Technical Bulletin No. 13

STANDARD METHOD OF TESTING SPACER GRID SYSTEMS

July 2005

At the request of several manufacturers of spacer grid systems, the MCRMA supervised a series of structural tests carried out at a well-known testing laboratory.

The tests were designed to establish the structural performance of the components and the loads were greater than would be found in site conditions.

The description of the tests is as follows:

1 Bracket/ferrule to zed/rail attachment.

2a Point load to centre span rail/zed.

2b Point load to bracket/ferrule to zed/rail attachment.

3 Down slope across the rail/zed load.

4 Along the rail/zed sway load.

NOTE: See attached appendices for test descriptions

Manufacturers will provide separate guidance as to frequency, fixing arrangements for supplementary components such as sway brackets or struts as extra items not included in the tests.

Manufacturers whose products were submitted for test were:

Architectural Profiles Limited
Cockayne House
126-128 Crockhamwell Road
Woodley
Reading
RG5 3JH

Ash & Lacy Building Systems Limited
Bromford Lane
West Bromwich
West Midlands
B70 7JJ

Euro Clad Limited
Wentloog Corporate Park
Wentloog Road
Cardiff
CF3 2ER

Fixing Point Limited
Runnings Road
Kingsditch Industrial Estate
Cheltenham
GL51 9NQ

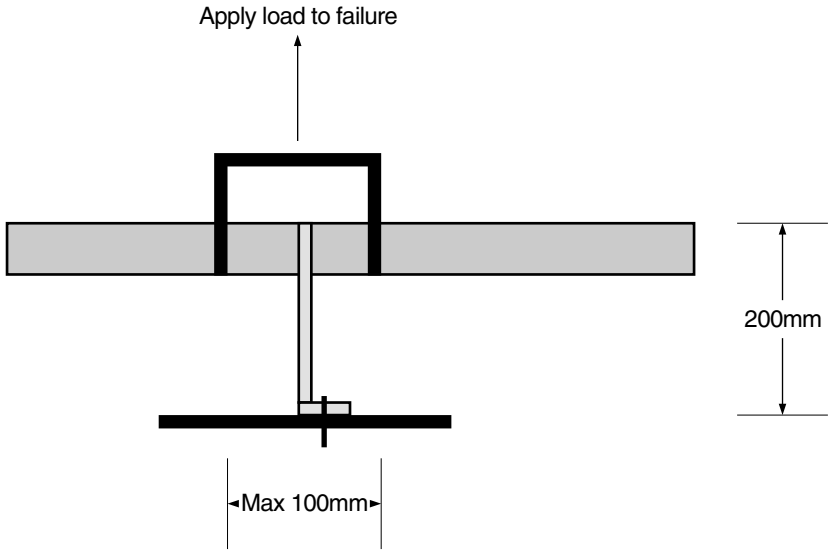
Roof Fix Supplies Limited
Unit 3a, 739 South Street
Glasgow
Lanarkshire
G14 0BX

Appendix

1 Bracket detachment test

Bracket fixed to solid base through 2 fixing holes.
Suitable hook on bar (no more than 100mm spaced legs) pulls bar from bracket.
Measure peak resistance load.

Materials: 1 × 200 bracket
1 × 250mm bar



2 Positive load

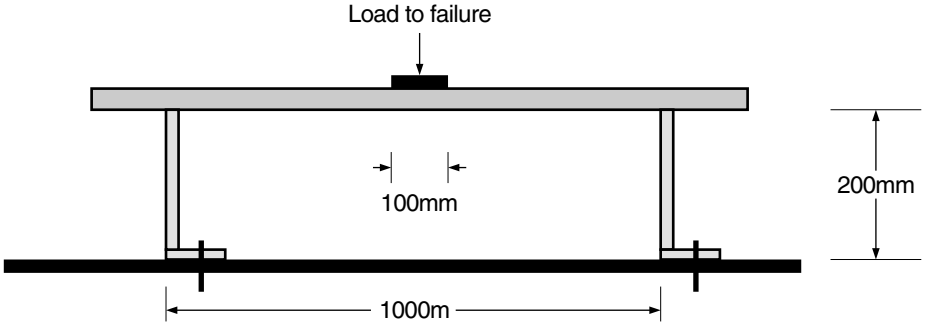
Rail and bracket assembly fixed to solid base with suitable plate min 100 wide fixed to rail top.
Apply load to failure and measure peak resistance.

A) Mid span between brackets

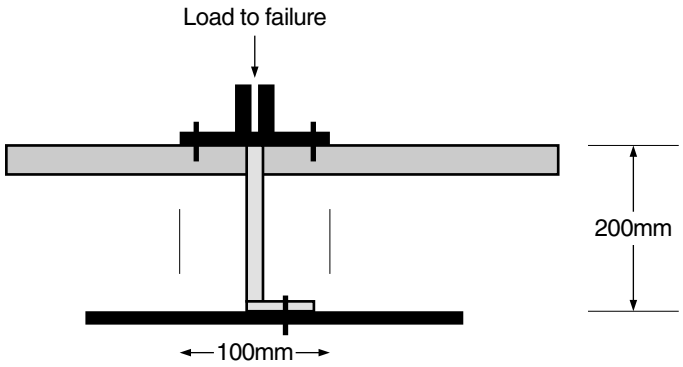
B) Single bracket

Materials: 3 × 200 bracket
1 × 250mm bar
1 × 1500 bar

A



B



3 Across the bar test

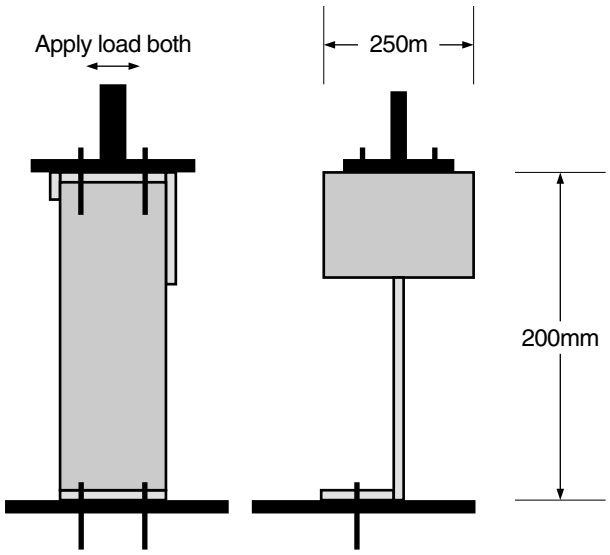
Suitable section attached to the bar top

A) Directly above bracket and pushed in both directions. Measure peak resistance and/or maximum deflection for a given load (say 0.5kN)

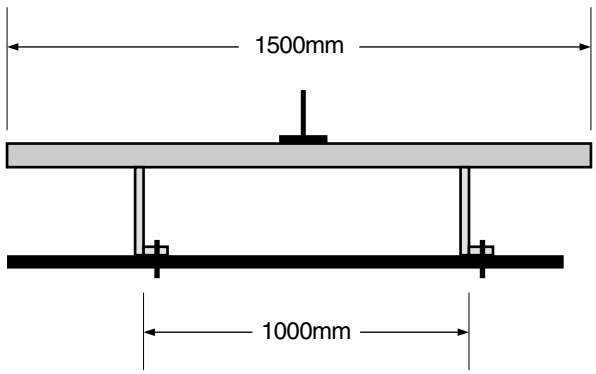
B) Repeat at mid span.

Materials: 3 × 200 brackets
1 × 1500 bar

A



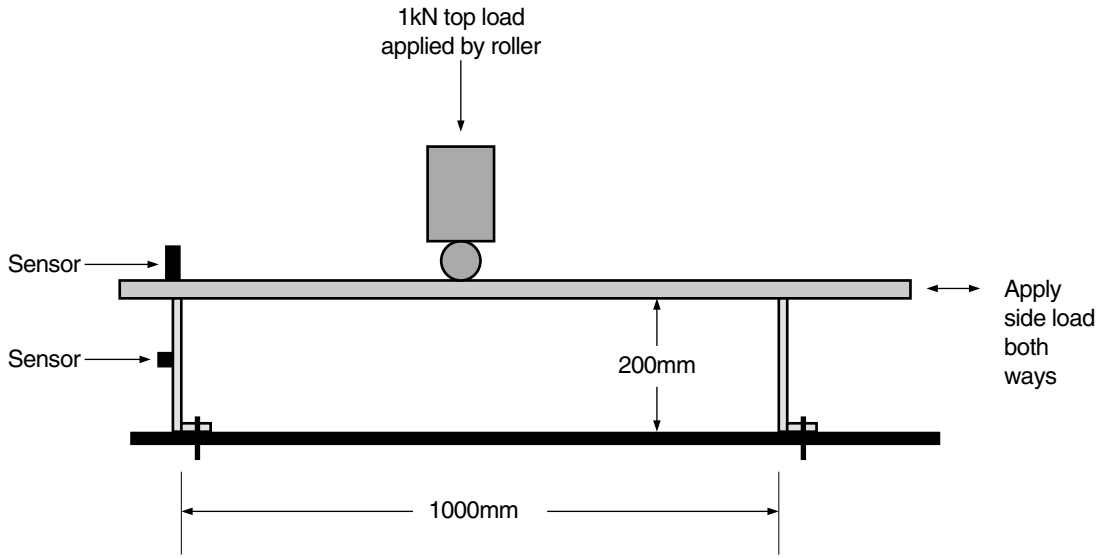
B



4 Sway load test

Apply continuous 1kN load to top roller at mid span.
Apply increasing load to end of bar to failure and measure peak resistance.
Measure movement of bar and bracket to confirm components act as one unit.
Repeat test with new components pushing end of bar in opposite direction.

Materials: 1 × 1500 bar
2 × 200 brackets



Disclaimer

This standard method of testing has been devised by a group of like-minded manufacturers under the auspices of the Metal Cladding and Roofing Manufacturers Association (MCRMA).

The tests do no confer any special status upon a spacer system other than it has been examined and tested using the requirements laid down.

As with all building materials, the supplier has no control over the quality of the installation of the final application; it is for the buyer to assess whether the product will be fit for a particular purpose and to ensure that the system is correctly installed.

Whilst all data is given in good faith and, to the best of our knowledge, is accurate and dependable, the Metal Cladding and Roofing Manufacturers Association Limited and its member companies cannot be held responsible for any errors or inaccuracies and, in particular, the specification for any application must be checked with the individual manufacturer concerned for a given application.

The diagrams of typical constructions in this technical bulletin are illustrative only.

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