

Certificate of Test

No. 1745

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This is to certify that the element of construction described below was tested by the CSIRO Division of Manufacturing and Infrastructure Technology in accordance with Australian Standard 1530, Methods for fire tests on building materials, components and structures, Part 4-1997 on behalf of:

Architectural Framing Systems Pty Ltd
29 Prime Drive
SEVEN HILLS NSW

A full description of the test specimen and the complete test results are detailed in the Division's sponsored investigation report numbered FSV 1038.

PRODUCT NAME Permanent formwork, load-bearing, reinforced concrete wall system

DESCRIPTION: The specimen comprised a reinforced concrete wall system of dimensions 2980-mm high x 3000-mm wide x 150-mm thick made up of 3 pre-fabricated permanent formwork panels filled with insitu concrete after assembly.

The formwork panels were fabricated from two 2980-mm high x 1200-mm wide x 6-mm thick fibre cement sheets bonded to 10 galvanised C-section metal studs of dimensions 136-mm x 35-mm x 0.6-mm using "AV Syntec" general purpose building glue. The studs were spaced at 100-mm centres and fixed together in a rigid frame. The studs had 90-mm diameter round holes spaced at 150-mm centres for a provision of horizontal reinforcing bars. The panels were fixed to a floor track (galvanised steel C-section) with provision for reinforcing starter bars from a completed floor slab. Succeeding panels were fitted together in a tongue and groove arrangement, and fixed with 9-18 x 20-mm fibretecs csk rib head screws at 500-mm centres. The wall was reinforced with N12 reinforcing bars at 450-mm centres, horizontally and vertically. Electrical services were installed in the cavity of the wall, that included two general power outlets and associated PVC conduits at 1200-mm centres. The panels were appropriately braced and 32 Mpa concrete 32-10-120 was pumped in through the top openings in 1500-mm layers and trowelled-off when completely filled. The specimen was subjected to an evenly distributed total load of 600 kN.


Details of panel construction are shown in drawing numbered 146-01 Issue B, dated 17 December 2003, by LGDS.

The element of construction described above satisfied the following criteria for fire-resistance for the period stated

Structural adequacy	-	no failure at 240 applicable
Integrity	-	no failure at 240 applicable
Insulation	-	236 minutes

and therefore for the purpose of Building Regulations in Australia, achieved a fire-resistance level (FRL) of 240/240/180. The FRL is applicable for exposure to fire from either direction.

Testing Officer: Chris Wojcik Date of Test: 25 February 2004
Issued on the 12th day of March 2004 without alterations or additions.



Garry E Collins
Manager, Fire Testing and Assessments



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