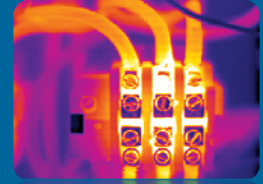




www.ipi-infrared.com

The Experts in Thermography

International Partners of the Infrasppection Institute



Infrasppection Institute is the oldest independent infrared training and certification firm in the world. Founded in 1980, Infrasppection Institute has trained and certified nearly 10,000 thermographers worldwide. With nearly 30 years in business, Infrasppection Institute literally pioneered the infrared training industry. During our long history, we have shaped the infrared industry through training, technical consulting, technical publications, research, standards development, and software publishing.



LEVEL I CERTIFIED INFRARED THERMOGRAPHER®

Open Enrollment

Level I Certified Infrared Thermographer® is a five-day course for the application of qualitative thermal imaging for P/PM, Condition Assessment, Condition Monitoring, Quality Assurance, Forensic Investigations, and Building Sciences.

This course covers infrared theory, heat transfer concepts, equipment operation and selection, standards compliance, image analysis and report generation.

Students are trained to identify and document thermal patterns caused by improper design, workmanship or material failure. Specific applications include: electrical distribution systems, mechanical systems, steam systems, refractory systems, underground piping, active thermography, building envelopes and flat roofs.

Students are encouraged to bring their own imager for individualized training or to learn how to use it more effectively.

Course tuition includes all course presentations, Student Reference Manual, and Infrasppection Institute Certified Infrared Thermographer® exam. Certification card and diploma issued with passing grade of 80%. Course is approved by the International Association of Certified Home Inspectors and meets the training requirements for their Infrared Certified professional designation and logo.

CLASS TIMES

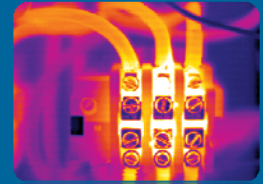
Classes begin at 8 am daily Monday through Friday and include refreshments, and lunch Monday through Thursday. Class ends by noon Friday.

Prerequisite:	None
Tuition fee:	AUD \$2600 (ex GST)



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LEVEL I CURRICULUM

1. Basic Infrared Theory

- Heat transfer
- Electromagnetic spectrum
- Emittance, reflectance, and transmittance
- Atmospheric transmission
- IR wavebands and lens materials

2. Infrared Equipment

- Selection criteria
- Range and level settings
- Class demonstrations
- Manufacturer equipment presentations (optional)
- Hands-on use in class

3. Infrared Electrical System Inspections

- Theory and thermal signatures of problems
- Seven types of detectable defects
- Conducting an inspection
- Safety practices
- Confirming exceptions
- Data recording
- Standards for inspections

4. Infrared Mechanical System Inspections

- Theory and thermal signatures of problems
- Rotating equipment
- Power transmission components
- High-temperature insulation
- Steam systems, process equipment, heat exchangers, storage vessels
- Active thermographic inspection techniques
- Safety practices
- Confirming exceptions
- Data recording
- Standards for inspections

5. Infrared Roof Inspections

- Theory and component construction
- Insulation and material characteristics
- Inspection techniques
 - ground based / aerial

- Weather variables and influences
- Required site conditions
- Safety practices
- Thermal signatures of latent moisture
- Verification of data
- Data recording
- Alternate methods of moisture detection
- Standards for inspections

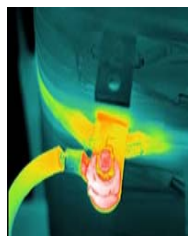
6. Infrared Building Inspections

- Theory and component construction
- Insulation and material characteristics
- Inspection techniques
 - interior / exterior
- Weather variables and influences
- Required site conditions
 - creating sufficient Delta T
- Thermal signatures
 - missing & damaged insulation
 - air leakage
 - latent moisture
 - pest damage

- Mold detection
- Other tools
- Verification of data
- Data recording
- Standards for inspections

7. Implementing an IR Predictive Maintenance Program

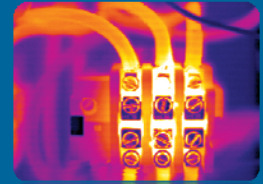
- 9 steps to setting up a program
- Integrating with other predictive technologies
- Cross-verifying with other predictive technologies
- Why programs fail, how they succeed
- Generating standards compliant reports



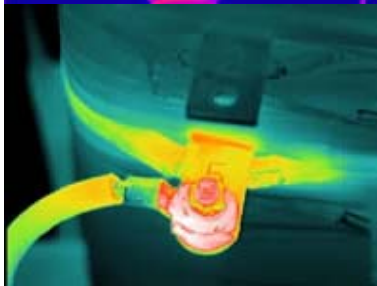


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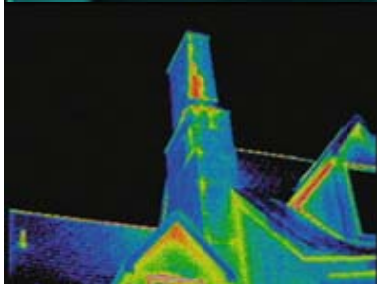
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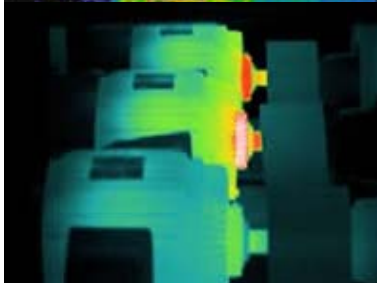
Locate loose connections



Perform quality assurance inspections of new installations or retrofits



Identify latent moisture in structures

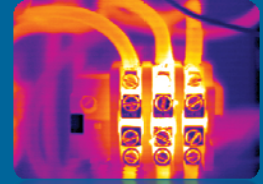


Rapidly inspect motor bearings



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FREQUENTLY ASKED QUESTIONS

Are There Any Standards for Thermography?

There are a number of standards and specifications published for infrared thermography. Currently, standards exist for the certification of personnel, operation of equipment, and inspections of electrical, mechanical, and structural systems. Recognizing the need for standardized procedures, Infrascpection Institute began publishing guidelines for thermography in 1993. Since their initial publication, Infrascpection Institute guidelines have been adopted by hundreds of companies worldwide and incorporated into documents published by recognized standards organizations such as the American Society for Testing and Materials (ASTM). Beginning in 2007, Infrascpection Institute guidelines were updated and renamed as standards to reflect their industry-wide acceptance and the best practices they embody.

Eight comprehensive standards are now available from Infrascpection Institute. These documents cover equipment operation, temperature measurement, and specific thermographic applications. The selection and use of applicable standards, specifications, and guidelines are taught in all Infrascpection Institute courses.

Why is Training Important?

Aside from test equipment, training is the most important investment a company will make in an infrared inspection program. Advances in technology have provided infrared equipment that is user-friendly; however, infrared thermography is not a “simply point and shoot” technology. In addition to understanding the object or system being inspected, thermographers must also understand common error sources that can influence observed thermal data. Infrascpection Institute Level I and Level II courses teach infrared theory, heat transfer concepts, equipment selection and operation, how to eliminate or overcome common error sources, and specific applications. Our courses are designed to allow a student to quickly master the technology enabling a company to see an immediate return on their investment.

Is All Training Equal?

No. While many firms offer Level I, II, or III Courses, course content is determined by the instructor. Consequently, course content often varies widely between training firms. Courses offered by equipment manufacturers are often biased toward their own brand and often conveniently ignore key limitations of equipment that they manufacture and/or sell. Since Infrascpection Institute does not manufacture or sell infrared equipment, our courses are not “infomercials”. Infrascpection Institute courses are presented without marketing hype and are applicable to all infrared imagers regardless of brand or age. All Infrascpection training courses are taught by experienced Level III thermographers who have extensive field experience in providing infrared inspections for a broad range of industries worldwide.

What is Certification?

Infrared certification is written proof that a person has completed formal training and/or possesses a certain skill set. Certification has long been one measure of thermographer competence within the infrared community much in the same way a diploma or degree is used among educational institutions. With over 26 years in business and nearly 10,000 graduates worldwide, Infrascpection Institute is the oldest and most respected name in infrared certification. Recognizing our reputation for excellence, smart engineers demand Infrascpection Certified Infrared Thermographers® for their projects. The Infrascpection Institute Certified Infrared Thermographer® program is compliant with international standards organizations such as ISO and ASNT.

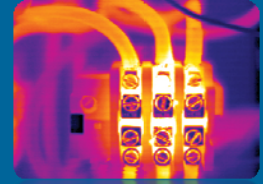
How Does a Person Become an Infrascpection Certified Infrared Thermographer®?

Upon completion of an Infrascpection Institute Level I, II, or III Course, students are welcome to take the Infrascpection Institute Certified Infrared Thermographer® exam. These exams are open book tests that are based upon content of the subject course. Students who score 80% or higher receive an Infrascpection Institute Certified Infrared Thermographer® Certificate. Infrascpection certification is good for life and does not expire. There are no renewal fees associated with Infrascpection Institute certification.



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Do I Have to Attend a Class to Become Certified?

No. As an alternative to taking the certification exam at the end of a course, students who complete 32 hours of Distance Learning may also take the Certified Infrared Thermographer® exam. These exams must be taken in person and are available at any of our regularly scheduled courses, at our annual IR/INFO Conference, or by appointment at an approved Infrasppection Institute testing facility. As an alternative, students may also take their exam via a video conference link to one of our Level III Distance Learning Instructors.

Where Are Classes Held?

Melbourne area Level I, II and III open-enrollment training courses are held at several times throughout the year at IPI's head office in Mitcham Victoria. We are located at 15/634-644 Mitcham Road, Mitcham Victoria, approx 23 km east from the City Center and approx 45km from the Melbourne Airport at Tullamarine.

Can Training Be Conducted at My Facility?

Yes! In addition to our Level I, II, and III Certified Infrared Thermographer Courses, Infrasppection Institute can also provide customized on-site training at your facility. With an on-site class, our Level III instructors will travel to your facility and can customize our training to meet your company's particular needs. Whenever possible, we will work with your on-site staff to conduct field trips and address your company's particular applications. On-site courses provide a cost-effective alternative to attending open-enrollment classes. On-site classes may be conducted for any number of students and are generally cost-effective with classes of 5 or more students.

What Do I Receive for My Tuition?

Tuition for Infrasppection open enrollment courses includes the following: All course materials including Student Reference Manual, Certified Infrared Thermographer Exam at end of Course, Trial copy of Exception® Data Management and Report Generation Software, and refreshments and Lunch during the course. On-site courses include the above plus field trips. Meals and meeting space can be provided upon request.

Distance Learning Courses include the following: Student Reference Manual, multi-question online quizzes for each course unit, Exception® Report Generation Software, hands-on experiments utilizing provided materials, instructions for self-directed field assignments, written proof of course completion.

What Continuing Education Do You Provide?

In addition to our Level I, II, and III courses, Infrasppection Institute hosts IR/INFO, an annual Advanced Training Conference, Technical Symposium and Technology Exposition. Since 1980, IR/INFO has been the infrared industry's premiere showcase for the latest in applications, equipment, techniques and standards. IR/INFO provides a unique forum in which our industry's brightest professionals exchange up-to-the-minute information, ideas and business strategies. Be sure to join us for 4 days of learning, networking and fun.

Why Infrasppection Institute Training?

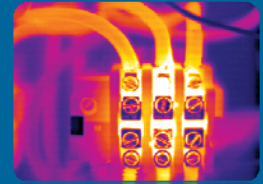
When you consider everything Infrasppection Institute has to offer, there really is no other choice for training. Whether you are a beginner or a seasoned professional, our courses and services are without equal in the infrared industry. We offer unbiased, state-of-the-art training and support services that are applicable to imagers of any type or age. With nearly 30 years experience in infrared training, technical consulting, standards development, and software publishing, we can help you get the most from your infrared inspection program. Give us a call and find out what thousands of other thermographers already know.



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About Us

Industrial Precision Instruments is an affiliate partner of the Infrasppection Institute. For more than 14 years we have been professional consultants to the Infrared industry offering professional services, consultancy advice, calibration and servicing, training and equipment.

Infrasppection Institute is the oldest independent infrared training and certification firm in the world. Founded in 1980, Infrasppection Institute has trained and certified nearly 10,000 thermographers worldwide. With nearly 30 years in business, Infrasppection Institute literally pioneered the infrared training industry. During our long history, we have shaped the infrared industry through training, technical consulting, technical publications, research, standards development, and software publishing.

Our mission is to support practicing thermographers with educational, certification and support services. We provide timely, accurate and unbiased information about infrared hardware, applications and program development. We are deeply committed to the global advancement of thermography as a science and a profession.

Certification

With vastly greater numbers of graduates than any other training organization, the Institute's Certified Infrared Thermographer® training and testing program has set the standard of excellence for infrared predictive maintenance since 1980. Infrasppection Institute Certified Infrared Thermographers® are specified by government and industry to perform thermographic inspections.

NDT Qualification

Our training courses, Reference Manuals and examinations can qualify you for Level I, Level II and Level III employer based certification in accordance with the ASNT document, SNT-TC-1A and help you prepare to take the optional ASNT Level III National Exam in Thermal/Infrared Testing Methods. Our staff can provide other outside agency services you might need.

Professional Curriculum

Infrasppection Institute instructors use extraordinary techniques to deliver stimulating, effective, and relevant instruction. All of our instructors are highly experienced, practicing thermographers. Each brings years of unmatched, real-world experience to the classroom. Our courses are taught using a combination of dynamic multi-media presentations, hands-on demonstrations and one-on-one interaction with students. Our courses integrate theory, practice, and case studies in a fun, relaxed atmosphere designed to maximize your learning experience.

All courses and Reference Manuals are constantly updated with the latest applications, practices and Standards based on research by our staff, graduates and others.

Continuing Support

We maintain a constant link with our graduates through follow-up phone calls, faxes and letters because our mission is to help you create a successful infrared thermography program. We are the only organization to provide the annual IR/INFO Symposium that keeps you on the cutting-edge of technology, up-to-date and competitive.