible for the efficient running of the entire maintenance aspect of a plant.

ERIKS is pro-actively developing maintenance and engineering systems and strategies to ensure customers are optimising their business processes and activities, improving efficiency and reducing costs. Thermal imaging is used alongside other condition monitoring techniques such as vibration analysis, lubricant analysis, and laser alignment; all key aspects of the general maintenance programmes that are available from ERIKS anywhere in UK.

## Putting the seal on food safety

ERIKS is setting the benchmark for food safety with blanket (EC 1935) extraction testing of its food sealing products to FDA 177.2600 standards.

Food safety is a hot issue, and with all the recent public scares, one that is not likely to fade any time soon. One key area is the migration of contaminants from compounds and polymers that come into direct contact with food.

The relevant European Framework Regulation (EC) 1935/2004 (L338/4)

does not cover rubber, one the primary materials that comes into contact with food products, so the industry has adopted the US FDA 177.2600 regulation. Not all manufacturers use the more rigorous extraction testing program method of compliance however, leaving room for variations in performance and quality even within the standard.

ERIKS has its own Materials Sealing Technology Centre at Warrington, and it is here that full extraction tests are undertaken

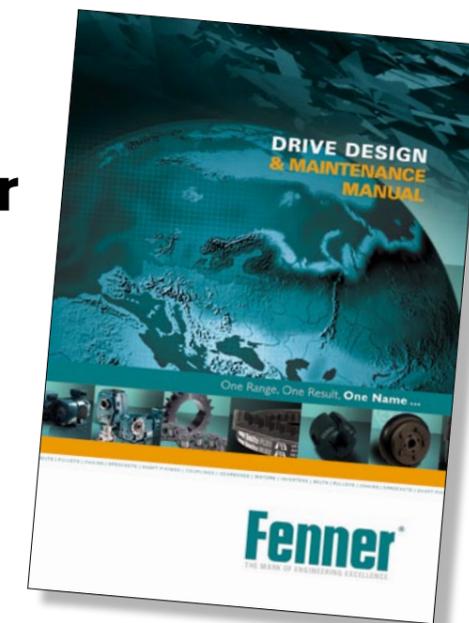
for food grade sealing products. Certified ISO 9001, the Centre has comprehensive dedicated test facilities for O rings and rubber parts, Oil seals, Mechanical seals, FEA and providing Clean Room requirements.

"The FDA regulation demands documented proof of safety; and with these tests we are able to deliver that proof; that the ingredients we use are securely bonded into the rubber of our O rings and moulded parts," said Chris Dixon, Divisional Sales Director for ERIKS Sealing Technology.

## New 400 page Fenner Drive Design Manual is a 'must have' guide to power transmission products

The new, extended and revised 2010 edition of the Fenner Drive Design Manual is now available. An essential power transmission reference tool for design engineers and maintenance engineers, the latest version adds over 100 pages of new products and technical know-how, including many new energy saving solutions.

The Fenner range of power transmission products provides a complete drive solution from electrical input to the final driven machine. To receive a free copy simply register your details on the Fenner website at [www.fptgroup.com](http://www.fptgroup.com) or contact your local Authorised Distributor for a copy.



## Energy saving rebuild for industrial tyre shredder...

ERIKS UK HAS RECENTLY APPLIED ITS ENGINEERING KNOW-HOW TO THE REMANUFACTURE OF A TYRE SHREDDER USED AT A NEW UK TYRE RECYCLING CENTRE.

Located in Cambridgeshire, the UK's newest and most up-to-date tyre recycling centre is capable of recycling up to 5 million individual tyres (50,000 tonnes) each year – reducing them to a fine quality crumb which can be used for a range of products including sports surfaces and children's playgrounds.

When the owners needed one of the tyre shredders to be rebuilt, a large number of components needed to be repaired or replaced including the entire powertrain; due to the high energy usage of the machine this was seen by the operating company as an opportunity to up-date the shredder to make it more efficient. ERIKS achieved this by using energy efficient replacement motors, gearboxes, bearings and inverter drives; all specified, supplied and installed by the ERIKS engineering team that completed the entire rebuild process.



## A long way from 'Superglue'

After research carried out with thousands of customers worldwide in order to update the iconic Loctite 243 and 270 thread lock products.



The results were passed to the Henkel technology centre in Dublin, where the products have been re-developed to address three main areas of performance: performance on passive metal substrates, oil tolerance and temperature resistance.

From start to finish the process took more than two years to complete and several Henkel scientists worldwide were working on this project. According to the company, the Loctite 243 and 270 upgrade project required the expertise of the materials testing and analytical support division where they, "Have used highly specialised equipment, the kind that you would normally only find in large research universities or on CSI."

You can try the new products for yourself as they are now both available across Europe from ERIKS.