

**Results of Electronic Ballot of RESNET Board of Directors  
Authorizing Amendment to Proposed RESNET IR Standards to  
be Submitted to the RESNET Standards Public Review and  
Comment Process**

December 14, 2009

***Shall the RESNET Board of Directors authorize the amendments proposed by the RESNET IR Standard Working Group on the proposed RESNET IR Standards (Attachment A) to be submitted to the RESNET standards amendment public review and comment process?***

Yes (18)

No (0)

Abstain (0)

Not Voting (3)

Ben Adams  
Steve Byers  
Dennis Creech  
Richard Faesy  
Philip Fairey  
David Goldstein  
Andy Gordon  
Tom Hamilton  
Michael Holtz  
Mark Jansen  
Lee O'Neal  
Kelly Parker  
Bill Prindle  
Robert Scott  
Daran Wastchak  
Erin Wiggins  
David Wilson  
Barb Yankie

Bruce Harley  
C.T. Loyd  
Greg Nahn

The amendment was authorized to be submitted to the public review and comment process

# Attachment A

## Proposed Amendment: IR Standard

### Proponent:

RESNET IR Standards Working Group

### *Proposed Amendment*

Chapter Eight

802.1 – Amend as follows:

### **802.1 Certification for Infrared Inspections of Buildings**

The person applying to RESNET for the Infrared Inspection of Buildings Certification will have two possible courses of action:

#### Method 1

1. The candidate must have a minimum of Home Energy Survey Professional certification and should be able to demonstrate sufficient building science knowledge and understanding of the effects of stored heat, stack and wind effect, solar heating, reflectivity, emissivity, material saturation and surface moisture.
2. **AND, the candidate must complete a course of study that fully complies with the Level I Guidelines of the American Society for Nondestructive Testing (ASNT). The course of study must meet the minimum ASNT Guidelines of thirty-two (32) classroom hours and successful completion of an exam. The exam will be in three (3) parts – general (written), application specific (written), and practical (hands-on). Those who have received their training outside RESNET must submit three thermography reports following these guidelines for review by the RESNET Infrared Certification Committee.**
3. AND, should the RESNET Infrared Certification Committee require further documentation of knowledge and abilities, the candidate must provide either through written or video means, evidence of the ability to performance of the following: a thorough knowledge of the operation of your particular infrared imaging system, the ability to interpret thermographs and other data, and the ability to confirm that test conditions are within set limits and are consistent with assumptions that support the interpretation.
4. The RESNET Infrared Certification Committee will provide a certification number to the individual once all criteria has been achieved.

#### Method 2

Without the training as indicated in Method 1 above, four courses of action must be met to obtain a certification through RESNET:

1. The candidate must have a minimum of a Home Energy Survey Professional certification and should be able to demonstrate sufficient building science knowledge and understanding of the effects of stored heat, stack and wind effect, solar heating, reflectivity, emissivity, material saturation and surface moisture.
2. A RESNET APPROVED training course with designated field and classroom course work equaling 24 hours. **The 24 required hours of thermography training will be as follows: A minimum of 16 hours will be in a classroom setting. A minimum of 4 hours will be in the field and will include a RESNET standardized field test on the use of an infrared imaging system. Each student must complete a two hour RESNET online thermography test of 50 questions- either proctored according to RESNET guidelines after the training or the RESNET thermography test may be offered by the Rater Trainer after the 24 required hours of training.** Documenting 1 year of thermal imaging experience, **which will include submission of ten thermography reports that conform to currently accepted professional guidelines and demonstrate the use a blower door in conjunction with the infrared imaging system** for review by the RESNET Infrared Certification Committee. **Candidates will have a one year period from the time they passed the RESNET Thermography test to submit the required thermography reports.**
3. The candidate must submit documentation of steps 1 through 3 above to the RESNET Infrared Certification Committee and must provide to the Committee upon request, further documentation through written or video means of the following knowledge and abilities: a thorough knowledge of the operation of his/her particular infrared imaging system, the ability to interpret thermographs and other data, and the ability to confirm that test conditions are within set limits and are consistent with assumptions that support the interpretation.
4. The RESNET Infrared Certification Committee will provide a certification number to the individual once all criteria have been achieved.

802.2 – Amend as follows:

## **802.2 Thermographic Imaging Requirements**

### **Infrared Imaging System Performance**

The infrared imaging system must have the gain or contrast set so as to be able to distinguish a framing member from the other parts of the envelope cavities under the prevailing thermal conditions with the IR imaging system at a distance, which permits the recognition of thermal anomalies. The imaging system should be able to insure any defects or anomalies won't appear in either saturation (maximum brightness or white) or in suppression (minimum brightness or black)

on the display or on the thermographic images. **Some imaging systems that meet the specifications may have fixed focus and automatic level and span adjustment. It is the responsibility of the thermographer to adjust their viewing position relative to the envelope surfaces to insure that data is of acceptable quality and the image is properly documented.** This requirement assumes all conditions for the inspection have been met. A radiometric camera is recommended but not required. (Note: If temperatures are being measured, you must also have the ability to adjust emissivity and set background reflected temperature; this can be done in the camera OR by using software.)

802.8 – Amend as follows:

## **802.8 REPORTS**

16. Thermal images taken during the inspection with their relative locations and written **or voice recorded** explanations of the anomaly listed along with visual and reference images. **Any spot, line or area temperature measurement marker embedded in a thermal image shall also include information regarding its spot, line or area emissivity and background temperature setting.**

802 Appendix D – Amend as follows:

### **Remove in its entirety and re-letter Appendixes**

#### ***Justification***

The RESNET IR Standard Working Group drafted an IR standard based on the experience of its members and the United Kingdom's standard for using the technology in measuring the quality of insulation installation. The draft standard was reviewed and approved by the RESNET Technical Committee. The draft standard underwent a public and review and comment process. After considering the comments the working committee has proposed the following amendments to the draft standard

- Method of approved training from outside of RESNET (Method 1)
- Method of approved training of RESNET Approved course (Method 2)
- Image system specifications dealing with fixed focus and automatic level and span adjustment.
- Elimination of APPENDIX dealing with Moisture Identification-relettered Appendixes and document.
- Allowance of voice recorded data

