

PGH CORIUM FACADE

Spanning Capacity of Horizontal Rails and Vertical Beams

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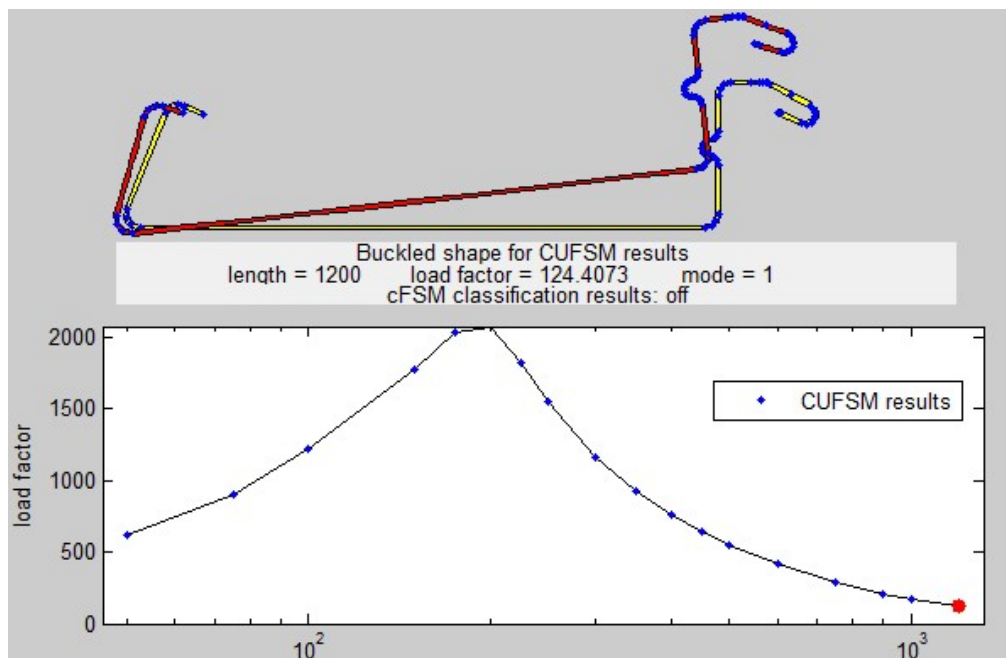
Client: PGH Bricks and Pavers

Project Description:

David Beneke Consulting was commissioned by PGH Bricks and Pavers to determine the spanning capacity of the horizontal rails and vertical beams of the Corium façade system. The system consists of an L-shaped slotted bracket which attaches to the building substrate and cantilevers out to an aluminium vertical beams. The horizontal rails of the system span between the aluminium vertical beams.

Finite strip analyses were carried out on the horizontal rails using the CUFSM program to determine the flexural capacities of both the light gauge steel and stainless steel rails. The flexural capacities of the vertical beams were determined following the provisions of AS1664.1-1997. The connection capacities between the brackets/vertical beams/rails were determined from full scale tests.

A spreadsheet was prepared which can take the above analyses/test results and creates two separate tables to determine the suitability of the rail and the vertical beam for load widths ranging from 300mm up to 1200mm for ultimate wind pressures ranging from 0.5 to 10.0 kPa in 0.5 kPa increments for single, double and triple span configurations.



CUFSM analysis of stainless steel rail

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