

From Ship to Shore - Thermal Imaging goes Global

Global Switchgear Services Limited are utilising the versatility of thermal imaging to carry out electrical and mechanical inspections of marine and industrial equipment. With a wide variety of customers including; commercial and royal navy shipping; the nuclear, coal, oil, gas and hydro energy industries; pumped storage; rail and heavy industry such as steel mills, Global can quickly identify areas of potential concern that if left undetected could cause damage, fires or be potentially life threatening.

Many industrial fires are caused by faulty electrical components, which result in costly down time and expensive recovery in terms of lost production and replacement of equipment. By detecting heat build-ups or hot spots, thermography provides early detection of potential electrical fires and allows planned monitoring of electrical systems and the scheduling of preventative maintenance actions before serious damage occurs.

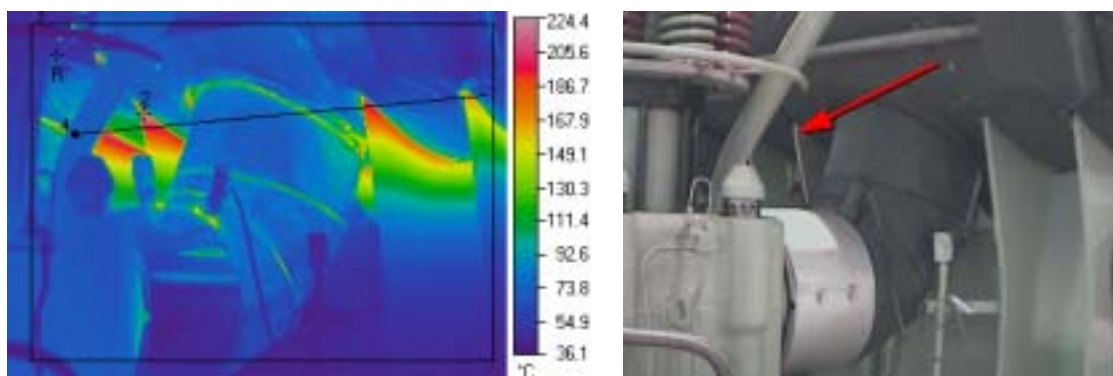
A key strength of thermography is its non-contact, non-invasive function that allows equipment or processes to be monitored or inspected without being powered down. Moreover, inspection is rapid and the instantaneous image permits potential areas of concern to be identified immediately unlike other condition monitoring and NDT techniques.



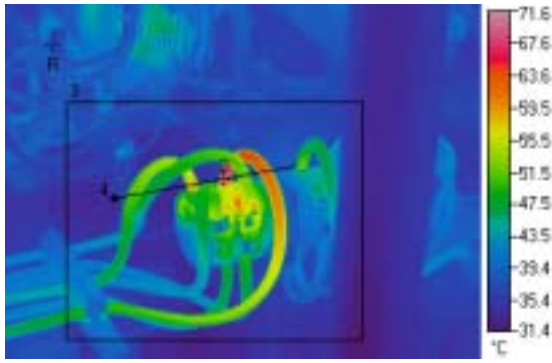
NEC TH7100 Series
Thermal Imaging Camera

Global was founded in 1997 and has gained an excellent reputation as specialists in switchgear engineering, repairs and servicing. During the course of visits to their customers, Global quickly recognised the potential for thermography and its ability to complement their existing capabilities by the inclusion of electrical and mechanical inspections into the Company's range of expertise. Inspections are carried out by Global's Level 1 ASNT trained thermographers using the NEC TH7102WV thermal imaging camera and a full written report is provided to the customer showing both a visual and thermal image highlighting any problem areas and making recommendations as appropriate.

The original camera that Global purchased was heavy and expensive to maintain with only basic operating features. However as thermal inspections became an established part of the company's business, Global invested in a NEC TH7102WV camera, part of the range of thermal imaging equipment supplied by Metrum.



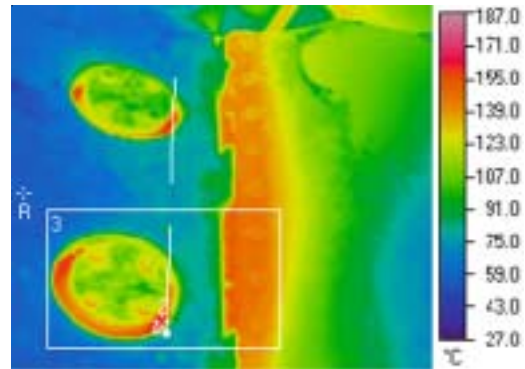
Ship Engine Exhaust



Thermal and Digital Image showing poor connection on Main Isolator Switch

The TH7100 Series cameras are hand held, weighing only 1.7 kilogrammes and are ergonomically designed to allow the user to operate the camera, freeze the image, adjust the temperature span and store images all with one hand. Other features include voice annotation and a built in 752 (Horizontal) x 480 (Vertical) pixel visual camera enabling the user to prepare reports that show both thermal image and daylight pictures for easy identification. With low light areas in mind the camera has a 1 lux sensitivity similar to high performance photographic cameras. The visual camera uses auto exposure and auto focus to reduce on site operation time and cost for the customer.

Metrum supplies a full range of thermal imaging cameras, from small, low resolution units, through fixed installed automation cameras to high resolution systems with built-in digital imaging facilities. To further support every NEC camera supplied by Metrum, a full training package covering product information, basic theory and system operation is provided on-site for all customers, focusing on the aspects of use that are of major importance to the customer's specific requirements. Furthermore, Metrum provides full after sales care of all products including calibration, service and repair to the strict quality procedures as laid down in the company's ISO9001 procedures.



Main Engine Charge Air Cooler showing hot spots on seals

For further details about the range of Thermal Imaging Cameras and Services that Metrum can offer, please contact:

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