An assessment of the fire performance of a removable single-leaf access panel

Prepared for:
Fire Proofing Services Limited
Evolution House
Aston Road
Nuneaton
CV11 5EL

11 March 2014

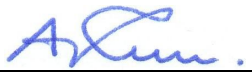
Assessment report number
CC 251333 Review 1

Protecting People, Property and the Planet

Prepared on behalf of BRE Global by

Name Andrew C Russell

Position Senior Consultant

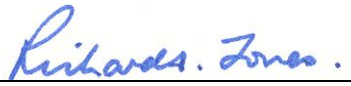
Signature 

Authorised on behalf of BRE Global by

Name Richard A Jones

Position Associate Director

Date 11th March 2014

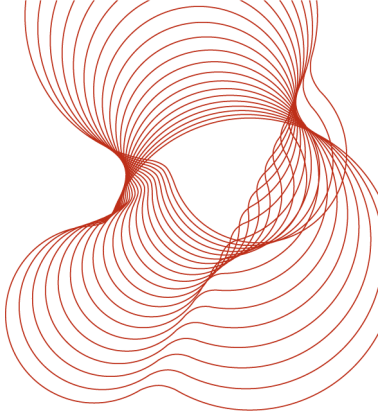
Signature 

Date of original report 24 February 2009

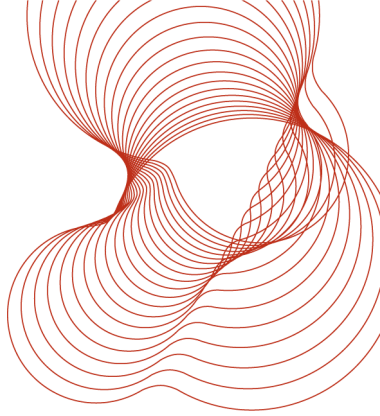
Date of this review report 11 March 2014

Date of next review 11 March 2019

BRE Global
Bucknalls Lane
Watford
Herts
WD25 9XX
T + 44 (0) 1923 664100
F + 44 (0) 1923 664994
E enquiries@breglobal.com
www.breglobal.com



Contents



1 Introduction

A fire resistance test in accordance with BS 476: Part 22: 1987 has been carried out on a double-leaf hinged access panel in a steel framed plasterboard partition, for a duration of 135 minutes. This assessment report examines the fire resistance of a removable single-leaf access panel, up to 900mm high x 900mm wide, where the continuous hinge is replaced by a second three-point locking system.

2 Scope

This assessment report considers the fire resistance of a removable single-leaf access panel, up to 900mm high x 900mm wide, installed in a steel framed partition system, against the integrity criteria of BS 476: Part 22: 1987, for fire exposures of up to 120 minutes from the side from which the panel is removed.

3 Supporting data

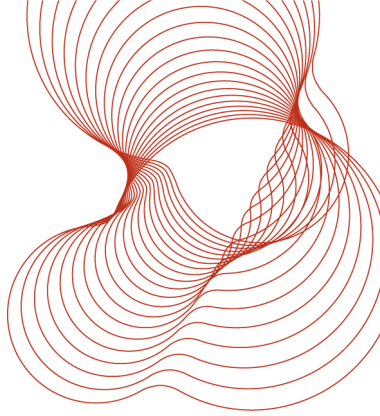
This assessment is based on supporting test data which is more than five years old. This supporting data has therefore been reviewed against current test procedures.

3.1 LPC test report TE 94530

A double-leaf steel/plasterboard access panel, incorporated in a steel-framed plasterboard partition, was subjected to a fire resistance test in accordance with BS 476: Part 22: 1987 (Method 6) on 12 April 2000 for a duration of 135 minutes.

Each door tray consisted of a 1.0mm-thick Zintec steel skin, which was polyester powder-coated in RAL 9010, 20% gloss, with pre-formed 1.2mm-thick top-hat section stiffeners welded to the sides and middle section of each door tray. The voids within the door trays were filled with stone mineral wool insulation. A 12.5mm-thick sheet of Lafarge Megadeco wallboard was fixed to the rear face of each door tray using 32mm drywall screws. The panel had a fire retardant smoke seal attached to the frame perimeter and each door was fitted with a continuous steel hinge welded to the door tray and fixed to the frame using nuts and washers to M6 bolts welded to the frame at 150mm in from the edges and 300mm centres thereafter. The right hand door panel (as viewed from the exposed face) was fitted with a 1mm-thick back plate and was locked top and bottom from the opposite side by a budget lock. The left-hand door panel was locked using a three-point locking system.

The access panel frame consisted of a 1.2mm-thick Zintec steel section with M6 bolts welded to the hinge side. The 25mm-wide front picture frame flange was mitred at each corner. The frame was polyester powder-coated to RAL 9010, 20% gloss.



The actual overall panel dimensions, not including the picture frame surround, were 2000mm high x 2000mm wide, with a 25mm-wide picture frame surround mitred at each corner. The three-point lock hole in the left hand door tray was fitted with a plastic dome plug and collar. Plastic spacer plugs were also fitted in the edge of the door trays, two top and bottom of each door with two on the opening side.

The access panel was incorporated in a steel-frame partition comprising one layer of 12.5mm-thick Lafarge Firecheck plasterboard followed by one layer of 12.5mm-thick Lafarge Megadeco plasterboard on each face of the partition. The specimen when tested in the orientation described was found to have the following fire resistance:

Insulation: 16 minutes

Integrity: 135 minutes

For full details see LPC test report TE 94530.

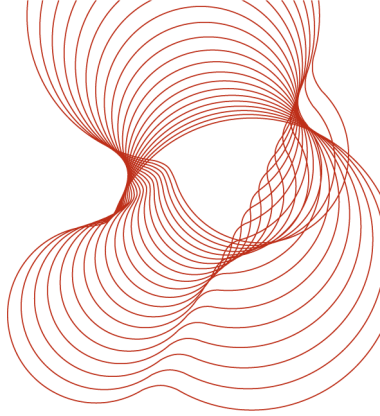
4 Description of the proposed removable single-leaf access panel

The construction of the proposed removable single-leaf access panel is the same as that of the tested double-leaf hinged access panel. The only significant differences are that the continuous hinge along one edge of the leaves is replaced by a second three-point latching system and the size of the leaf is reduced to 900mm high x 900mm wide.

5 Assessment

The tested access panel was of a double-leaf construction, whereas the proposed access panel is single-leaf. Based on our experience, we would expect a single-leaf access panel in a steel-framed partition system to perform in a similar manner to a double-leaf panel as long as the leaf is properly retained in the frame. In this case, the continuous hinge along one edge of the leaves has been replaced by a second three-point latching system the same as that on the latch edge of one of the leaves of the tested access panel. This should ensure that any differential movement between the leaf and frame is minimal. In addition, the design of the access panel leaf perimeter and frame is such that should any differential bowing occur it is highly unlikely that any gaps exceeding 150mm x 6mm would open up between the two. It should also be noted that the leaf size of the proposed panel is considerably smaller than those of the tested panel – 900mm wide x 900mm high against 1000mm wide x 2000mm high. This will mean that the locks are much closer together, further reducing the possibility of any gaps opening up.

As the tested specimen suffered no loss of integrity during the 135-minute test, it is reasonable to assume that the proposed removable single-leaf access panel is capable of maintaining its integrity for at least 120 minutes.



6 Conclusion

Therefore it is our opinion that a removable single-leaf access panel, up to 900mm high x 900mm wide, installed in a steel framed partition system, as described in section 4 of this report, is suitable for applications where a fire resistance of up to 120 minutes is required, for fire exposure from the side from which the panel is removed.

7 Validity of the assessment

7.1 Declaration by applicant

- We the undersigned confirm that we have read and complied with the obligations placed on us by the PFPF Guide to Undertaking Assessments in Lieu of Fire Tests.
- We confirm that the component or element of structure, which is the subject of this assessment, has not to our knowledge been subjected to a fire test to the Standard against which this assessment is being made.
- We agree to withdraw this assessment from circulation should the component or element of structure be the subject of a fire test to the Standard against which this assessment is being made.
- We are not aware of any information that could adversely affect the conclusions of this assessment.
- If we subsequently become aware of any such information we agree to cease using the assessment and ask BRE Global to withdraw the assessment.

Signed:

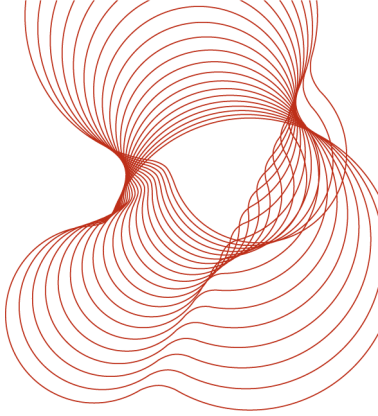
For and on behalf of:

This assessment report is not valid unless it incorporates the declaration duly signed by the applicant.

7.2 BRE Global declaration

This assessment was reviewed on 11 March 2014. We have received written confirmation from Fire Proofing Services Limited that there have been no changes in the specification of their access panel since the original date of the assessment. There have been no changes in the fire test procedures or methods of assessment, which would adversely affect the fire performance of the access panel. We are therefore satisfied that the validity of this assessment may be extended for a further five years.

This assessment is based on test data, experience and the information supplied. If contradictory evidence becomes available to BRE Global the assessment will be unconditionally withdrawn and the applicant will be notified in writing. Similarly the assessment is invalidated if the assessed construction is subsequently



tested since actual test data is deemed to take precedence over an expressed opinion. The assessment is valid for a period of five years after which it should be returned for review to consider any additional data, which has become available or any changes in the fire test procedures. Any changes in the specification of the product will invalidate this assessment.

This assessment has been carried out in accordance with Fire Test Study Group Resolution No. 82. It relates to the fire performance of the product and does not cover aspects of quality, durability, maintenance nor service requirements. This assessment relates only to the specimen(s) assessed and does not by itself infer that the product is approved under any Loss Prevention Certification Board approval or certification scheme or any other endorsements, approval or certification scheme.

Next review date: 11 March 2019

==========REPORT ENDS==========