



Interpretation: Thermographic Inspections
Designation No: 301-2014-15
Approved: June 29, 2018 by RESNET SDC 300
Effective Date: July 29, 2018

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Reference: This request for interpretation refers to the requirements presented in:
ANSI 301-2014 MINHERS
 Page Number(s): ANSI 301-2014, page 22
 Section(s): 4.2.2.2 and 4.2.2.2.1
 Table(s): _____
 Relating to: Using thermographic inspections to inspect and grade insulation

Background: The current section on Insulation Inspections in ANSI 301-2014 is not explicit about whether thermographic inspections can or cannot be used to assess insulation in the Rated Home. Section 4.2.2.2.1 states: “The insulation of the Energy Rating Reference Home enclosure elements shall be modeled as Grade I. The insulation of the Rated Home shall either be inspected according to procedures equivalent to Appendix A of the *Mortgage Industry National Home Energy Rating Systems Standards* or, if not inspected, shall be modeled as Grade III and shall be recorded as “not inspected” in the rating.” There is no clear definition of what constitutes an ‘inspection’ and if thermographic inspections are permitted in the event that the insulation is not directly visible.

Interpretation: It is our interpretation that thermographic inspections can be used to verify the presence of concealed insulation and that thermographic inspection should not be recorded as “not inspected”, which therefore limits it to a Grade III. It is our interpretation that thermographic inspections can be used to rate concealed insulation as Grade I or Grade II, if following the RESNET Interim Guidelines

Question: Is this Interpretation correct?

Answer: No.

Comments: While the current Standard is not explicitly clear, thermographic inspection can be used, but only for limited inspections and for grading under limited conditions.

To determine whether an assembly is insulated or uninsulated, thermographic inspection may be used. Assemblies determined to be insulated via thermographic inspection are considered Grade III.

In order to rate the insulation as Grade II using thermographic inspection, the following restriction applies: the person doing the inspection is either a licensed engineer or has the following credential (ASNT NDT Level III) or is working under the direction of a licensed engineer or under the direction of an individual with the following credential (ASNT NDT Level III). A searchable database of individuals certified by the American Society for Nondestructive Testing (ASNT) for nondestructive testing (NDT) can be found here:

https://www.asnt.org/MajorSiteSections/Certification/ASNT_NDT_Level_III.aspx

Thermographic inspection may not be used to determine an assembly achieves a Grade I rating.

The RESNET Interim Guidelines for Thermographic Inspection of Buildings are not a standard and shall not be used to determine the Grade for the insulation of an assembly. The current consensus is an ASTM standard for thermographic inspections and training with certification programs need to be established before thermographic inspection is fully recognized for grading the quality of insulation installations.