

# Australian Professional Thermography Association Inc.

Email: admin@auspta.asn.au Web: www.auspta.asn.au Phone: 1300 084 982 Post: PO Box 3154 Asquith NSW 2077

*There's more to thermography than meets the eye.*

**What if we could predict the future? Now it's possible with the use of the right infrared thermal imaging camera, together with the right skill set of a Certified Thermographer. Here, AUSPTA briefly outlines the background and context.**

Thermal energy is emitted from objects within the invisible infrared bandwidth of the electromagnetic frequency spectrum. Infrared is the longer wavelength just beyond red on the visible light spectrum.

Thermography is the application of technology, underpinned by the science of Infrared, that enables the skilful interpretation of infrared images to see what cannot normally be seen.

Thermography is used to provide very useful information about all types of assets, from a wide range of plant machinery and equipment to entire buildings. The primary application is electrical and relevant to Australian Standard AS/NZS3019 Electrical installations - Periodic verification, in terms of Condition Monitoring and Non-Destructive Testing. Well established for over 40 years now, it is an adjunct tool complimentary to other technologies applying to periodic verification.

**Across every industry, electrical assets of all types are increasingly benefiting from infrared thermography inspections to:**

- Provide periodic verification with greater knowledge of, and confidence in, the safety and reliability of electrical installations, plant, and machinery.
- Reduce the risk of an unexpected and costly interruption to operations.

**With no down time to operations, thermography effectively locates thermal faults *before they become serious*, such as:**

- Overloaded or unbalanced circuits
- High resistance connections
- Faulty components
- Potential fire risks

Repairs can then be carried out according to priorities.

**Driven by Maintenance Management, Insurance Risk Management, WHS requirements, and Quality/Standards Accreditation Programmes, thermography inspections apply to all electrical installations, both high and low voltage:**

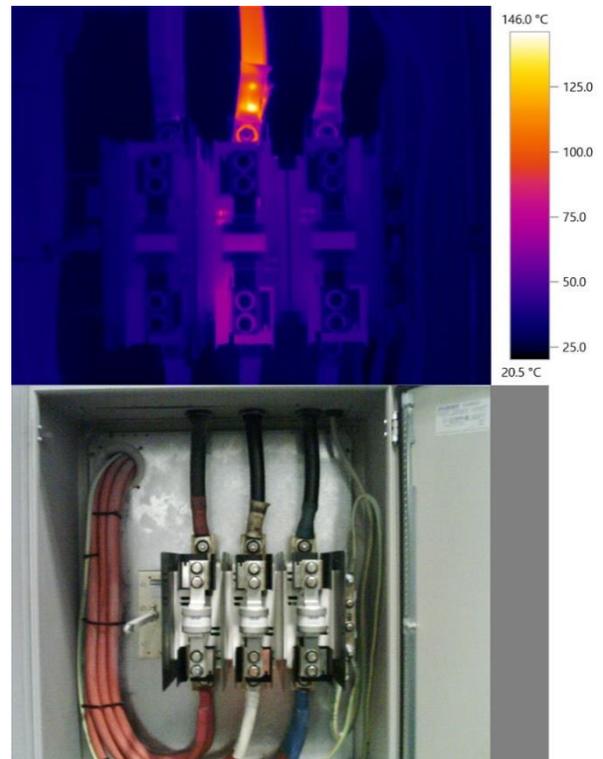
- Switchboards
- Mechanical Services Switchboards
- Machine Control Centres

**A regular thermography inspection, usually annually, contributes to productivity by:**

- Improving electrical system safety and reliability
- Avoiding the costs of an electrical failure that may otherwise go undetected

**Note 1:** Thermography detects surface heat; it cannot see through opaque or clear acrylic covers over electrical components. In some cases, these may not need to be removed. In other cases, where it is safe to do so, they may be removed.

**Note 2:** The purpose of an inspection and report is to provide information to assist with the location and identification of thermal faults. While the content of a thermography report is based on qualitative and/or quantified data, it is data that is captured at a particular point in time and subject to conditions at that time.



*FOR FURTHER INFORMATION PLEASE REFER TO THE ATTACHED SCOPE OF WORK*