



UK THERMOGRAPHY
ASSOCIATION

Electrical Thermography

Background

The use of thermal imaging cameras to inspect electrical equipment is the most well-established application of infrared thermography within the commercial and industrial sectors. This is mainly due to its unparalleled ability to quickly and safely identify defects, such as poor connections, overloading and faulty electrical equipment, without the need to power down equipment and while maintaining normal business operations.

The industry is now increasingly driven by recommendations and requirements of insurers due to the recognised benefits of reducing risk associated with property damage and business interruption caused by electrical fires.

In parallel with the growth demand for electrical thermography, there has been an increase in low-cost, low-specification thermal imaging cameras entering the market. This in turn has led to cases in which electrical inspections have been carried out by untrained/inexperienced practitioners using ill-suited equipment, thus rendering the inspections ineffective and often involving the use of unsafe working practices.

What competencies should clients look for?

To fully realise the benefits of electrical thermography, it is essential that personnel are suitably trained/experienced in not just thermography but also the discipline of the subject and that they use suitably specified thermal imaging cameras.

The nature and complexity of electrical installations can vary significantly, for example a small industrial unit with a few distribution boards will be simpler to inspect than electrical systems on an offshore oil/gas drilling platform. It is therefore recommended that, when selecting an appropriate thermographer to undertake thermographic surveys, it is essential to ensure they are appropriately trained and suitably experienced for the intended application.

The UKTA suggests that thermal survey reports are completed by personnel who have completed appropriate thermography training and have been certified. It may be a requirement that the thermographer must also have certification in electrical applications. This is a decision to be made by the client. Although this does not guarantee competence, it will at least mean that personnel have undertaken the necessary training, with their knowledge and experience assessed to a standard that aims to ensure that inspections are completed in a safe manner while realising the benefits of electrical thermography. This will afford the client the comfort of knowing that they are instructing a true professional.

Article author:
Kristian Westerhold – Red Current Limited