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ASSURANCE ADVISORY NOTE

Evaluation No. IGNL-8383-99-01R Issue 01 Revision 00 [2024]

GROUP NUMBER EVALUATION – WOVEN IMAGE CURTAIN WALL LINING PANEL

1 INTRODUCTION

Assurance has been engaged to evaluate Group Number and SMOGRA value of Woven Image's Curtain wall lining panel to AS 5637.1. Testing of Woven Image's Column wall lining panels to AS ISO 9705 has been undertaken by Ignis Labs, with the results evaluated to AS 5637.1 in their test report IGNL-8260-06-01R dated 1 October 2024. The Curtain wall lining differs only from the Column wall lining in that the corrugations in the material have irregular spacings. All other details such as composition, density, and thickness are the same.

This advisory note is issued by Benjamin Hughes-Brown, Chartered Professional Engineer of Ignis Labs Pty Ltd, 3 Cooper Place, Queanbeyan, 2620, NSW for use under the Deemed-to-Satisfy requirements of the National Construction Code Building Code of Australia Volume 1 and Volume 2 2022 (BCA). This engineering advisory note serves as a certificate from a professional engineer in accordance with Clause A5G3 of the BCA.

2 TESTED SYSTEM DETAILS AND PERFORMANCE

The tested Column wall lining panels were a 3D formed acoustic panel (Mura face laminated to Epsilon board). It is composed of 100% PET. It has a nominal density of 9.2 kg per panel and a nominal thickness of 9 mm. The sponsor described its colour as '573 mint' and its end use is as a wall covering.

The received specimens were corrugated Polyester felt panels. They had a measured thickness of 8.1 mm and dimensions of 1 m in width and 2.8 m in length. The panel was comprised of two layers, a white top layer with a measured thickness of 2.61 mm and a grey bottom layer with a measured thickness of approximately 5.5 mm. The corrugations extended along the entire length of each panel, with a nominal height of approximately 75 mm and width of approximately 150 mm. The 1 m corrugated panel width is formed from a feedstock of 1,232 mm.

The tested wall panels are shown below.

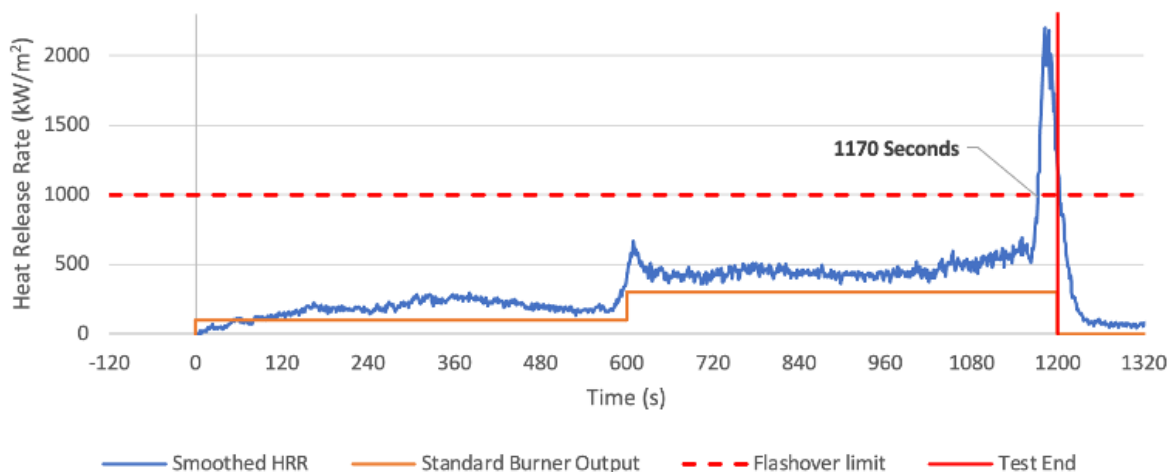
FIGURE 1:
COLUMN WALL PANELS



The Column wall lining panels achieved the following Group Number and SMOGRA values, with flashover occurring 1170 seconds into the test.

Criteria	Result
Group Number	2
SMOGRARC (in $m^2s^{-2} \times 1000$)	9.28

FIGURE 2:
HEAT RELEASE RATE



3 VARIATIONS TO THE TESTED SYSTEM

It is proposed that the Group Number and SMOGRA values of the Column panels are applicable to the Curtain wall lining panels. The two panels have identical composition, density, and thickness, with the only variation being the irregularly spaced corrugations of the Curtain panels. This results in a flat feedstock measuring 1,260 mm wide for each 1 m wide Curtain panel in place of 1,232 for the Column panels. This corresponds with an increase in surface area between the two panels of approximately 2.3%.

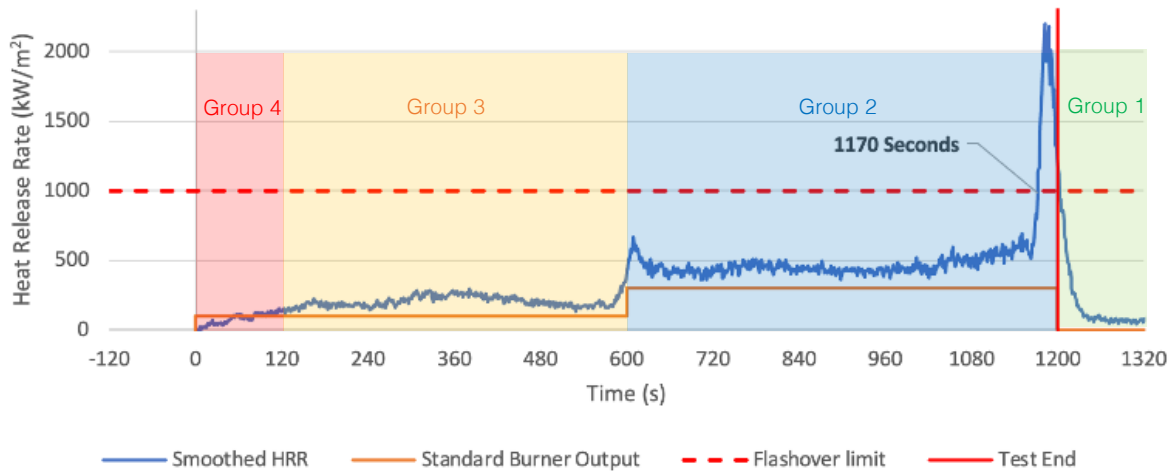
FIGURE 3:

CURTAIN WALL PANELS



While an increase in surface area is correlated with a worse performance of the material, it was observed through testing of the Column material that flashover occurred at the end of the time period that signals a Group 2 result, reaching flashover 9.5 minutes after the threshold for a Group 3 result. Based on the increase of 2.3% in lineal surface area and on the performance of the Column material being 30 shy of a Group 1 status, the difference in profile is not deemed to be substantial enough to change the Group number classification. The composition, thickness, and density of the panels is to remain identical.

FIGURE 4:
HEAT RELEASE RATE – GROUP NUMBERS



4 CONCLUSION

It is deemed that, with all other details of the wall lining panels remaining consistent with the tested system, the changes to corrugation pattern between the Curtain and Column panels of Woven Image will not impact the Group Number or SMOGRA as assessed to AS 5637.1. It is deemed that the Curtain wall lining panels achieve the following Group Number and SMOGRA values:

Criteria	Result
Group Number	2
SMOGRARC (in m ² s ⁻² x 1000)	9.28



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