



NDT&E Tech Brief

Winter Testing

Winter can be a great time for investigations, including Non-Destructive Testing and Evaluation (NDT&E). Many of the common tests can be and are performed.

Heat Loss: Building infrared (IR) surveys are actually facilitated by winter conditions due to the large difference between indoor and outdoor temperatures. As long as the sun is not shining directly on the exterior and the winds are low, heat loss can be observed at any time of day or night.

Roof Survey: Ice and cold winds make an IR roof moisture survey ill-advised, but electrical impedance (formerly known as capacitance) roof moisture surveys are an effective alternative. We have performed successful EI surveys on roof membranes over ice, at all air temperatures, and under all wind conditions. The only concern may be added delay after precipitation if surface ponding takes the form of snow or ice that must melt.



Concrete & Masonry: Detection of embedded objects – rebar and conduit in concrete, wall ties and truss mesh in masonry – is not inhibited by the cold. The only concern is battery life, so we bring spares and chargers to the site. Impact measurements such as thickness with impact-echo, strength with rebound hammer, and void/delamination testing with sonics or ultrasonics are also not affected by the cold.

Restricted Testing: Of course, water testing – deluge, flood, leakage, absorption – is restricted to above freezing temperatures. Outdoor coating adhesion testing will be limited not by the pull-off equipment but by the unknown curing time of the dolly epoxy.

At a time when construction schedules can be on hold, contractors are eager to assist NDT&E investigations with platforms, booms, and scaffolds. Feel free to contact me if you have any questions on how NDT&E may help you solve a problem. (For a list of all of the tests that SUPERSTRUCTURES provides, click [here](#).)

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