

SPONSORED INVESTIGATION No. FSZ 1450
BUSHFIRE TEST ON A WINDOW ROLLER SHUTTER

SUMMARY

IDENTIFICATION OF SPECIMEN:

The sponsor identified the specimen as a non-insulated aluminium window roller shutter assembly.

SPONSOR: Croci Australia Pty Ltd
88-90 Derby Street
PASCOE VALE VIC

MANUFACTURER: Croci Australia Pty Ltd
88-90 Derby Street
PASCOE VALE VIC

TEST STANDARD: Australian Standard 1530, Methods for fire tests on building materials, components and structures,

Part 8.1-2007: Tests on elements of construction for buildings exposed to simulated bushfire attack – Radiant heat and small flaming sources.

TEST NUMBER: FS 4176/3366

TEST DATE: The fire test was conducted on 29 November 2010.

DESCRIPTION OF SPECIMEN:

The specimen comprised an aluminium window roller shutter assembly, overall size 2360-mm high x 2825-mm wide, protecting an aluminium framed glass window mounted into a brick wall opening.

The roller shutter curtain comprised two different extruded aluminium horizontal slats as shown in drawing numbered S3, dated December 2010 by Croci Australia. The slats were of a double walled cavity. The AR6 flat profile slats, nominally 40-mm x 9-mm, were stated to be made by a 1.2-mm thick extruded aluminium, with profiles shown in drawing numbered S13, dated December 2010 by Croci Australia. The AR17 curved profile slats, nominally 44-mm x 9-mm, were stated to be made by a 1.0-mm thick extruded aluminium, with profiles shown in drawing numbered S14, dated December 2010 by Croci Australia.

PERFORMANCE

Performance observed in respect of Clause 14.4 of AS1530.8.1-2007 criteria:

Performance Criteria	Time to failure (min)	Position of failure
Formation of through gaps greater than 3-mm	No failure	-
Sustained flaming for 10 seconds on the non-fire side	No failure	-
Flaming on the fire-exposed side at the end of the 60 minutes test period	No failure	-
Radiant heat flux 365-mm from the non-fire side exceeding 15 kW/m ²	No failure	-
Mean and maximum temperature rises greater than 140 K and 180 K	Not applicable	-
Radiant heat flux 250-mm from the specimen, greater than 3 kW/m ² between 20 minutes and 60 minutes	No failure	-
Mean and maximum temperature of internal faces exceeding 250°C and 300°C respectively between 20 minutes and 60 minutes after commencement of test	Not applicable	-
Crib class	A	Peak heat flux
		40 kW/m²

For the purpose of building regulations in Australia, the test specimen achieved a Bushfire Attack Level (BAL) of A40.

This report details methods of construction, the test conditions and the results obtained when the specific element of construction described herein was tested in accordance with AS 1530.8.1-2007.

TESTED BY:



Chris Wojcik
Testing Officer

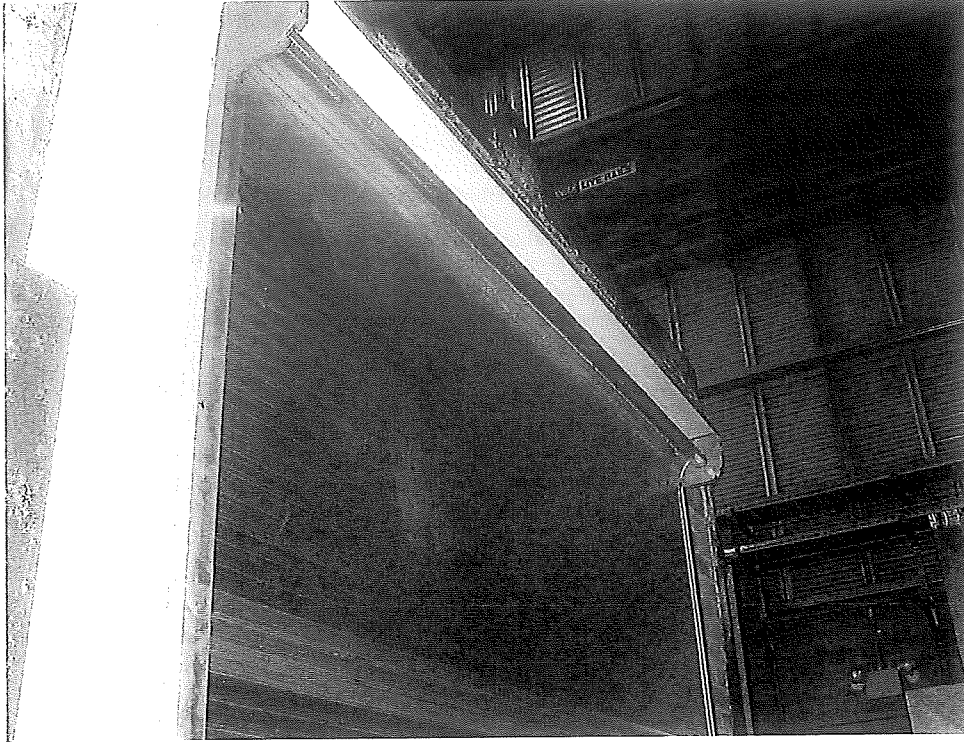


Garry E Collins
Manager, Fire Testing and Assessments

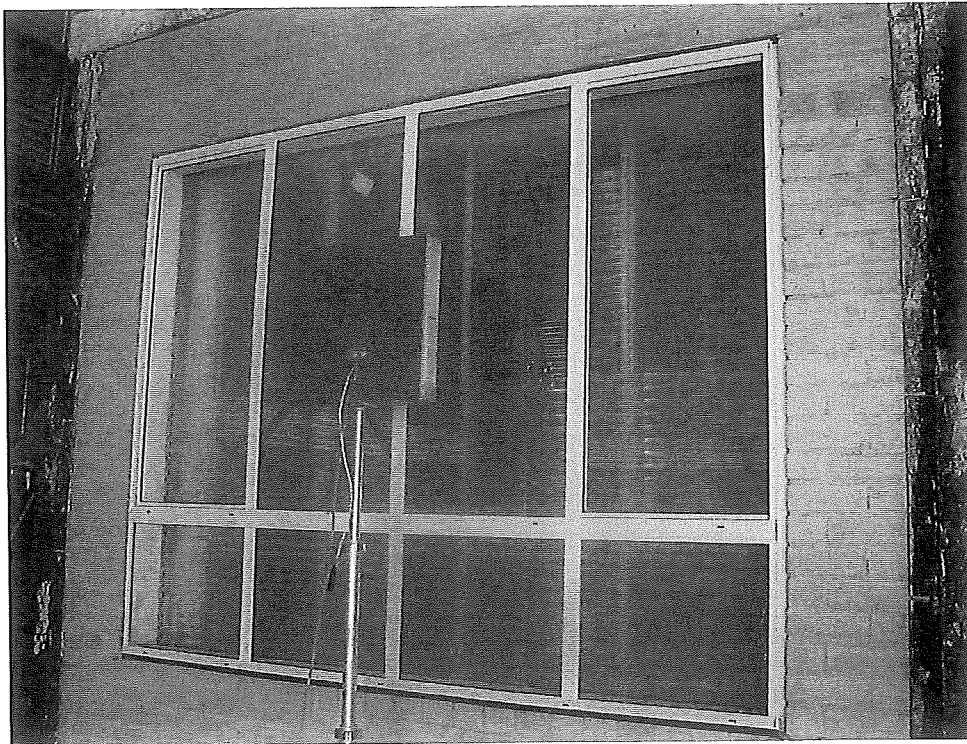
14 January 2011

APPENDICES

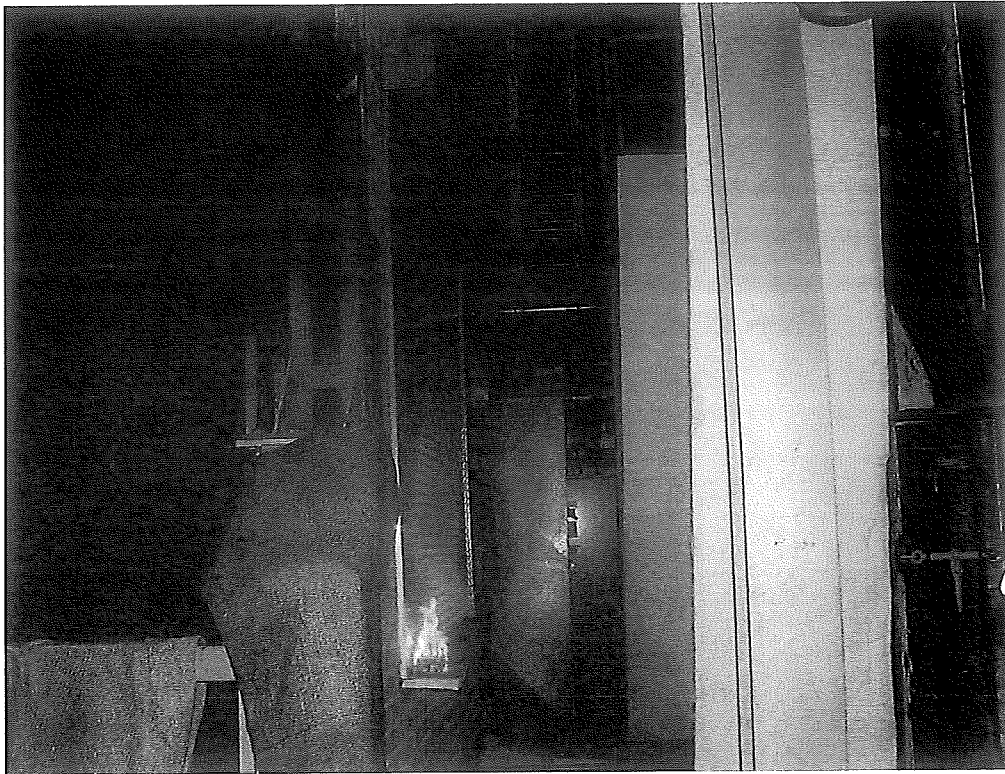
APPENDIX 1



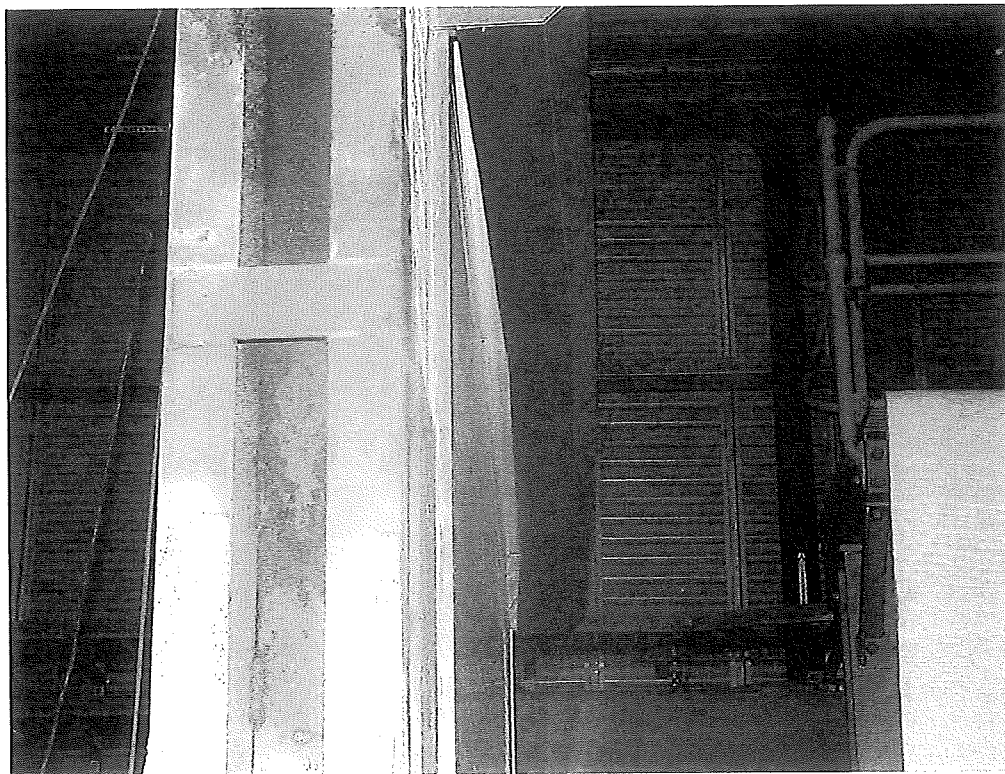
Photograph 1 - Exposed face of the specimen prior to testing



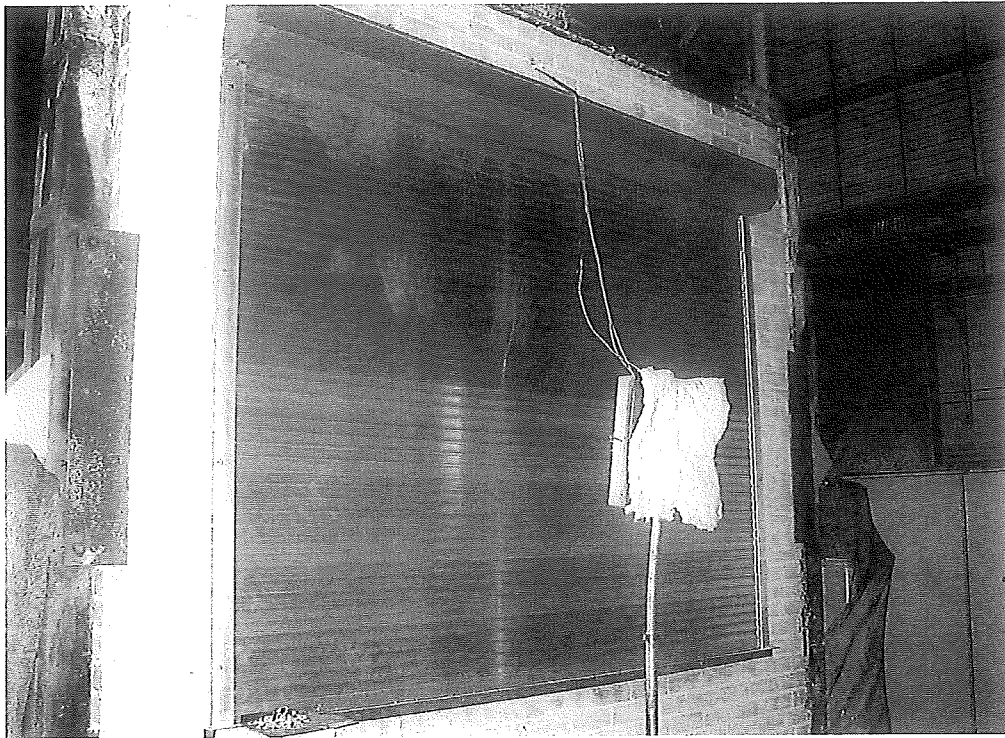
Photograph 2 - Unexposed face of the specimen prior to testing



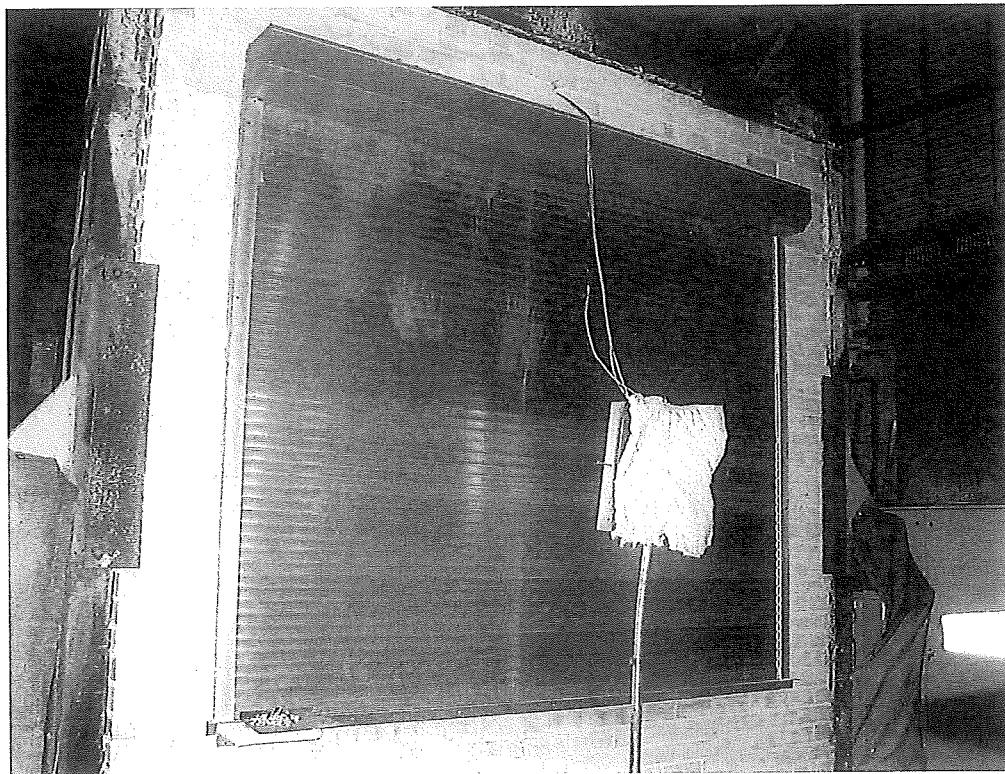
Photograph 3 - Specimen at 30 seconds of testing



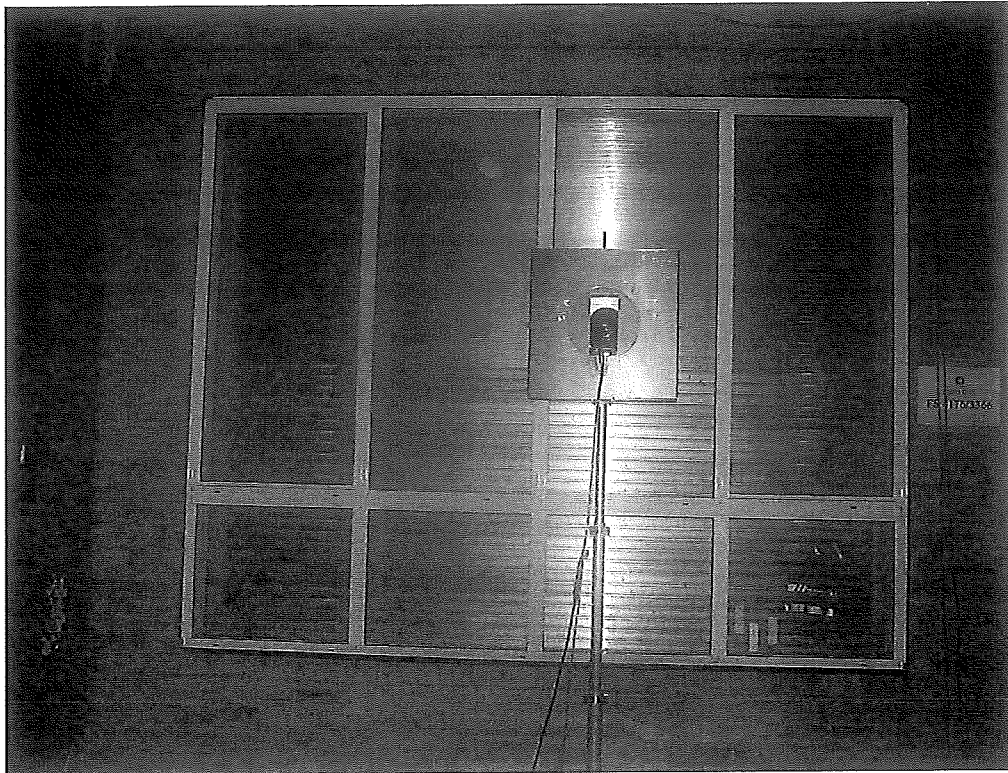
Photograph 4 - Specimen at 1:10 minutes into the test



Photograph 5 - Exposed face of the specimen at 30 minutes into the test



Photograph 6 - Exposed face of the specimen at the conclusion of testing



Photograph 7 - Unexposed face of the specimen at the conclusion of testing