

An abstract graphic consisting of numerous thin, overlapping curved lines that sweep across the page from the left side towards the right, creating a sense of motion and depth. The lines are of varying lengths and curves, some originating from the left edge and others from the top or bottom, all converging or diverging in a fluid, organic pattern.

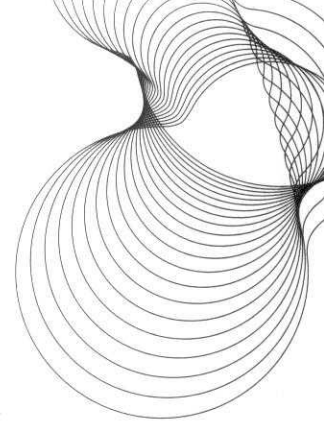
**bre**

**An assessment of the  
fire performance of Fire  
Proofing Services  
access panels**

Prepared for:  
Fire Proofing Services Limited  
Potters Barn  
Stanton Lane  
Potters Marston  
Croft  
Leicestershire  
LE9 3JQ

8 September 2005

**Assessment report number  
CC 201168 Review 1**



**Prepared on behalf of BRE Testing by**

---

Name        Andy Russell

Position     Senior Consultant

Signature    *AR*

---

**Approved on behalf of BRE Testing by**

---

Name        Richard A Jones

Position     Associate Director

Date         8/9/05

Signature    *Richard A Jones*

---

**Date of original report**        12 September 2000

**Date of this review report**    8 September 2005

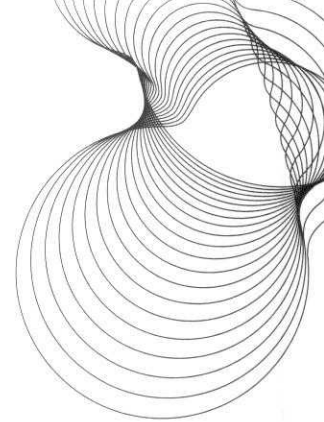
**Date of next review**            8 September 2010

---

BRE Testing  
Garston  
WD25 9XX  
T + 44 (0) 1923 664100  
F + 44 (0) 1923 664994  
E [enquiries@bre-certification.co.uk](mailto:enquiries@bre-certification.co.uk)  
[www.bre.co.uk](http://www.bre.co.uk)

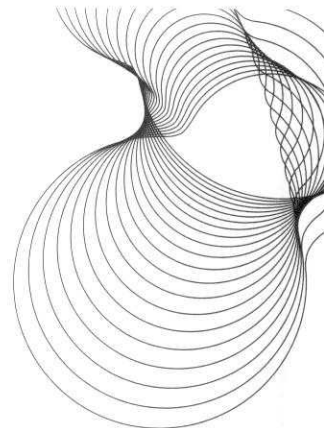
This report may only be distributed in its entirety and in accordance with the terms and conditions of the contract. Assessments relate only to the items tested/assessed. We have no responsibility for the design, materials, workmanship or performance of the product or items tested/assessed. This report does not constitute an approval, certification or endorsement of the product tested/assessed.

This report is made on behalf of BRE Testing. By receiving the report and action on it, the client accepts that no individual is personally liable in contract, tort or breach of statutory duty (including negligence). No third party has any right to rely on this report.



## Contents

1	Introduction	4
2	Scope	4
3	Supporting Data	4
3.1	LPC Test Report TE 94529	4
3.2	LPC Test Report TE 94530	5
4	Description of the Proposals	5
5	Assessment	6
6	Conclusion	7
7	Validity of the Assessment	7
7.1	Declaration by applicant	7
7.2	BRE Testing Declaration	7



## **1 Introduction**

Fire Proofing Services Ltd. access panels are designed to provide a fire resistance of up to two hours when installed in separating partitions. This report describes the assessment which has been carried out of the fire resistance of Fire Proofing Services Ltd. access panels for variations in size, modifications to the design and alternative orientations of the access panels.

## **2 Scope**

This assessment report covers the fire resistance of the Fire Proofing Services access panels mounted in a partition, in terms of the integrity criterion of BS 476 :Part 22 :1987, for fire exposures of up to 120min, for fire attack from either side.

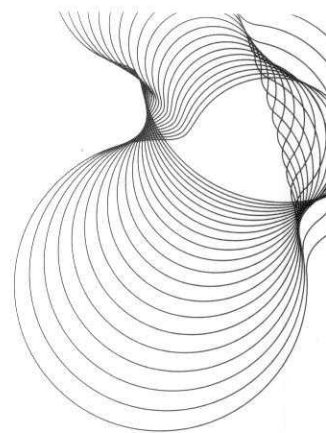
## **3 Supporting Data**

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 94529**

A fire resistance test in accordance with BS 476: Part 22: 1987 was carried out for you on your single-leaf access panel (for a heating period of 132min). The actual overall panel dimensions, not including the picture frame surround, were 2000mm high x 900mm wide, with a 25mm-wide picture frame surround mitred at each corner. The three budget lock holes on the front face of the panel door were each fitted with a removable metal screw bung. Plastic spacer plugs were also fitted in the edge of the door tray, two top and bottom with two on the opening side.

The panel leaf (of overall thickness 45mm) consisted of a 1.0mm-thick Zintec steel skin, which was polyester powder-coated in Ral9010 20% gloss with pre-formed 1.2mm-thick top-hat section stiffeners welded to the sides and middle section of the door tray. The voids within the door tray were filled with 25mm-thick RW3 Rockwool insulation (of stated density 60kg/m<sup>3</sup>). A 12.5mm-thick sheet of Lafarge Megadeco wallboard was fixed to the rear face of the door tray using 32mm drywall screws. The panel had a fire retardant smoke seal attached to the frame perimeter and was fitted to M6 bolts 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 panel was locked by three budget locks, one lock positioned approximately 200mm in from each end, top and bottom, with one lock central.



The 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 Ral9010 20% gloss.

The access panel was mounted in a plasterboard-clad, steel stud partition with the panel leaf opening towards the furnace. The access panel satisfied the integrity criteria of the standard for 57min while satisfying the insulation criterion of the standard for 11min. See LPC test report TE 94529 for full details.

### **3.2 LPC Test Report TE 94530**

A fire resistance test in accordance with BS 476: Part 22: 1987 was carried out for you on your double-leaf access panel for a heating period of 135min. 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.

Each door tray consisted of a 1.0mm-thick Zintec steel skin, which was polyester powder-coated in Ral9010 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 a rock wool insulation (type and density not stated by the sponsor). 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. Both door leaves were nominally 60mm thick.

The 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 Ral9010 20% gloss.

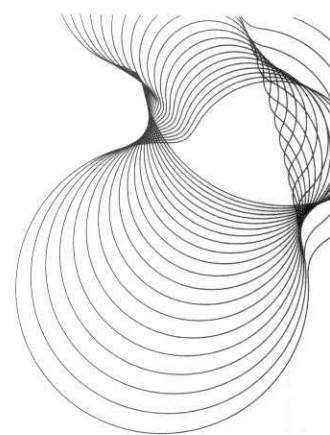
The access panel was mounted in a plasterboard-clad, steel stud partition with both panel leaves opening towards the furnace.

The access panel satisfied the integrity and insulation criteria of the standard for 135min, and 16min respectively. See LPC test report TE 94530 for full details.

## **4 Description of the Proposals**

Four proposals are to be considered:

- i) Treatment of the single leaf access panel with Drywall sealer to the unexposed (plaster board) face of the leaf to increase the leaf's fire resistance to 120min.



- ii) Increasing the maximum height of the double leaf access panel to 2.6m.
- iii) Installing both access panels with the plaster board face towards the fire. (i.e. the opposite way to the fire tests).
- iv) The addition of a 65mm x 12mm x 1mm-thick steel protective plate around the perimeter of the Megadeco wallboard on the rear of the door leaves.

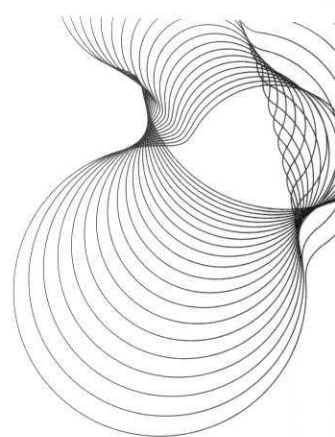
Any details of the construction of the access panels not described in this assessment report are assumed to be the same as on the tested specimens.

## 5 Assessment

- i) The single leaf access panel failed to satisfy integrity criterion of BS 476: Part 22: 1987 after 57min due to flaming from the paper coating of the plasterboard face. Throughout the test, there was no other failure of the integrity criterion. In the fire test on the double leaf access panel (TE 94350) Drywall sealer was applied to the surface of the plasterboard and no flaming was observed. As the double leaf access panel was of similar construction to the single leaf, the addition of a surface treatment to the plaster board surface to prevent ignition of the paper coating will enable the single leaf access panel to achieve a fire resistance of 120min integrity.
- ii) The 2m high x 2m wide double-leaf access panel tested satisfied the integrity criteria of BS 476: Part 22: 1987 for the duration of the fire resistance test TE94530 (135min). Although the complete partition/access panel specimen tested deflected towards the furnace by 104mm, there was very little deflection of the access panel relative to the supporting partition. As there was no failure of the integrity criterion during the 135min of the fire test, increasing the door height to 2.6m will still enable the access panel to satisfy integrity criteria for 120min. The continuous hinges and 3-point locking system retain the door leaves closely within the door frame.
- iii) During both fire tests, there was no failure of the gap criteria for integrity. Towards the end of test TE 94529, the outer plasterboard of the panel leaf cracked enabling the hinge and door tray of the leaf to be observed. There was no evidence of any gap formation between the leaf tray and access panel frame. Therefore, reversing the orientation of the access panels will not decrease the fire resistance of the panels with respect to integrity.
- iv) The addition of the 65mm x 12mm x 1mm-thick steel protective plate around the perimeter of the Megadeco wallboard on the rear of the door leaves will have no significant effect on the integrity of the access panels and has only been added to prevent damage to the Megadeco board during normal use of the access panels.

This assessment assumes that the steel stud and plasterboard partition system in which the access panel is mounted has a fire resistance of at least that specified for the access panel.





## 6 Conclusion

Therefore it is our opinion that your single- and double-leaf access panels, as described in Section 4 of this report, are suitable for installations where a fire resistance of up to two hours is specified in terms of the integrity criterion of BS 476: Part 22: 1987, for fire attack from either side.

## 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 UK Fire Test Study Group Resolution No. 82 : 2001.
- 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 Testing to withdraw the assessment.

Signed:

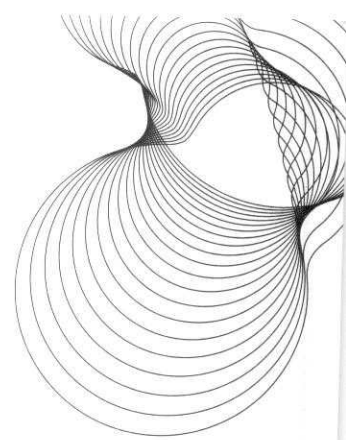
For and on behalf of:

Fire Proofing Services Ltd

### 7.2 BRE Testing Declaration

This assessment was reviewed on 8 September 2005. We have received written confirmation from Fire Proofing Services Ltd. that there have been no changes in the specification of their access panels 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 panels. 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 Testing 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: 8 September 2010

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

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