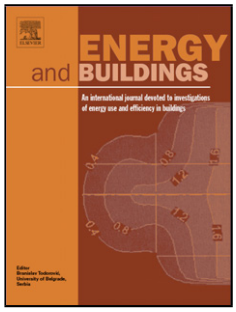

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PII: S0378-7788(17)32323-X
DOI: https://doi.org/10.1016/j.enbuild.2017.10.034
Reference: ENB 8054

To appear in: *ENB*

Received date: 10-7-2017
Revised date: 20-9-2017
Accepted date: 9-10-2017

Please cite this article as: Mario Cucumo, Vittorio Ferraro, Dimitrios Kaliakatsos, Marilena Mele, On the distortion of thermal flux and of surface temperature induced by heat flux sensors positioned on the inner surface of buildings, Energy and Buildings https://doi.org/10.1016/j.enbuild.2017.10.034

On the distortion of thermal flux and of surface temperature induced by heat flux sensors positioned on the inner surface of buildings

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Research highlights

- Evaluation of the deflection of the heat flux of internal walls of a building provoked by heat flux sensors.
- Supply useful information about the positioning of the sensors and the measurements obtained from them.
- Comparison between the experimental and calculated values of temperature and heat flux for the walls containing a sensor for the in situ evaluation of transmittance.
- Analysis of the errors induced by the presence of Heat Flux Sensors.

ABSTRACT

The in situ determination of overall heat transfer coefficient (transmittance) of the opaque components which constitute the envelope of existing buildings, allows a more accurate evaluation of the real energetic consumptions of a building and, furthermore, this value is a useful tool for energetic certification.

The value of transmittance can be calculated theoretically using the European Standard EN ISO 6946 or can be obtained from the analysis of experimental recorded temperature and heat flux values.