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CSIRO

Our Ref: FCO-2666/3637
BAR: bar

ITW Construction Products (Trading as Ramset)
296-298 Maroondah Highway
MOOROOLBARK VIC 3138

Attention: Mr Greg Parsons

ANKASCREW ROD & ANKASCREW STUD
Assessment Number FCO-2666
Your e-mail dated 4 June 2008

INTRODUCTION

We have examined the information referenced by you with regard to the fire performance of your Ankascrew M8 and M10 threaded rod hanger and stud fixtures. The information included

- Test report numbered 235964 by Building Research Establishment (BRE), Garsdon UK, dated 23 January 2008, on various Tapcon fixtures;
- Ramset AnkaScrew product guide, 3 pages, undated; and
- AS 1530.4-2005.

We have retained these documents and information.

You have specified that the tested M8 Tapcon fixture will be marketed in Australia under the name Ankascrew Rod and Ankascrew Stud.

ANALYSIS

On the 2 October 2007, BRE Testing conducted an ad-hoc fire test on a variety of loaded Tapcon fixtures mounted in the soffit of a concrete slab. The fixtures were exposed to a “standard” fire as stipulated by the heating requirements of BS EN 1363-1. Although the fire test was not conducted in accordance to a recognised Standard the laboratory is a Registered Testing Authority for standard testing and the fire exposure is equivalent to AS 1530.4.

The Tapcon M8 threaded rod-hanger (nominated as Fixing G in the BRE test report) was fitted into a 6-mm diameter x 35-mm deep drilled hole in a 150-mm thick grade C25 concrete slab. The fixture was loaded using a steel RHS bracket and a length of M8 threaded rod supporting a total dead load of 79.3kg.

The fire test was terminated after a period of 180 minutes. Test observations revealed that the threaded rod supporting the load on the fixing inclined after 144 minutes of fire exposure. Post test investigations determined that the threaded rod supporting the load on the fixture extended causing the load to rest on the floor of the furnace. The BRE test report surmised that the fixture supported the full test load for a period of at least 120 minutes.

The table 1 below summarises the relevant test specimen details:

BRE Report reference	Fixture	Measured fixing diameter	Measured length of part of fixing in concrete	Diameter of hole in concrete	Threaded rod size	Load suspended	Failure
G	Tapcon threaded rod hanger	7.5 -mm	35-mm	6.0-mm	M8	79.3 kg	No failure at 120 minutes

ASSESSMENT/CONCLUSION

Based on the BRE test results and the equivalence of the fire exposure to AS 1530.4 it is the assessment of this Division that a M8 or M10 Ankascrew Rod fixture would be capable of achieving a fire-resistance level (FRL) of 120/-/- if tested in accordance with AS 1530.4-2005.

It is also the assessment of this Division that a modification of the threaded rod hanger design to comprise a M8 stud (Ankascrew Stud) would also be capable of achieving a fire-resistance level (FRL) of 120/-/- if tested in accordance with AS 1530.4-2005.

This assessment report is limited to the fire performance of the M8 and M10 Ankascrew Rod and M8 Ankascrew Stud, installed in the soffit of a concrete slab equivalent to the tested prototype, supporting a total maximum load of 79.3kg.

TERM OF VALIDITY

This assessment report will lapse on 31 August 2013. 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

Brett Roddy
Fire Testing & Assessments
1 August 2008

Garry E Collins
Manager, Fire Testing and Assessment