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INFRAMATION

Infrared
Training
Center **itc**™

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Welcome [\[top\]](#)

Hi [{{ user\("firstname"\) }}](#),

Our thoughts and prayers are with all our friends at NASA and their families as we mourn the loss of Columbia and her crew.



We at ITC have trained many thermographers from NASA and JPL,

and I have had the personal privilege of providing technical support for a few Space Shuttle flight experiments. We wish them the best through these difficult days.

Click [here](#) to download a pdf version of the newsletter.

Until next month,

Gary Orlove,
Editor and Publisher



ASNT: All Sorts of Nice Things [\[top\]](#)



By Bernard R. Lyon Jr.
ASNT NDT Level III
ITC Course Moderator

"Great discoveries and improvements invariably involve the cooperation of many minds." — Alexander Graham Bell, 1877

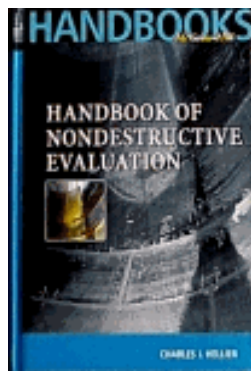


What is ASNT? Some folks are quite familiar with the acronym, but there are many people who are totally unaware of this worthy organization. The letters stand for American Society for Nondestructive Testing. We often announce at training courses that we have more ASNT NDT Level III personnel than any other Infrared Training Organization. But, what is the significance of that?

The Society was originally founded in 1941 by nine members, as the American Industrial Radium and X-Ray Society, with Phillip D Johnson as their leader. It is interesting to note that the original document has Johnson's address as 210 Brookside Parkway, Medford, Massachusetts. This happens to be a very short walk from my house.

Johnson worked as a radiographer at the Boston Navel Shipyard. He saw the need for an association to serve the needs of the radiographic profession. Radiographers conducted X-Ray inspections of metal parts used in aircraft, trains, ships, and many other mechanical devices. This work was essential to prevent catastrophic failures which had taken place in the past.

Over time, the society adopted additional nondestructive testing methods. Today there are eleven major NDT methods for which the society provides educational material and programs, as well as training, standards, and services for the qualification and certification of NDT personnel. Conferences and meetings provide a forum for exchange of information.



ASNT inaugurated its NDT Level III program in 1976 with certification offerings in five NDT methods: Radiography, Magnetic Particle, Ultrasonic, Penetrant and Eddy Current. Infrared Thermography, known as the Thermal/Infrared method, was officially recognized as the tenth method in September, 1993. Many professional thermographers had recognized the vital need for worthy certification by a well established and respected organization. ASNT is the single largest certifying body of Level III personnel in the world today. The ASNT NDT Level III certificate remains the most respected and widely accepted NDT certification throughout the world. Over 5,000 individuals from more than 50 countries have been certified by ASNT over the years. Today there are 38 individuals with ASNT NDT Level III certifications in the Thermal/Infrared method.

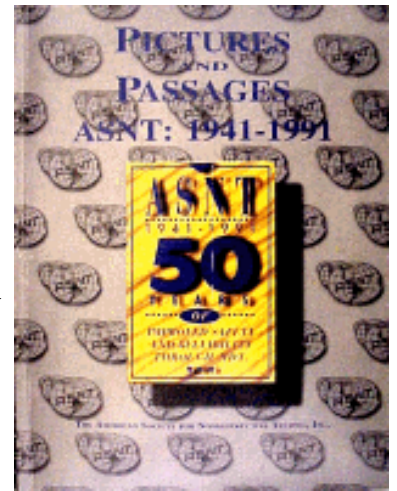
In response to industry requests for a third-party certification that focused on Predictive Maintenance knowledge and test methods, instead of the traditional NDT methods used for NDT Level III certification, ASNT began the Predictive Maintenance (PdM) Level III certification program in 2000. ASNT now offers PdM Level III certification in the Infrared and Vibration Analysis methods. There are currently 9 individuals with PdM Level III certifications; only two of those are certified in Infrared.

ASNT conducts two major conferences annually. I had recently attended the Fall Conference in San Diego with Gary Orlove and Bob Rogers. We were all involved with delivering presentations, and attending various committee meetings. I had also conducted a short course: "Infrared Thermography: Equipment, Applications, Theory." We all got the opportunity to attend various sessions where papers were presented. There were seven papers dealing with Infrared Thermography. ITC staff members delivered four of these.

ASNT is a large, established, dynamic organization. It is difficult to paint an appropriate image, or even acquire one, without direct interaction and involvement. I have been a member since 1994, and I have had the opportunity to attend many conferences.

I have a great deal of admiration and respect for all of the people who work so hard to uphold and promote the NDT profession and contribute to the good of the society.

I would like to encourage everyone to take a closer look at this fine organization. For more information, you can visit their website at www.asnt.org. Charles Hellier has written an excellent book, "Handbook of Nondestructive Evaluation," McGraw-Hill, 2001, ISBN # 0-07-028121-1. Another book, published in celebration of ASNT's 50th anniversary, is "Pictures and Passages ASNT: 1941-1991," ASNT, 1991, ISBN # 0-931403-31-6. Better yet, attend a conference if you can. See firsthand what ASNT has to offer. Say hello to me at the conference. I'll be the guy with my name on the badge.



Tech Tips - Quickly Adjust Level and Span on the PM-695 [top]



By Jason Gagnon
ITC Image Processing
Applications Support Supervisor

Although the A (auto-adjust) button does a good job of determining the optimal level and span based on what you are scanning, it is often necessary to make small adjustments in order to optimize the appearance of the IR image. This technique, called thermal tuning (*we stopped using "thermal focusing" due to confusion with optical focusing - ed.*), allows you to zero in on a problem hot spot and enhance the quality of the IR image. It also allows you to find small temperature differences that may not be initially apparent when using the A button.

There is a very easy way to adjust the level and span on the PM-695 without having to access the menus. If you hold down the C button on the camera and push the joystick up and down you can adjust the level (or brightness). If you move the joystick left and right while holding down the C button you can adjust the span (or contrast). You will see the image change as you move the joystick. Once the image is set simply let go of the C button and the joystick will return to its normal function.

This technique can be used with the PM-695 camera and similar FLIR and Agema cameras, like the PM-595 and the Agema 570.

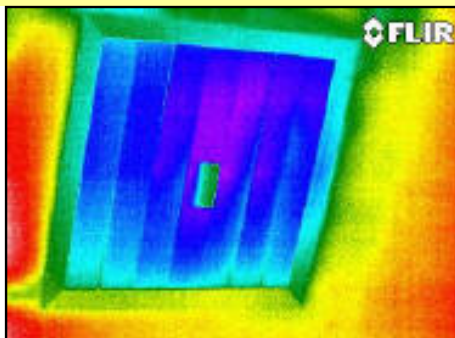


Hold down
the C button.....

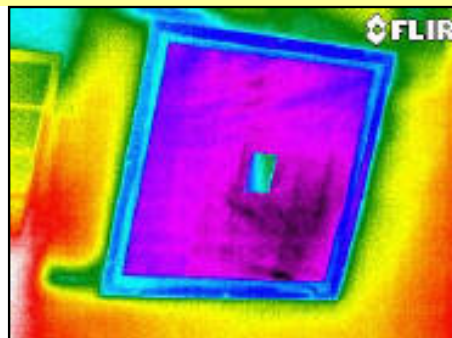
...and move the
joystick to adjust
the level and span.



Last Month's Brainteaser [top]



Before Plastic Sheet



After Plastic Sheet



Visual

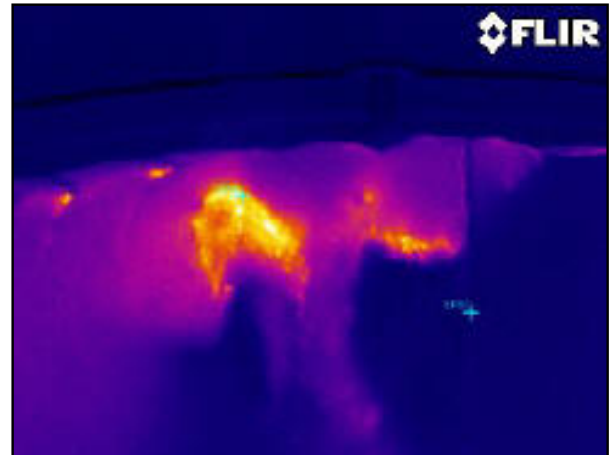
These images show the vent louvers for an attic whole house fan (which is off) on the top floor of a home in New England in the winter. The first image shows the thermal conditions before application of a 4 mil plastic sheet covering the louvers, the second image shows the effect after application. The artifact at the center of each image is a "Post It" note adhered to the surface to provide a uniform reference to view. The temperature scales of the two images are identical.

Congratulations to Bob Burton of Owens_Ill. Glass Co or Toledo, OH for his correct explanation for the temperature changes between the images. Here it is "*The air in the attic is colder than in the room below. As long as the warmer inside air is able to move through the louvers, it warms them. The plastic stops the movement of warmer air and the louvers become colder.*" Great thermal sleuthing Bob!

Brainteaser of the Month [\[top\]](#)

Here is this month's brainteaser. First reader to email me with the correct explanation wins \$20 in Infrabucks. Please put "**Brainteaser**" as the subject of the message.

[Click here to email your guess](#)



Upcoming Classes [\[top\]](#)

Click the links below to see our latest course calendars.

[Americas](#)

[EurAsia](#)

[Germany](#)

[France](#)

About the Infrared Training Center [\[top\]](#)

The Infrared Training Center offers training and certification in all aspects of infrared thermography use. Our world-class training facilities are located near Boston, Massachusetts, USA and Stockholm, Sweden and have the world's most extensive hands on laboratories for infrared applications. Please join us in exploring the fascinating world of the infrared!

Your comments and suggestions about this newsletter are welcomed and encouraged. If you have an interesting application or case study to share, we encourage you to submit it for publication. **Published articles earn credit towards recertification.**

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