

Volume 8 Issue 7 - August 2019

Director's Message



Infrared radiometers must be within calibration in order to accurately measure temperatures. Traditionally, thermographers periodically send their equipment to the manufacturer for calibration. For some, this process can take several weeks and can be rather expensive. As an alternative, savvy thermographers can check the calibration of their instrument quickly and

easily using some commonly available items.

In order to check infrared radiometer calibration, you will need at least two targets each with a known temperature and emittance. A simple solution is to use a container of ice water and a container of boiling water with a coupon of Scotch PVC electrical tape affixed to the container's exterior surface. The size of each target must exceed the spot measurement size of the instrument being calibrated. Container temperatures may be ascertained with a thermometer, thermocouple or contact radiometer.

Once targets have been prepared, use the following procedure:

- Turn radiometer on and allow it to stabilize to room temperature
- Set radiometer perpendicular to target surface
- If possible, set radiometer inputs for distance, humidity & air temperature
- Measure and compensate for Reflected Temperature
- Set radiometer emittance control. Scotch 191 tape = 0.97 LW or SW. Ice = 0.98 LW; 0.93 SW
- Using subject radiometer, measure temperature of target. For ice water, measure temperature of ice cubes. For hot water container, measure tape coupon
- Compare radiometer's value with contact temperature reading for each target to ensure that radiometer is within spec

A heated blackbody simulator can be used to check instrument calibration at higher temperatures. Because radiometer calibration is not user adjustable, it will be necessary to return it to the manufacturer should you find your instrument is out of spec.

Upcoming Courses

[Level I Certified Infrared Thermographer®](#)

- Aug 5 - 9 Orange
- Aug 12 - 15 Seal Beach
- Aug 12 - 16 Toronto
- Aug 12 -16 Vancouver
- Aug 26 - 30 Kuala Lumpur
- Sep 2 - 6 Sydney
- Sep 16 - 20 Houston
- Sep 23 - 27 Gold Coast
- Oct 7 - 11 West Windsor
- Oct 7 - 11 Melbourne
- Oct 14 - 18 Kuala Lumpur
- Oct 14 - 17 Henderson
- Oct 28 - Nov 1 Auburn
- Oct 28 - Nov 1 Reno

[Level II Certified Infrared Thermographer®](#)

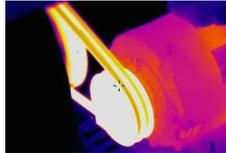
- Sep 16 - 20 West Windsor
- Nov 11 - 15 Melbourne
- Nov 18 - 22 Kuala Lumpur
- Dec 9 - 13 Auburn
- Dec 9 - 13 Trinidad

[Level III Certified Infrared](#)

Radiometer calibration will be the subject of [SuccessRies 202](#), one of two short courses being held on January 19, 2020, at the IR/INFO Conference. Attendees who bring their imager can calibrate it for free while at the conference.

Temperature Limits for Drive Belts

Drive belts are an integral component on many types of machines. Despite the critical role they play in machine operation, V type drive belts tend to be out-of-sight and out-of-mind until they fail. In most installations, belt temperature largely influences the life of installed V belts.



As a rule of thumb, properly applied and maintained belts should not exceed 140° F (60° C), assuming an ambient temperature of less than 110° F (43° C). It should be noted that belt life can be greatly reduced by higher operating temperature. In fact, for every 18 F (10 C) increase in belt temperature, belt life is cut in half.

There are many factors that contribute to high belt temperature including, but not limited to: ambient air temperature, machine design, installation, alignment, and belt tension. Overheating belts can be readily detected with an infrared imager. Once detected, overheating belts should be investigated for cause and proper corrective measures taken as soon as possible. Doing so can help prevent unscheduled downtime and may prolong belt life.

[More Information](#)

Course Materials Licensing



Infraspection Institute's course materials licensing program provides a unique opportunity for experienced thermographers to bring quality training to their clients without having to develop their own training materials. Licensees can elect to teach applications or certification courses. Best of

all, our program provides all training materials, course manuals, instructor training, and support.

Benefits of our Program:

- Expand your services and increase profits
- Enhance your credibility
- Provide world-class thermography training with minimal investment

Infraspection Institute's course materials licensing is open to individuals, companies, and educational institutions. It is perfect for

[Thermographer®](#)

- Sep 23 - 25 West Windsor
- Dec 2 - 4 Melbourne

[Full 2019 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](#)

October 3 - 6, 2019
Irvine, CA

[SMRP Conference](#)

October 7 - 10, 2019
Louisville, KY

[IR/INFO Conference](#)

January 19 - 22, 2020
San Antonio, TX

[Ultrasound World](#)

May 12 - 14, 2020
Clearwater Beach, FL

Links of Interest

[IRINFO.ORG](#)

[NACBI](#)

[CITA.ORG](#)

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those seeking to provide green technology education as well as companies seeking to educate a sizeable thermography team.

TI-Reporter.com

[More Information](#)

Early Registration Bonus for IR/INFO Exhibitors

Infraspection Institute are pleased to announce an early registration bonus for exhibitors at our annual IR/INFO Conference. Exhibitors that register and pay for their booth prior to September 15 are eligible to bring a second person at no additional charge. Valued at \$595, this bonus provides full conference access and conference proceedings.



Now in its 31st year, IR/INFO is the original Advanced Infrared Training Conference, Technical Symposium, and Technology Expo. IR/INFO features four days of networking, learning, and fun in a professional, yet relaxed, family atmosphere. IR/INFO is scheduled for January 19 – 22, 2020, in San Antonio, TX.

IR/INFO is a must-attend event for all manufacturers and distributors of infrared equipment, condition based monitoring tools and services, reporting software, and those who provide products or services of interest to thermographers.



[More Information](#)

Don't Settle for Less



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