

## Category 2 Thermography ISO18436 PCN

***A prerequisite for ITC Category 2 is that the student must hold a Category 1 certificate.***

The five day Category 2 training course prepares you for qualification as a Category 2 certified Thermographer. You will learn about topics in Infrared Thermography to both deepen and broaden your knowledge about infrared physics, heat science, infrared measurement equipment and its application. As a Category 2 Thermographer you shall provide guidance to category 1 personnel in the areas of equipment selection, techniques, limitations, data analysis, corrective actions and reporting.

In order to attend a Category 2 Thermography Course, you shall

- hold a valid Level 1/ Category 1 Thermography certificate,
- prepare a case study to be presented at the Category 2 course and submitted towards qualification at course closing. Details and guidelines on the case study will be issued 2-3 weeks prior to the course start date.

### Course Content

|   |   |
|---|---|
| <b>Introduction to Thermography:</b>    | Review of Level 1 Thermography  |
| <b>Temperature:</b>                     | Conversion factors between Kelvin, Celsius, Fahrenheit.   |
| <b>Heat Transfer Theory:</b>            | Convection, conduction and radiation – Radiation Laws.  |
| <b>Thermography:</b>                    | Blackbodies, emissivity. Planks, Boltzman, Newton, Wein's laws<br><br>Optical filters, optical materials, anti-reflective coatings.<br><br>Atmospheric transmission and attenuation.<br><br>Detector technologies and calibration.<br><br>Measurement techniques. |
| <b>IR Measurement Systems Overview:</b> | Details of different thermal imaging camera parameters including, NETD, IFOV, MFOV  |
| <b>IR Windows and window materials:</b> | Window measurement formulae, spectral transmittance of different materials  |
| <b>Transient Thermographic NDT:</b>     | Transient Thermographic methods analyzed.   |
| <b>ITC Certification Test:</b>          | ITC qualification test to be held on last day of course.  |



## Category 2 Thermography ISO18436 PCN

Please bring with you a scientific calculator, your laptop with software loaded and your Thermal Imaging camera as they will be used extensively throughout the course. There will be some reading required during the evenings.

### Useful reference books for Category 2 courses,

|  |                    |
|--|--------------------|
| ASNT Level III Study Guide   | ISBN 1-57117-015-4 |
| Common Sense Approach to Thermal Imaging                                   | ISBN 0-8194-3722-0 |
| Infrared Thermography Principles & Practice                                | ISBN 0903132338    |
| Infrared Thermography Applications   | ISBN 090313232x    |
| ISO 18434-1 Condition Monitoring and Diagnostics of Machines- Thermography |                    |
| ISO 13372 Condition Monitoring and Diagnostics of Machines- Vocabulary     |                    |

### ITC Category 2 course dates for UK and Ireland

**Part Number: ITC-CER-5201 Price £1715+VAT (€2100)**

|  |                                    |                         |
|--|------------------------------------|-------------------------|
| <b>2<sup>nd</sup> to 6<sup>th</sup> July</b>     | <b>ITC Category 2 Thermography</b> | <b>FLIR Office Kent</b> |
| <b>3<sup>rd</sup> to 7<sup>th</sup> December</b> | <b>ITC Category 2 Thermography</b> | <b>FLIR Office Kent</b> |

The ITC Level 2 course can be run onsite anywhere within the UK and Ireland and is classed as a group booking. If you would like to find out more about the onsite training including pricing and availability email [jon.willis@flir.uk.com](mailto:jon.willis@flir.uk.com).

For software updates, free downloads and technical support logon to <http://flir.custhelp.com>

**If you would like to book yourself on a training session contact,**

- Your FLIR distribution partner
- Jon Willis ITC Manager North EMEA ([jon.willis@flir.uk.com](mailto:jon.willis@flir.uk.com)) tel 01732 220011
- Mrs Charlie Reed Bookings & Admin ([Charlie.reed@flir.uk.com](mailto:Charlie.reed@flir.uk.com)) tel 01732 221285
- [www.irtraining.eu](http://www.irtraining.eu)