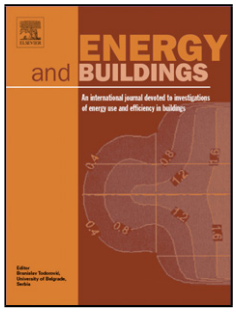

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AN INFRARED THERMOGRAPHY PASSIVE APPROACH TO ASSESS THE EFFECT OF LEAKAGE POINTS IN BUILDINGS

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HIGHLIGHTS:

- IRT was successfully applied to assess air leakages
- a colder area near the leakage points can be detected by IRT
- surface temperature tends to stabilize close to the outdoor temperature
- the first pressure step has major impact in the superficial temperature differences

ABSTRACT

Energy consumption is one of the major concerns of European citizens and governments. In the EU, buildings use 40% of total energy consumption and generate 36% of greenhouse gases. Therefore, buildings energy efficiency must be optimized, which requires, among others, minimizing infiltrations through the envelope. The measurement of the air leakages through a building envelope is usually carried out by means of the fan pressurization method (Blower Door Test). Although useful for assessing the airtightness of buildings no