

## **Thermographic Signal Reconstruction with periodic temperature variation applied to moisture classification**

by P. Bison, G. Cadelano and E. Grinzato

*CNR-ITC, C.so Stati Uniti 4, 35127 Padova, Italy, [paolo.bison@itc.cnr.it](mailto:paolo.bison@itc.cnr.it)*

### **Abstract**

A method to analyse thermographic data with periodic temperature variation is proposed. A periodic heat flux is generated on the surface of a specimen with a non-zero average value. Functions describing the periodic temperature response plus the transient effect are considered. A possible linear trend is also taken into account aiming at considering slow environmental variations. Based on the superposition of the effects, thanks to the linearity of the heat conduction equation, the analysis of the thermographic signal is proposed that applies to the classification of the evaporative effects in moistened porous building materials.

This paper was published in the QIRT Journal 8.2