

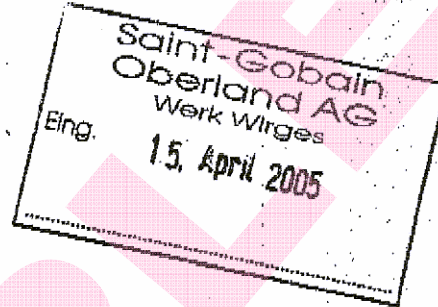
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Attention: Mr Peter Leitzbach

SOLARIS GLASS BRICK WALL
Assessment Number FCO-1833 (Revision)
Your letter of 3 March

INTRODUCTION

We have re-examined the information referenced by you on the likely fire-resistance performance of your glass brick wall system if it was tested in accordance with AS 1530.4-1997. The information included

- Warrington Assessment Report numbered WFERC C126045 dated 22 May 2003;
- Amtliche Materialprüfanstalt Für Das Bauwesen beim Institut Für Baustoffe, Massivbau und Brandschutz (IBMB) test certificate number 3571/2980 – W/Rm – , dated 20 September 1990; and
- Deutsches Institut Für Bautechnik (DIBT) Certificate of Approval numbered Z-19.14-526 dated 26 April 1996.

We have retained these documents.

ANALYSIS

On 1 August 1996 Warrington Fire Research conducted a full-scale vertical fire-resistance test to BS 476 Part 22 as a comparison to a test conducted at Amtliche Materialprüfanstalt Für Das Bauwesen beim Institut Für Baustoffe, Massivbau und Brandschutz on 3 June 1996. Both of these laboratories, through mutual recognition agreements between NATA and the English and German accreditation bodies, are Registered Testing Authorities under the provisions of the Building Code of Australia. Subsequently on 13 November 1996 and 15 November 1996 two additional horizontal tests were conducted by Warrington Fire Research as a comparison with tests conducted at the German Laboratory. These comparison tests served the dual purpose of verifying both the laboratories and the relevant national standards to which the tests were subjected, ie BS 476 Parts 20 and 22 and DIN 4102 Part 13.

Australian Standard 1530, Part 4 is the relevant Australian standard and although more closely aligned with the BS standard than that of the DIN standard but there are aspects, such as the use of the ambient temperature in the furnace equation, that align AS 1530.4 with DIN 4102 Part 13. Thus, using the assessment procedure demonstrated in the Warrington report numbered C126045, we can verify that the reports submitted by you represent satisfactory evidence for assessing your glass bricks and pavers to AS 1530.4.

On 4 May and 23 May 1990 IBMB conducted two full-scale fire-resistance tests on glass brick walls incorporating 190-mm x 190-mm x 80-mm deep glass bricks with 20-mm wall thicknesses. The bricks were designated as Solaris 198 HSH 20 bricks and were laid up in an insulating mortar using steel reinforcing bars. The two specimens only varied in the configuration of the reinforcement bar with regard to size and quantity. The prototype tested on 4 May maintained integrity for the full 92-minute duration of the test. The prototype tested on 23 May failed integrity at 83 minutes when one of the bricks was dislodged but this was noted by the test laboratory as being the result of poor construction rather than the performance characteristics of the specimen.

OPINION/CONCLUSION

Based on the test data detailed above it is the opinion of the Division that your 190-mm x 190-mm x 80-mm (Solaris 198 BSH 20) glass bricks wall constructed as specified in IBMB test certificate numbered 3571/2980 would be capable of achieving fire-resistance levels (FRL) of -/90/- if tested in accordance with the requirements of AS 1530.4-1997.

TERM OF VALIDITY

This assessment report will lapse on 30 April 2010. Should you wish us to re-examine this assessment with a view to the possible extension of its term of validity, would you please apply to us three to four months before the date of expiry. This Division reserves the right at any time to amend or withdraw this report in the light of new knowledge.

Yours faithfully,


Garry E Collins
Manager, Fire Testing and Assessments.

1 April 2005