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Director's Message



Electrical bus ducts are a common feature found in many commercial and industrial electrical systems. When used to supplement regular PM, infrared inspections can help to detect loose or deteriorated connections that can lead to costly catastrophic failures.

Electrical bus ducts are used to distribute low voltage power throughout many industrial facilities. Modern bus ducts are unitized structures that contain insulated conductors within a steel casing. Individual sections of bus duct, each typically 10 feet long, are joined with bolted connections at the end of each bus section. Published industry standards recommend that bus duct connections be manually tightened every six months.

Even with regular tightening of bus duct connections, loose/deteriorated connections are difficult to detect. With the bus duct under load, a thermal imager can readily detect the temperature differentials associated with loose connections. Properly functioning bus ducts should exhibit no temperature differential in the vicinity of bolted connections. Because bus duct conductors are hidden from direct line of sight, any inexplicable temperature differentials should be investigated and corrected immediately. Disconnect switches and cable connections should be checked for thermal anomalies as well.

To ensure complete coverage, bus duct should be inspected from both sides of the duct along its entire length. Termination cabinets should also be inspected once the covers have been removed. Annual or semi-annual infrared inspections performed by certified, experienced thermographers should be used to supplement regular bus duct maintenance.

Cleaning IR Lenses

Measurement accuracy is a perennial topic among thermographers. Many are unaware that improperly cleaning lenses can have significant impact upon the accuracy of an infrared imager.



Lenses and optics are an integral part of any infrared imaging system. Most infrared optics are coated with special anti-reflective coatings to maximize the transmission of infrared energy to the system's infrared detector. For imaging radiometers, each lens is individually calibrated to the imager.

Improperly cleaning a lens or coated optical element can cause the anti-reflective coating to be damaged thereby changing the transmittance of the lens and the measurement accuracy of the system. If the coating is sufficiently damaged, a costly lens replacement and system recalibration may be required. This recalibration would require sending the imager back to the manufacturer incurring up to several weeks of downtime.

In light of the above, thermographers should always be sure to follow the manufacturer's instructions when cleaning infrared lenses and optics.

[More Information](#)

Upcoming Courses

[Level I Certified Infrared Thermographer®](#)

- 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
- Dec 2 - 6 Trinidad
- Dec 2 - 5 Henderson
- Dec 9 - 13 West Windsor
- Dec 16 - 20 Kuala Lumpur

[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 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](#)

Steam Trap Testing



With the onset of seasonably cooler weather, now is the time to prepare your steam system for the upcoming heating season. Testing your steam traps before the season begins can help to pinpoint costly leaks prior to winter.

Traditionally, two different non-destructive technologies have been employed to test steam systems – contact ultrasonics and temperature measurement. Used individually, each of these techniques has limitations that can lead to false positive and/or false negative results. Combining temperature measurement with ultrasound can result in a highly accurate test method by following a few simple steps:

- Measure trap inlet to ensure that temperature is above 212° F. If trap inlet is below 212° F, ascertain why steam is not reaching trap
- Listen to the trap outlet with contact probe of ultrasonic unit. Continuous hissing or rushing sounds usually indicate a failed trap
- Ascertain that trap is cycling periodically. Frequent cycling may be caused by an undersized or worn trap
- Tag defective traps and document in a written report
- Re-test defective traps after repair to ensure effectiveness of repair

Always be sure to follow appropriate safety precautions especially when working with high-pressure steam or when using ladders or lift equipment.

[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.

IR/INFO
CONFERENCE

[More Information](#)

Be All That You Can Be



[Become an Infraspection Institute Master](#)

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

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[CITA.ORG](#)

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