INFRARED TRAINING CENTER

explore the thermal dimension

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INFRARED TRAINING CENTER

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Welcome to ITC, the leading source of knowledge within infrared science and its applications.

ITC is present in over 50 countries and has instructors that speak 22 languages. We offer everything from short introduction courses to certification courses. Our instructors are among the most knowledgeable people in the industry.

ITC is proud that its products and services are compliant to industry, national, and international standards. Join our community, our conferences, or our courses at www.infraredtraining.com.

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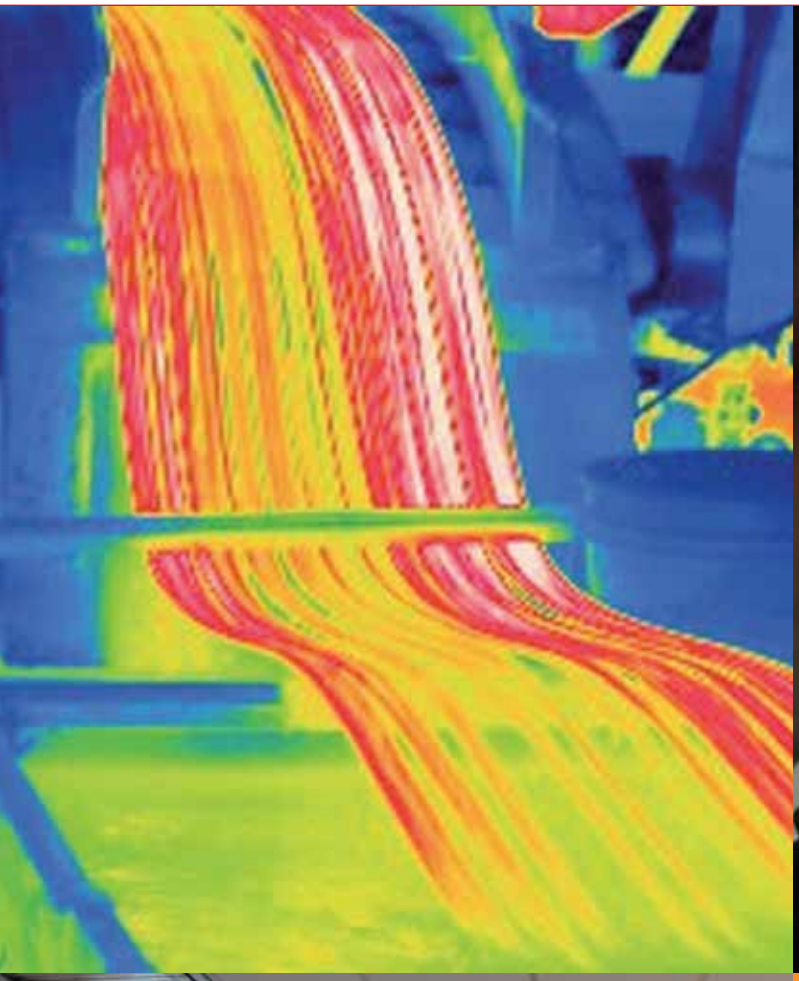

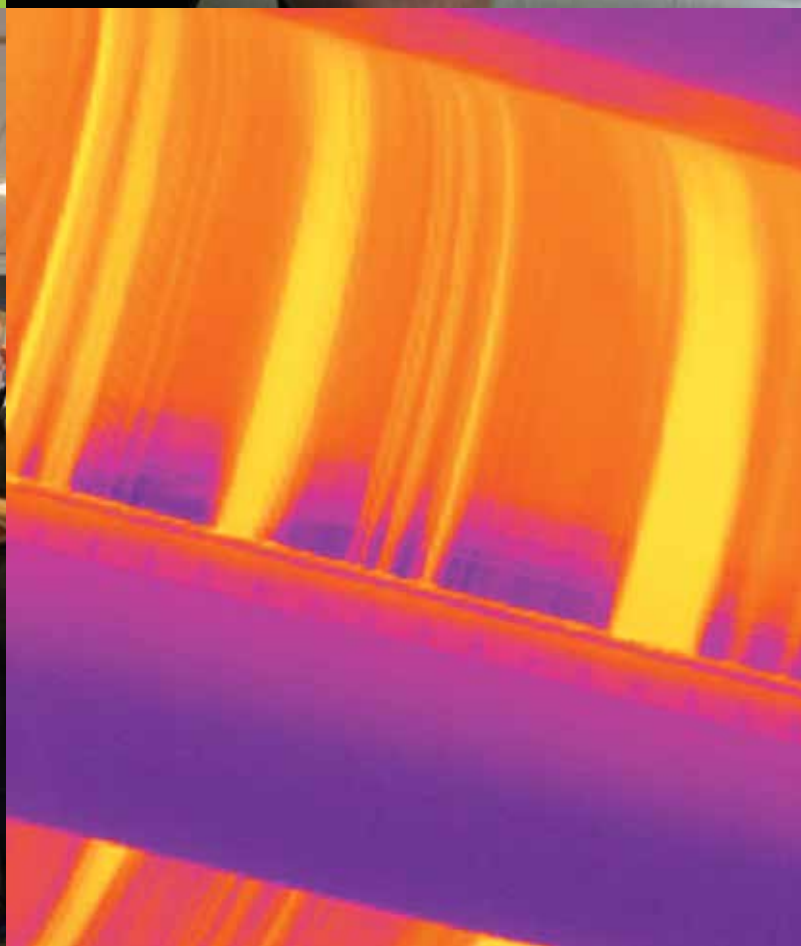

ITC Level 1 Thermography Course

Become a Level 1 certified thermographer and gain a competitive advantage

Objectives

This course prepares you for qualification as a category 1 certified thermographer. You will learn about the basics of infrared, how to operate an infrared camera under different conditions and for various purposes, how to appropriately judge a measurement situation in the field, and how to identify potential error sources. You will be able to undertake infrared inspections following written guidelines and to report the results of this inspection.

Description

After a short introduction to thermography you will have hands-on training. The theory sections on heat and infrared will provide you with the basic knowledge needed to use an infrared camera in the field, and to recognize and interpret thermal patterns. Strong emphasis will be placed on infrared measurement techniques and the influence of emissivity and reflectivity on the measurement results. You will take measurements of actual equipment in a laboratory, and you will also learn how and when to use qualitative and quantitative thermography. A short introduction to inspection routines and reporting principles will end the course. Now you will be well prepared to create a short case study, which you will present in front of the class. The course ends with an examination, including multiple-choice questions and thermogram analysis.

The course includes exercises, and our trainers work with images, sketches, and simple diagrams to illustrate the theoretical parts in a descriptive way.

Who should attend this course?

This course is designed for beginners in thermography with some experience of infrared camera handling and limited infrared knowledge who want to take their first step to becoming a professional thermographer and wish to qualify as a Level 1 certified thermographer.

Prerequisites

In order to attend the Level 1 Thermography Course, you must:

- be familiar with the basic operation of an infrared camera
- have the recommended experience of thermography according to relevant standards.

Proof of education

Participants passing the examination and meeting all relevant requirements will receive a certificate of conformance with the certification requirements.

Contact you nearest ITC office or visit the ITC website for course schedules.

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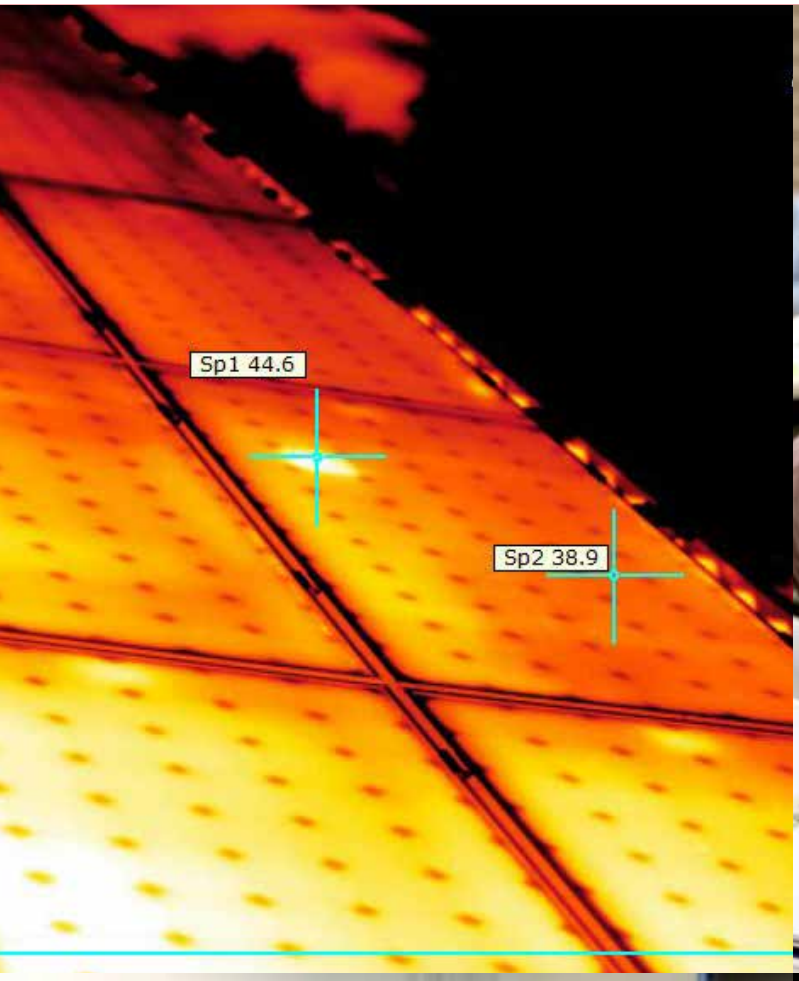

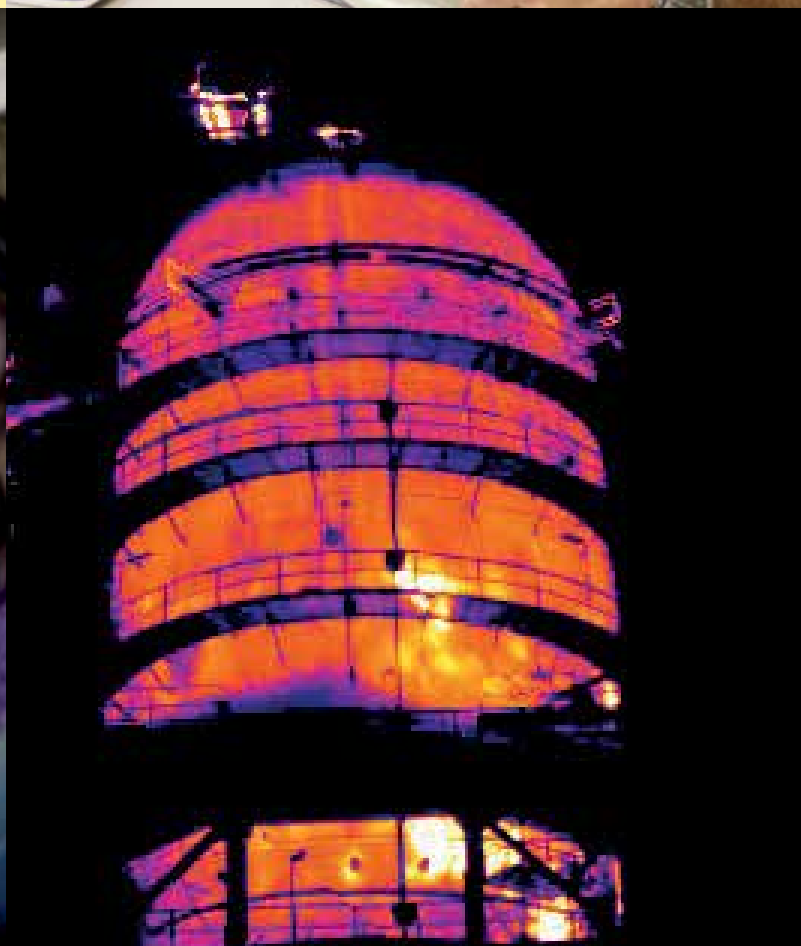

ITC Level 2 Thermography Course

Become a Level 2 certified thermographer and increase your infrared knowledge

Objectives

This 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 and infrared measurement equipment and its application. As a Level 2 thermographer, you are able to provide guidance to category 1 personnel in the areas of equipment selection, techniques, limitations, data analysis, corrective action, and reporting.

Description

After a short introduction to certification levels and procedures, and related standards, you will take an initial test. During the course you will build on your existing knowledge of thermal science and heat transfer as well as gain advanced knowledge on infrared theory and equipment. The course ends with a multiple choice exam.

The course includes advanced practical exercises and discussions about your professional experience and cases from the field. Thermal and infrared science theory are taught by using formulas, diagrams, and graphs. The focus is on steady-state processes, but transient mechanisms are also included.

Who should attend this course?

This course is designed for thermographers holding a Level 1 certificate who want to increase their knowledge about thermography and wish to qualify as a Level 2 certified thermographer.

Prerequisites

In order to attend the Level 2 Thermography Course, you must:

- hold a valid Level 1 thermography certificate
- have the recommended experience of thermography according to relevant standards
- prepare a case study to be presented at the Level 2 course and submitted toward qualification at the course close.

Proof of education

Participants passing the examination and meeting all relevant requirements will receive a certificate of conformance with certification requirements.

Contact you nearest ITC office or visit the ITC website for course schedules.

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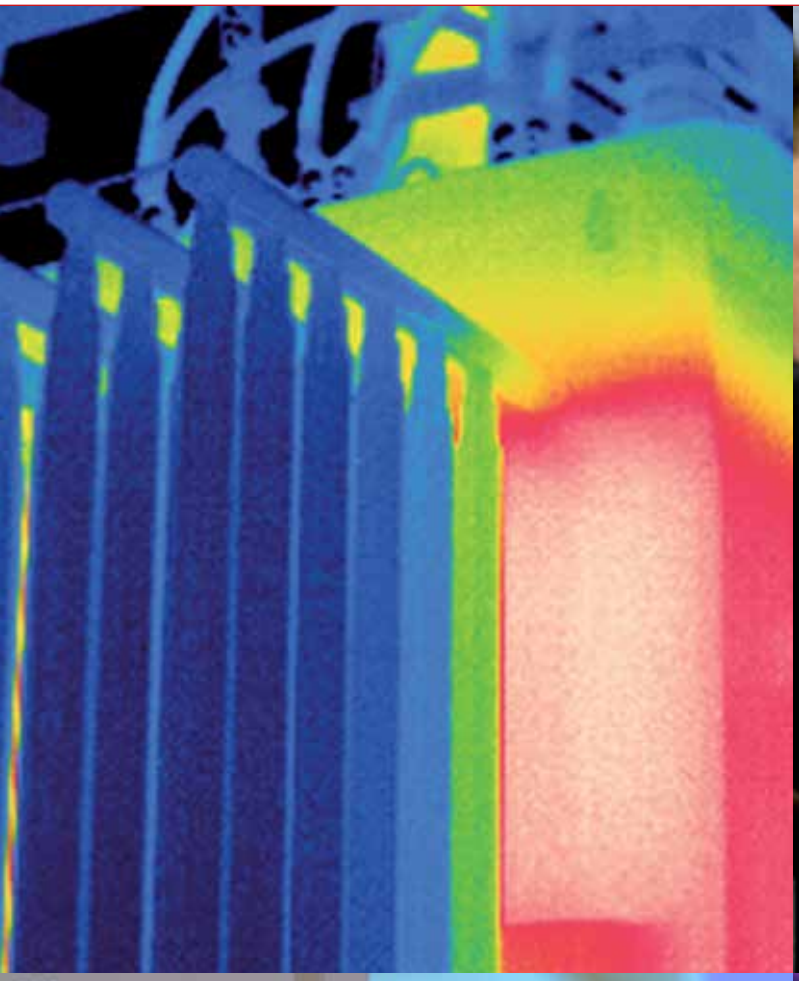


Professional courses

Take these courses after the Level 1 Thermography Course or combine it with the Level 2 Thermography Course and be recognized as a certified thermographer with specialized application expertise

Objectives

These interdisciplinary courses bridge the gap between thermography, background science, and applications. You will learn about important scientific concepts, such as physics, heat science, and chemistry. You will apply them together with relevant knowledge of applications, and thus be able to undertake qualified inspections within your application field on the basis of existing laws, standards, and regulations.

Description

The structure and schedule of the application modules may vary, but all of them contain the following learning units:

- Introduction and overview of existing standards and regulations
- Concepts and details of necessary background science
- Details of the specific application, including its theoretical background, typical phenomena, and practical information
- Application/use in practical laboratory sessions of the knowledge gained
- Hints on the equipment necessary for qualified inspections
- Examination.

Who should attend these courses?

These courses are mainly designed for thermographers holding at least a Level 1 certificate who wish to deepen their knowledge within a specific application field.

Some of the classes, such as the Volatile Gas Detection Courses, may also address persons with little infrared experience, who are specialized experts in their field and need to learn how to use an infrared camera as a complementary measurement tool.

Prerequisites and recommendations

In order to attend a Professional course, you should:

- hold a valid Level 1 thermography certificate or
- have equivalent infrared-related education and experience.

It is recommended that you have some insight into the field of application that the course addresses.

Proof of education

Attendees will obtain a diploma of attendance. Participants successfully completing this course will obtain a declaration of continuing education.

To find out more about your applications of interest, contact your nearest ITC office or visit the ITC website for scheduled Professional courses.

Introduction courses and Basic Camera Operation

Learn what you need to start using your infrared camera for professional purposes

Objectives

These courses provide you with the most important basics of thermography theory and applications, camera operation, and software usage.

Description

After a short introduction to the history of thermography, you will learn about the basics of thermography and of emissivity and reflected apparent temperature. During the hands-on session, you will operate an infrared camera in different measurement situations. After an overview on electrical and industrial inspections, you will also learn how to analyze and report your findings. The courses include practical exercises and laboratory sessions on emissivity and the reflected apparent temperature.

Who should attend these courses?

These courses are designed for beginners in thermography who would like to become familiar with their infrared camera and to learn about the basics of infrared and its applications.

Prerequisites and recommendations

A basic technical understanding is recommended.

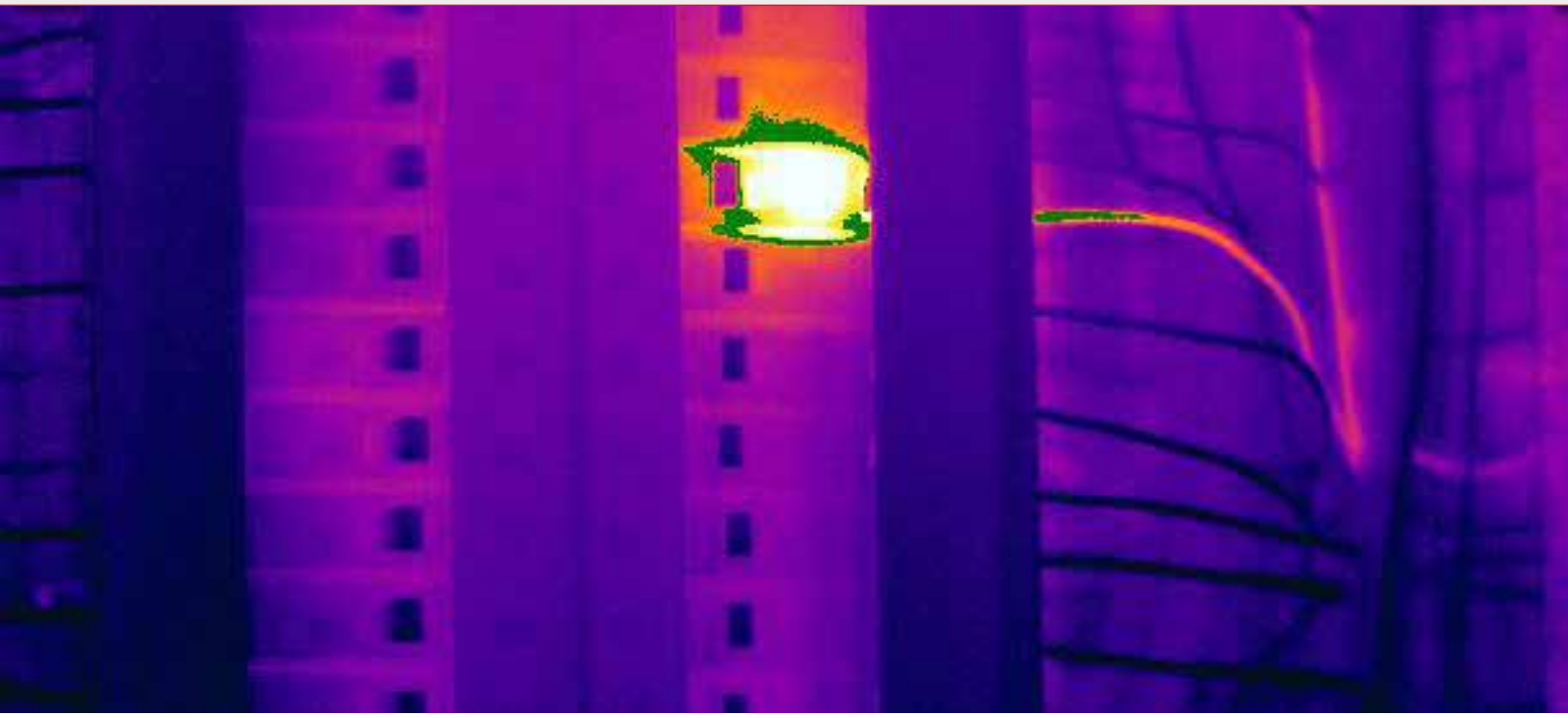
Proof of education

Attendees will obtain a diploma of attendance. Participants successfully completing this course will obtain a declaration of continuing education.

For course schedules, contact you nearest ITC office or visit the ITC website.

In-house training

Obtain the thermography training you need in your own working environment and learn how to use thermography the best way for YOUR inspections and measurement applications



Objectives

On-site training can be customized to your needs. The participants will learn about thermography, inspections, measurements, applications, and reporting corresponding to the level required for performing measurements and inspection in their working environment. The trainer will give useful advice on how to best implement thermography in your business.

Description

An on-site course can be any course, from a 1-day introduction to general thermography, to a customized application course to a complete certification course.

Who should attend this course?

Employees of a company or in a department of a company that wishes to minimize travel costs and provide training at its work site.

Prerequisites and recommendations

Refer to the prerequisites and recommendations applicable to the corresponding ITC course.

Proof of education

Participants attending on-site training are eligible for proof of education according to the specific course description.

Contact you nearest ITC office for a customized offer.

Why should YOU attend thermography training?

There are as many motivations as individuals using infrared cameras. However, we can assure you that training is the smartest way to put your thermography future on solid ground.

- A training course is the fastest way to get to work — you become familiar with your equipment, the measurement parameters and the potential applications.
- A training course is the fastest way to get the job right — you gain the necessary knowledge to avoid mistakes and presenting incorrect results.
- A training course is the fastest way to make a network — you will meet fellow thermographers and learn more about what the ITC community has to offer.
- A training course is the fastest way to become a professional — you benefit from the decades of field experience and knowledge of our instructors.

And, of course, it is more fun to explore the thermal dimension with a group of likeminded people. Contact your nearest ITC to get started.

Testimonials

A well-run and enjoyable course

Wayne Whyte, attended Level 1 training in New Zealand

Excellent, one of the best trainings I received!!

Pascal Delhaze, predictive maintenance coordinator at Johnson Matthey, attended Level 1 training in Belgium

Never before have I experienced something like this class; it was the best training I ever attended!

Dr Layer, building expert, attended Level 1 training in Germany

"I have great pleasure in saying a big thank you for the wonderful training session you conducted during the week for our Level 3 certification. It was indeed a very resourceful time we had and I must say that I gained quite a lot from attending the course. This should go a long way in making us effective and successful infrared program managers."
(Alfred Ombima, Elex Engineering Services Ltd, Kenya)

"The instructor was superb; his delivery was concise and he managed to get interest and contributions from all delegates! An informative, well-presented and structured course from which I've significantly benefited."
(Participant in on-site Level 1 training in the petrochemical industry, Scotland)

"I am very satisfied with the course structure; interesting content and very informative in an entertaining way."
(Building expert, attended Level 1 training Norway)

"Duration and content met exactly our expectations."
(Participant in 2-day on-site training at BMW, Germany)

"In our organization, IR application is limited to our FCCU reactor and regenerator. Though we had purchased an IR camera around 5 years back, we only started using it around 3 years ago. This was mainly due to lack of knowledge in IR application. However, we were able to use the camera more effectively after ITC training. With IR we could even detect problems in our FCCU well in advance."
(Participant in on-site Level 1 training in the petrochemical industry, India)

"This course was very useful to me and everything was excellent."
(Participant in Level 1 training, IT consulting company, Korea)

"A very well presented and informative course. Highly recommended."
(Participant in Level 1 training, South Africa)

"This was very useful training. The trainer has good mastery of his subject area."
(Participant of Level 1 training, Malaysia,)

"The course was very suitable for me and I am looking to Level 2 after passing my exam."
(Participant in Level 1 training, cement industry, Tanzania)

Why did the Implementations and Engineering Department of CEMIG Generation Transmission and SA recruit ITC for training?
"At CEMIG, IR thermography is an essential technique to detect failures in their early stages, and investment in equipment and training resulted in financial return for the company. We needed to learn how to do qualified thermographic inspections of our asset in order to reduce failure probability, as a means to save costs. "
(A. Gomes, CEMIG, Brazil about Level 1).

INFRARED TRAINING CENTER

The **Infrared Training Center (ITC)** is the leading source of knowledge within infrared science and its applications.

ITC holds training courses in nearly 50 countries and in over 22 languages featuring our trademark hands-on laboratories and practical exercises. Our global network of training and examination facilities includes wholly owned subsidiary operations as well as an extensive network of partners operating under a proven licensing model.

Courses
ITC offers certification courses, advanced application courses, and web-based learning; as well as providing access to experts in subject areas, custom solutions, and on-site services.

Instructors
ITC instructors are the most experienced trainers and thermographers in the business, holding expert ASNT, EPRI, EN, BINDT, and ISO qualifications, and their knowledge contributes to the success of our customers.

Certification
ITC certification courses prepare the candidate for a certification examination in compliance to national and/or international standards. A certificate is written testimony of demonstrated competence by successfully fulfilling conditions and procedures showing compliance to requirements.

Standards
The products and services of ITC are in compliance with ISO 17024 and ISO 18436.* Courses in North America meet or exceed the ASNT SNT-TC-1A guidelines and are accredited by NETA. Our quality management system for training, education, and certification of professional users of thermal infrared sensors and systems is certified to ISO 9001.

ITC staff actively participate in working groups and panels for recommendations, normative references, standards, and directives within our business and market segments — because of this involvement we can focus on key learning objectives for participants in ITC programs.

Community
The ITC online community at http://www.infraredtraining.com makes it possible to exchange ideas, problems, and solutions in the ITC forum, access to the ITC monthly newsletter, and learn about the applications of infrared thermography. For support of FLIR products, visit http://support.flir.com.

Conference
InfraMation is the world's largest annual infrared applications conference. To learn more, visit http://www.inframation.org.

Contact
To contact our North American operation, email info_us@infraredtraining.com. For inquiries concerning EMEA, Asia-Pacific, and Latin America, consult our global training directory on-line, ask your local FLIR representative or email itc@flir.se.

The Infrared Training Center (ITC) welcomes you to explore the thermal dimension with us.

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* In Europe, Middle East, Africa, Asia-Pacific, and Latin America.

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We have an established network of qualified training centers - to locate the one nearest to you, email itc@flir.se .