



Volume 10 Issue 2 - February 2021

Director's Message



With interest in renewable energy at an all-time high, photovoltaic systems have become a common sight worldwide. Infrared inspections can be used for quality assurance inspections of new installations or to monitor the performance of existing ones.

Photovoltaics is a method of converting solar energy into electricity. A photovoltaic system uses an array of several solar panels each of which is comprised of several solar cells. When exposed to sunlight, the solar cells produce direct current electricity. This DC power can then be converted to AC power for local use or to supply a power grid.

Defective cells or wiring within solar panels can cause hotspots that compromise the power output of the panel. Such hotspots are readily detected with a thermal imager while the panel is exposed to sunlight. Performed from either the topside or underside of panels, infrared inspections provide the most cost effective method for locating defects within installed panels.

When performing an infrared inspection of an installed PV system:

- Determine the best vantage point for imaging panels
- Perform inspections on a sunny day when winds are calm
- Qualitatively inspect panels looking for inexplicable hot or cold spots
- Include all electrical conductors and distribution equipment that connect solar panels to the electrical system
- Observe all safety precautions during the infrared inspection especially when working from an aircraft or an elevated vantage point.

Lastly, personnel should also take care to avoid electrical hazards when working near exposed, energized electrical conductors.

Frostbite and Hypothermia

For many, the dead of winter is upon us. Thermographers working outdoors in cold climates can face serious safety challenges due to frostbite and hypothermia. Knowing the symptoms of these conditions and proper treatment is imperative for worker safety.



Frostbite is a severe reaction to cold exposure that can permanently damage its victims. A loss of feeling and a white or pale appearance in fingers, toes, or nose and ear lobes are symptoms of frostbite.

Hypothermia is a condition brought on when the body temperature drops to less than 90 degrees Fahrenheit. Symptoms of hypothermia include uncontrollable shivering, slow speech, memory lapses, frequent stumbling, drowsiness, and exhaustion.

If frostbite or hypothermia is suspected, begin warming the person slowly and seek immediate medical assistance. Warm the person's trunk first. Use your own body heat to help. Arms and legs should be warmed last because stimulation of the limbs can drive cold blood toward the heart and lead to heart failure. If the person is wet, put them in dry clothing and wrap their entire body in a blanket.

Never give a frostbite or hypothermia victim beverages containing caffeine or alcohol. Caffeine, a stimulant, can cause the heart to beat faster and hasten the effects the cold has on the body. Alcohol, a depressant, can slow the heart and also hasten the ill effects of cold body temperatures.

[More Information](#)

Save Big on TI Reporter™ Software



In addition to streamlining your infrared report writing, now you can save even more with TI Reporter™ software. For a limited time, you can save over 15% with an annual subscription to TI Reporter™.

Combining cloud technology with state-of-the-art features, TI Reporter™ is the world's first cloud-based thermography reporting software that works with all thermal imagers. Reports can be generated quickly and easily from one's office or while in the field. Because it is cloud based, TI Reporter™ works with all computer operating systems and there is no need to install any type of program or software onto your computer.

Upcoming Courses

[Online Distance Learning](#)

[Level I Certified Infrared
Thermographer®](#)

- Feb 8 - 12 Las Vegas
- Feb 15 - 19 Sydney
- Feb 22 - 26 Palm Springs
- Mar 8 - 11 Edmonton
- Mar 8 - 12 Las Vegas
- Mar 15 - 18 Calgary
- Mar 15 - 19 Kuala Lumpur
- Mar 22 - 26 Melbourne
- Mar 22 - 26 Santa Fe
- Apr 12 - 16 Las Vegas
- Apr 19 - 23 West Windsor
- Apr 26 - 30 Twin Falls
- May 3 - 7 Kuala Lumpur
- May 10 - 14 Brisbane
- May 10 - 14 Palm Springs
- May 17 - 21 Perth
- May 24 - 28 Tacoma

[Level II Certified Infrared
Thermographer®](#)

- Feb 1 - 5 Kuala Lumpur
- Mar 8 - 12 West Windsor

[Level III Certified Infrared
Thermographer®](#)

- Mar 15 - 17 West Windsor

[Full 2021 Schedule](#)

Upcoming Conferences

Infraspection Institute invite you to see us at the following upcoming conferences. Be sure to stop by and say Hello!

[Thermal Imaging
Conference](#)

September 20 - 23, 2021
South Lake Tahoe, NV

[SMRP Conference](#)

October 25 - 28, 2021
Saint Louis, MO

[IR/INFO Conference](#)

January 16 - 19, 2022
Orlando, FL

Links of Interest

[IRINFO.ORG](#)

[The RAM Review](#)

[TI-Reporter.com](#)

Written by practicing thermographers, TI Reporter™ contains preformatted templates for a wide variety of infrared inspection applications including, but not limited to: electrical systems, mechanical systems, building envelopes, flat roofs, underground piping, and steam systems. TI Reporter™ automatically calculates temperature limits for electrical and mechanical equipment and can provide cost savings reports. The software is designed for in-house thermographers as well as thermographic consultants.

IRFeverScreen.com

[More Information](#)

New Dates for IR/INFO Conference

After careful consideration and due to concern for the safety of our attendees and staff, Infrasppection Institute's annual Advanced Training Conference, Technical Symposium and Technology Expo, IR/INFO, has been rescheduled for January 16 – 19, 2022 in Orlando, Florida. Now in its 32nd year, IR/INFO features four days of networking, learning, and fun in a relaxed, yet professional, family atmosphere.



We are presently seeking papers and presenters for IR/INFO 2022. Invited topics include, but are not limited to: safety, emerging applications, building sciences, related NDT, case histories, as well as tips and tricks.

Presentations are typically 20-25 minutes with 5 minutes for questions and answers with the audience. All papers and presentations will be published in the IR/INFO Conference Proceedings. The deadline for abstract submissions is July 31.

[More Information](#)

IR/INFO
CONFERENCE

Don't Hold Back



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Thermographer®](#)

