



Manufacturing & Materials Technology

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EA 0278

Our Ref: FCO-1240
JFS: GEC

Trafalgar Building Products
21-25 Mitchell Road
Brookvale NSW 2100 Australia

Attention: Stephen Brown
Technical Services Engineer



RIVERS LOCKING SYSTEM
Assessment Number FCO-1240
Your request e-mailed on 10 July.

INTRODUCTION

As requested, we have re-analysed the data referenced by you on the likely effect on fire-resistance performance of your doorset by the modification to the lockset and interchange of hardware.

The available information included:

- Standards Australia, Australian Standard 1530.4, Methods for fire tests on building materials, components and structures, Part 4-1997, Fire-resistance tests of elements of building construction;
- Standards Australia, Australian Standard 1905, Components for the protection of openings in fire-resistant walls, Part 1-1990, Fire-resistant doorsets;
- CSIRO test report numbered FSP 0415 on a fire test on alternative hardware to be used with fire-rated doorset; and
- Trafalgar Building Products Pty Ltd drawings numbered EA 0278_1, EA 0278_2, EA 0278_3, EA 0278_4 and EA 0278_5, all dated 15 June 2007.

We have retained these documents and information.

You have requested this Division to re-analyse and determine the likely effect that the interchange of the door leaf construction and modifications to the lockset would have on established fire-resistance levels:

ANALYSIS

On 3 November 1995 this Division conducted a fire test reported on in our sponsored investigation report numbered FSP 0415, on a pilot scale door assembly incorporating a Rivers 2 and 4 point security locking system. The lockset was attached to a 35 mm thick door leaf similar in construction to the full-scale doorset tested and reported in Fire Research report numbered NI 2490.

THIS ASSESSMENT SUPERSEDES ASSESSMENT NUMBERED FCO-1240 DATED 15 JULY 2002

A u s t r a l i a n S c i e n c e , A u s t r a l i a ' s
F u t u r e

The test was terminated at 241 minutes and the lockset was still fully attached to the door leaf and the latchbolts were engaged in the striking plates. It was thus deemed that the lockset, if installed onto the doorset reported in NI 2490, would not detrimentally affect the established fire-resistance levels of that doorset if tested to the requirements of AS 1530.4.

The deviations from the tested systems included:

- (i) installation onto your 45 mm thick steel clad door leaf as an alternative to the tested 35 mm thick door leaf;
- (ii) the use of the lockset on both single and double leaf doorsets; and
- (iii) using the lockset in both two points and four-point configuration.

The testing of hardware is required by Australian Standard 1905, Components for protection of openings in fire-resistance walls, Part 1 – 1990, Fire-resistance doorsets for these doorsets that have already achieved the required fire-resistance levels. The primary aim of the testing is to ascertain whether the attachment of the new hardware would prejudice these established fire-resistance levels.

As stated above the results of the pilot scale test demonstrated that the attachment of the Rivers Locket did not detrimentally effect the integrity of a 35 mm thick E-core door leaf sheathed on one side with 1.6 mm mild steel sheeting and we can assume that it would also not effect the integrity of your 45 mm thick door leaf with steel cladding on both faces.

The mechanism of the Rivers Lockset, as detailed in the drawings listed above, is such that there is significant engagement of the essential locking components. This would be beneficial to the performance of both your single and double leaf doorsets. Also the additional locking points would most likely provide equivalent, in the two points configuration, or better, in the four point configuration, performance than the original tested lockset.

CONCLUSION/ASSESSMENT

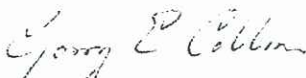
Based on the data referred to above, it is the assessment of this Division that the Rivers 2 and 4 point locking systems, if incorporated into doorsets which were subjected to the test conditions of AS 1530.4-1997, could be used in both two point and four point configuration on your 35 mm and 45 mm thick steel clad doorsets in both single and double leaf construction without detrimentally affecting the established fire-resistance levels of those doorsets.

TERM OF VALIDITY

This assessment/report will lapse on 31 August 2012. Should you wish us to re-examine this report 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 assessment in the light of new knowledge.

Yours faithfully



Garry E Collins
Manager, Fire Testing and Assessment

1 August 2007

