

Solutions@ Mecmesin Plasterboard Testing

Specification

Saint-Gobain are leaders in the design, production and distribution of materials for the construction, industrial and consumer markets and are Europe's largest distributor of building materials.

Saint-Gobain needed to carry out repetitive penetration tests in order to accurately assess the performance and durability of their gypsum plasterboard products.

Through their familiarity with the Mecmesin brand and satisfaction with their products, having previously purchased a Mecmesin force testing system, Saint-Gobain chose to contact Mecmesin regarding this application.

Solution

Mecmesin was able to offer the company a special MultiTest 1-x console-controlled test system. Capable of testing up to 1kN, the system was combined with a simulated PLC (Programmable Logic Controller) indexing unit, allowing total automation of the test process.

The simulated PLC indexing unit, when connected to the MultiTest-x, controls the system and performs a pre-programmed testing sequence. The system runs the operations that would otherwise need to be undertaken manually during the test. A precision probe is inserted into the side structure of the plasterboard to a depth of 13mm and the maximum force recorded. This is then automatically transmitted into a Microsoft® Excel spreadsheet totally automating the test and reporting functionality of the test system.

Utilising the simulated PLC indexing unit enabled up to 50 tests to be performed sequentially, thereby saving valuable time and labour normally required to carry out this type of assessment.

System

- MultiTest 1-x (specially designed automated system)
- 1000N S-Beam loadcell
- Simulated PLC indexing unit



Probe shown attached to loadcell before being inserted into plasterboard sample



Specially constructed MultiTest-x shown with a simulated PLC indexing unit