Energy efficient buildings

Marche Università Politecnica research focused on state-of-the-art monitoring systems

The Misure group at Marche Università Politecnica university is specialized in developing innovative industrial, civil and biomedical monitoring and diagnostic techniques. In the last few years it has started up numerous projects to monitor the buildings energy performances during the planning, construction, maintenance and utilization stages, assessing the thermal, acoustic, global structural characteristics of the entire complex and of each single component. In this context the group is part of the European Insiter project (www.insiter-project.eu) consortia comprised in the European Commission Horizon 2020 Energy Efficient Buildings programme. The purpose of the Insiter project is to fill the gap in the energy and qualitative performances of a building between those stated in the project stage and those assessed after construction. The innovation lies in developing and utilizing increased virtual reality tools and Building Information Models linked with diagnostic tools (thermal camera, 3D laser scanner, acoustic sensors, etc.) with the idea of guiding the differing "stakeholders" involved in the various stages of a building's construction. The project will be applied to new constructions but also to upgrading pre-existent buildings. Specifically, Insiter will focus on using prefabricated components and will therefore draw up standard protocols for inspection during the relevant application and maintenance. **-G.P.-**

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