

MFPA Leipzig GmbH

Testing, Inspection and Certification Authority for
Construction Products and Construction Types

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Inquiry Report No. UB 2.1/13-213-1-2

08 July 2013

No. Copy 1

subject matter:

Testing the ball throwing resistance of the "Acoustichoc 22" panel ceiling made of coated rock wool plates in conformity with

DIN EN 13964: edition of February of 2007

client:

Saint-Gobain Eurocoustic – Les Renardieres
7, place de Saverne

F – 92415 Courbevoie

staff engineer:

Dipl.-Ing. (FH) Volker Ahnert

test date:

June 25, 2013

This investigation report includes 3 pages and 2 annexes.

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D-PL-11021-01-00

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MFPA Leipzig tested a panel ceiling system including the substructure for ball throwing resistance in conformity with DIN EN 13964. These elements are used for lining the ceilings of various types of buildings so that occasional loading is likely from the impact of balls. The substructure for the ball shooting test during the test consisted of a rigid wood frame that was planked with particleboard.

The tested ceiling system has the structure below (from top to bottom; refer to the drawings in Annex 1):

- \varnothing 6 threaded rods
- mounting rail system (designation „Quicklock CLIP-ON T24“), 1,20 m x 0.60 m of space
- coated 1200 mm x 600 mm x 22 mm rock wool plates where the coating consists of a thin and bright fibreglass fabric and below also made of a fibreglass net (mesh approximately 3 mm)
- secured with 6 holding-down clamps per rock wool plate

The test was carried out in conformity with DIN EN 13964: “Suspended Ceilings – Requirements and Test Processes”, edition of February of 2007.

Test surface arrangement: as a ceiling element

The test surface was shot at with a handball as per the aforementioned standard and the impact speed was 4.0 m/s as per the targeted class 3A. Various points were shot at from various angles (such as the middle, the area near the edge, the corner zone and the area of braces below, etc.).

The testing temperature was 21°C.

The table below summarises the test results:

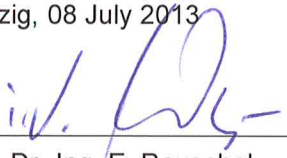
<i>type of ball</i>	<i>number of shots</i>	<i>angle of impact</i>	<i>impairments to the installation element</i>
handball	12	90°	none
	12	60°	- " -
	12	60°	- " -

The panel ceiling system tested did not show any visibly identifiable damage when tested as a ceiling element. This is the reason why the element is classified as "ball impact resistant" as per class 3A in conformity with DIN EN 13964:2007 based upon our test results.

Empirically the ceiling system with a grid of 600 mm x 600 mm x 22 mm does also withstand an impact speed of 4 m/s so that it can be classified into class 3A as well. In deviation to the element with the grid 1200 mm x 600 mm x 22 mm 4 holding-down clamps per rock wool plate are being used instead of 6 holding-down clamps per rock wool plate. Furthermore the grid of the mounting rail system designated „Quicklock CLIP-ON T24“ changes to 0,60 m x 0,60 m. Classification 3A is still valid with the grid system Quicklock CLIP-ON T35, for both frames 0,6 m x 0,6 m and 1,2 m x 0,6 m.

The results of the tests exclusively refer to the described test objects but not to the main unit. This document does not replace a certificate of conformity or suitability according to national and European building codes.

Leipzig, 08 July 2013


Prof. Dr.-Ing. E. Reuschel
Head of Business Division


Dipl.-Ing. (FH) V. Ahnert
Testing Engineer



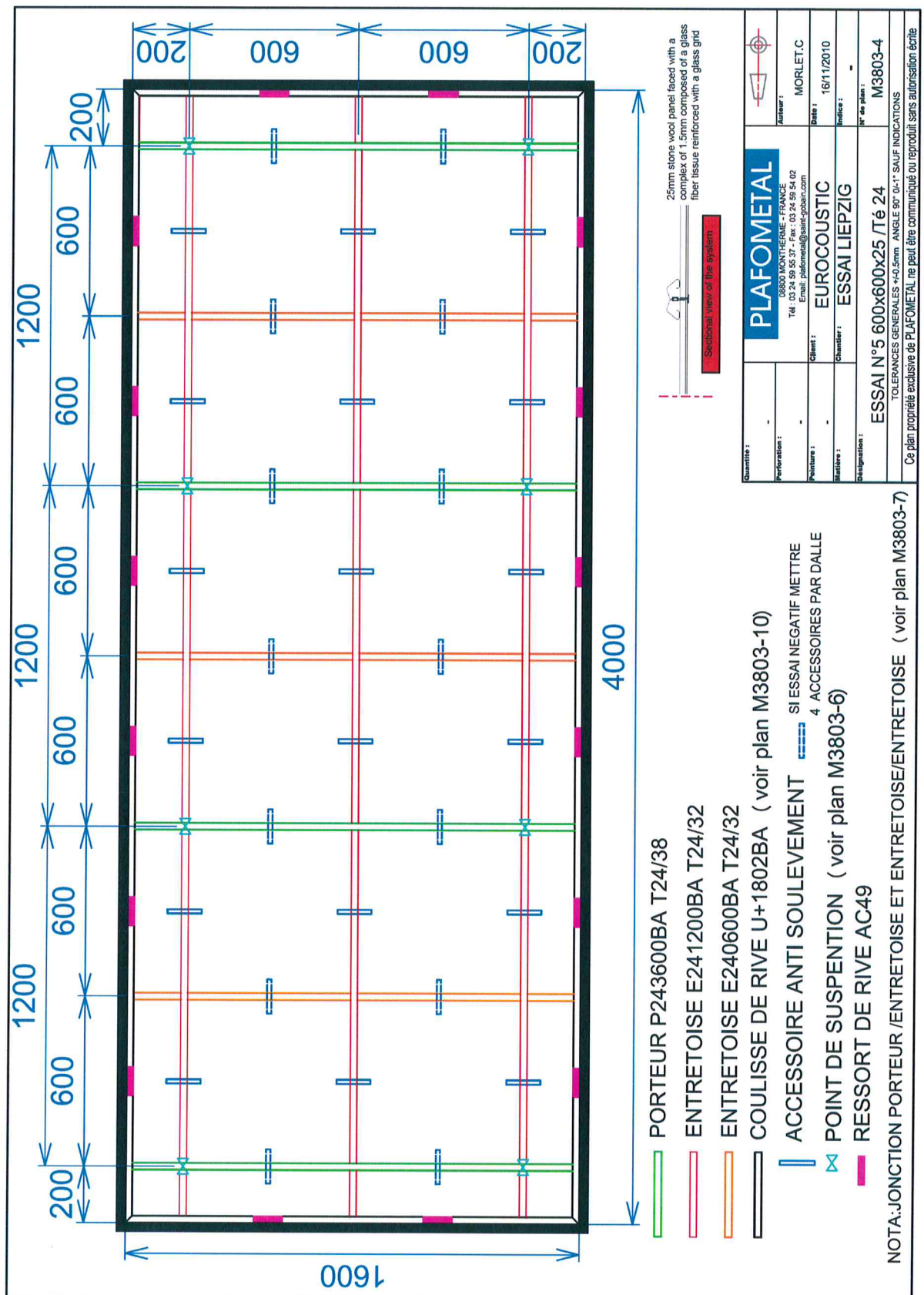


Figure A1-1: The client's technical drawing of the entire system (grid of 600 mm x 600 mm)



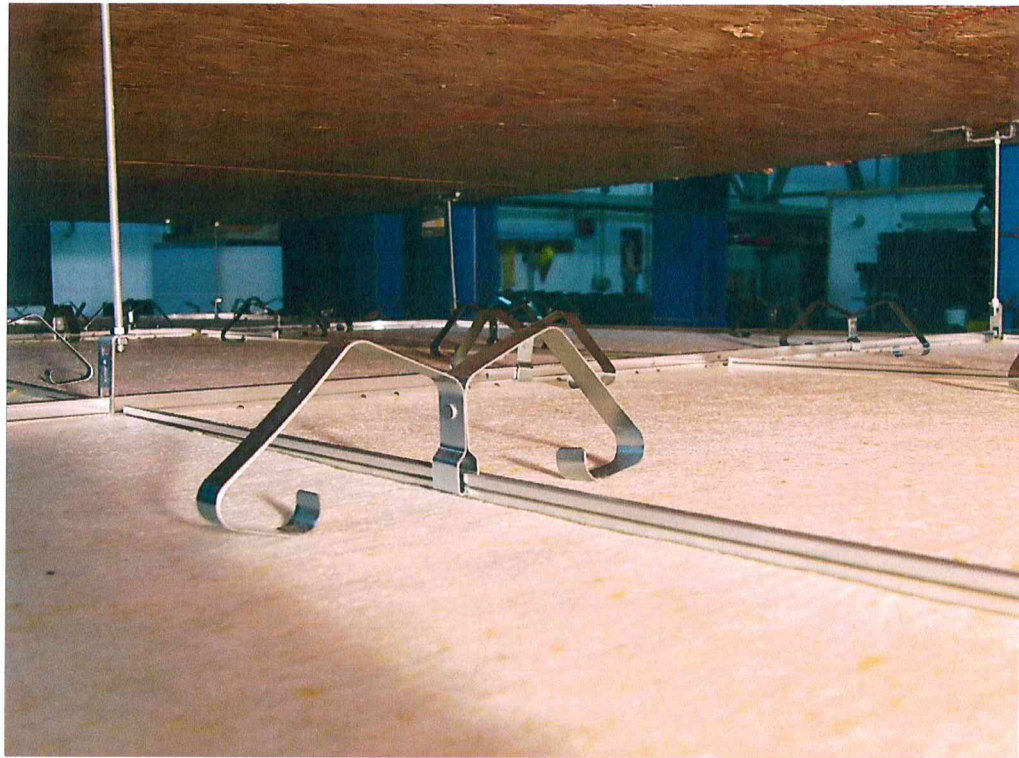


Figure A2-1: The view of the ceiling system with the substructure



Figure A2-2: The view of the ceiling system after testing