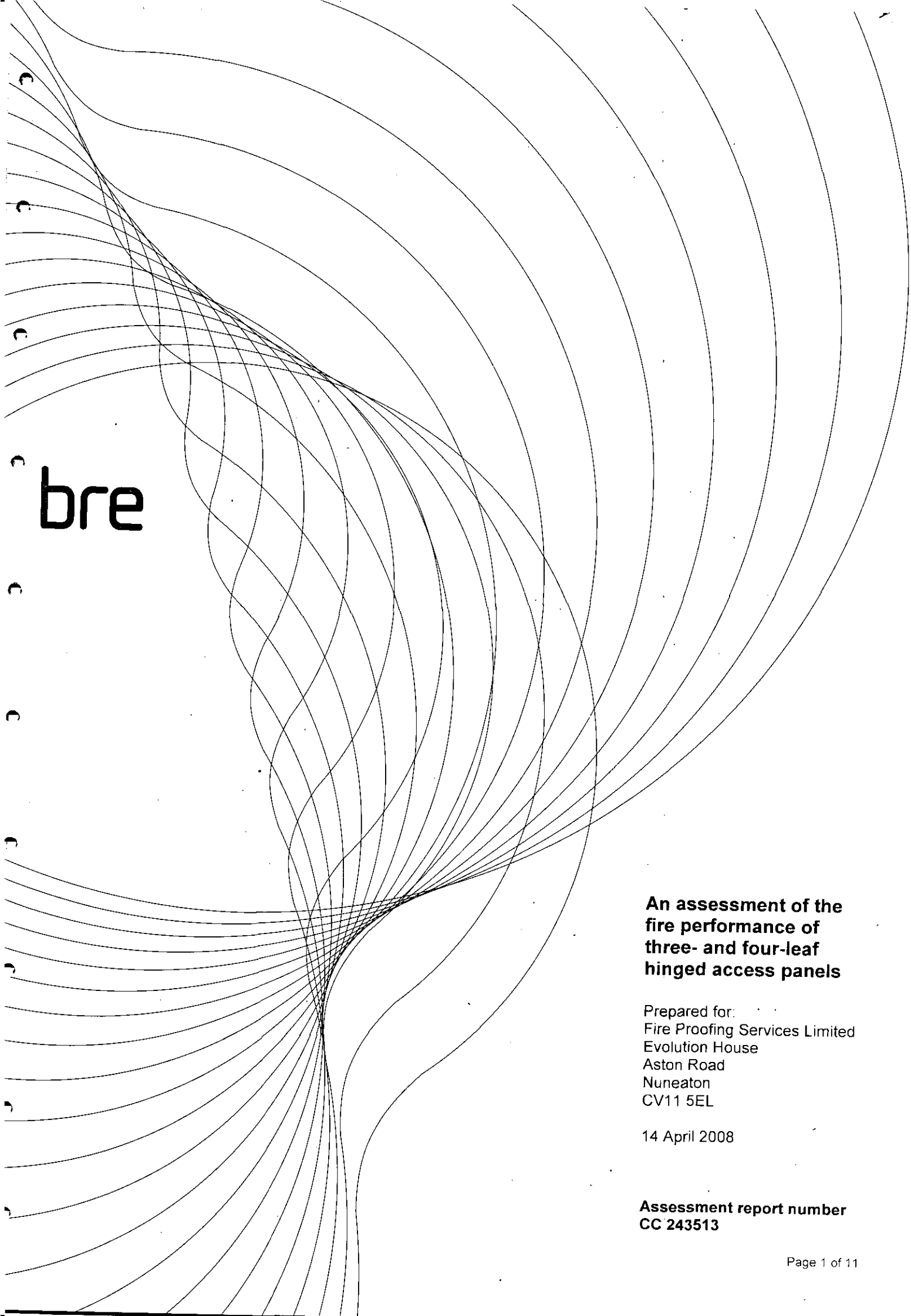

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An assessment of the fire performance of three- and four-leaf hinged access panels

Prepared for:
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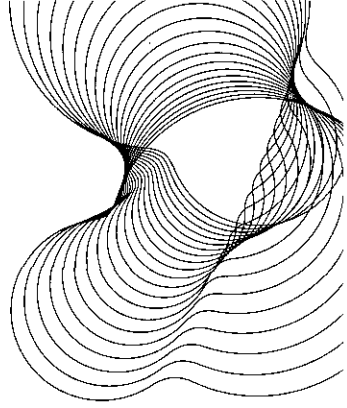
14 April 2008

Assessment report number
CC 243513



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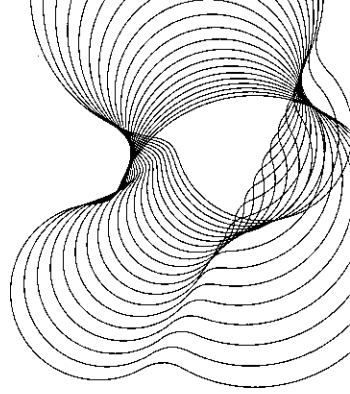

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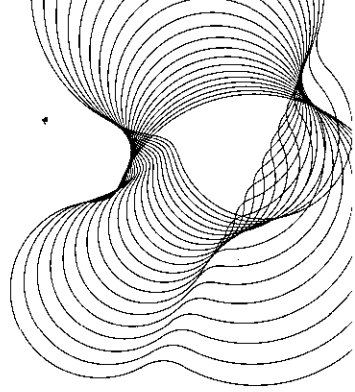


1 Introduction

A fire resistance test in accordance with BS 476: Part 22: 1987 has been carried out on a double-leaf hinged access panel for a duration of 120min. This assessment report considers the fire performance of similarly constructed three- and four-leaf access panels.

2 Scope

This assessment report considers the fire resistance of three- and four-leaf access panels mounted in plasterboard partitions, in terms of the integrity criterion of BS 476: Part 22: 1987, for fire exposures of up to 120min from either side.

3 Supporting Data

3.1 BRE Test Report No. 235651

A double-leaf steel/plasterboard access panel incorporated in a steel-framed plasterboard partition, was submitted to a fire resistance test carried out in accordance with BS 476: Part 22: 1987 (method 6) on 19 March 2007, for a duration of 120min.

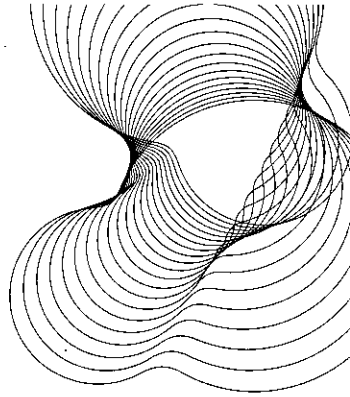
The access panel, nominally 2m high x 1.8m wide overall, comprised two preformed steel door leaves, 57mm thick, manufactured from powder coated Zintec steel sheet incorporating a sheet of 12.5mm-thick Megadeco plasterboard on the unexposed face The leaves were hung in a 1.2mm-thick steel frame incorporating polypropylene smoke seals, 10mm wide x 4mm thick.

The leaves were fitted with 1.5mm-thick mild steel continuous hinges which were welded to the inside face of the door tray and fitted to the panel frame using M6 bolts and nuts with washers. The passive leaf was fitted with an Emka 2-point locking system which engaged with the top and bottom of the frame. The active leaf was fitted with an Emka 3-point locking system which engaged at the top and bottom with the frame and centrally with the passive leaf.

The access panel was incorporated in a partition comprising two layers of 15mm-thick Lafarge Firecheck plasterboard on each face of a 70mm-deep steel-stud frame. The access panel opened towards the furnace and in this orientation achieved the following fire resistance:

Insulation:	10min
Integrity:	120min

For full details see BRE test report no. 235651.



4 Description of Proposals

The proposed three- and four-leaf access panels have a maximum leaf height and width of 1980mm and 777mm respectively.

The access panels can be constructed in any of the following combinations:

- One single-leaf and one double-leaf panel separated by a mullion.
- One single-leaf panel either side of a double-leaf panel, each separated by a mullion, as shown in figure 1.
- Two double-leaf panels separated by a mullion.

The proposed mullion is formed from a Zintec steel channel section, 86mm x 15mm x 3mm-thick, which is welded to 1.5mm-thick steel plate and bolted in position with two M6 bolts at the top and bottom. Details of proposed access panels are given in figures 1 to 5.

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 specimen.

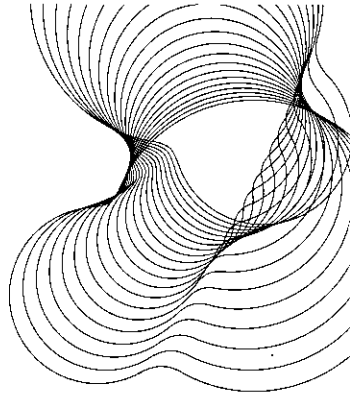
5 Assessment

The 2m-high x 1.8m-wide double-leaf access panel tested satisfied the integrity criteria of BS 476: Part 22: 1987 for the duration of the 120min fire resistance test. Although the complete partition/access panel specimen tested deflected towards the furnace by just over 100mm, there was very little deflection of the access panel relative to the supporting partition. During the fire test, there was no failure against the integrity criterion and no evidence of any significant gap formation between the leaf tray and access panel frame.

As the proposed construction for the three and four door systems is of a similar design to the specimens tested and the leaves are no larger, we are satisfied that the proposed mullion will provide sufficient restraint and support to the door leaves allowing a similar deflection to that recorded in the fire test. In addition, the continuous hinges and 3-point locking system retain the door leaves closely within the door frame ensuring that no gaps open up between the two.

It is therefore our opinion that the proposed three- and four-leaf systems will satisfy integrity criterion for 120min.

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 the three- and four-leaf hinged access panels, as described in section 4 of this report, are suitable for installations where a fire resistance of up to 120min is required with respect to the integrity criterion of BS 476: Part 22: 1987 for fire exposure from either face.

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 is issued on the basis of test data and information to hand at the time of issue. 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: 14 April 2013

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

8 Figures

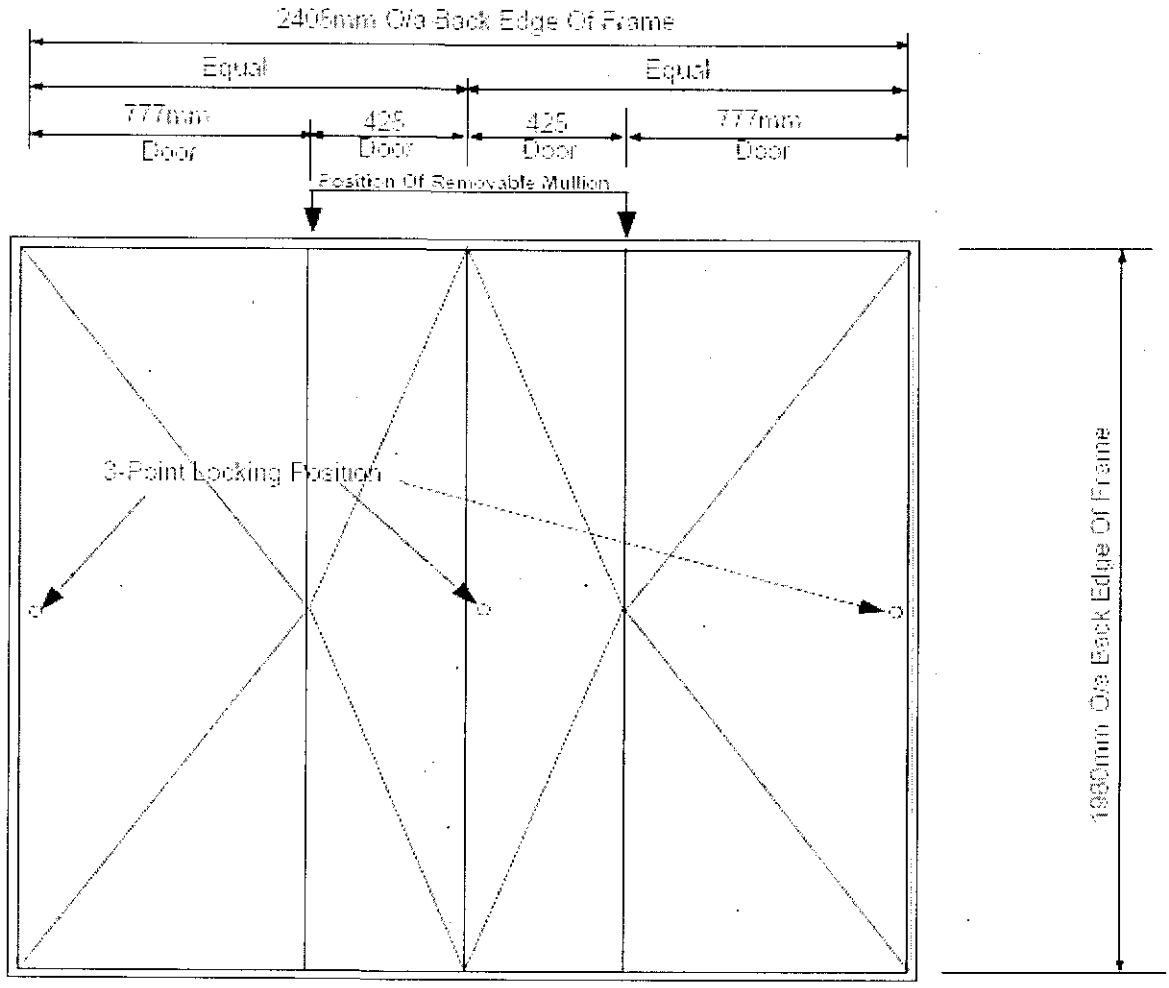
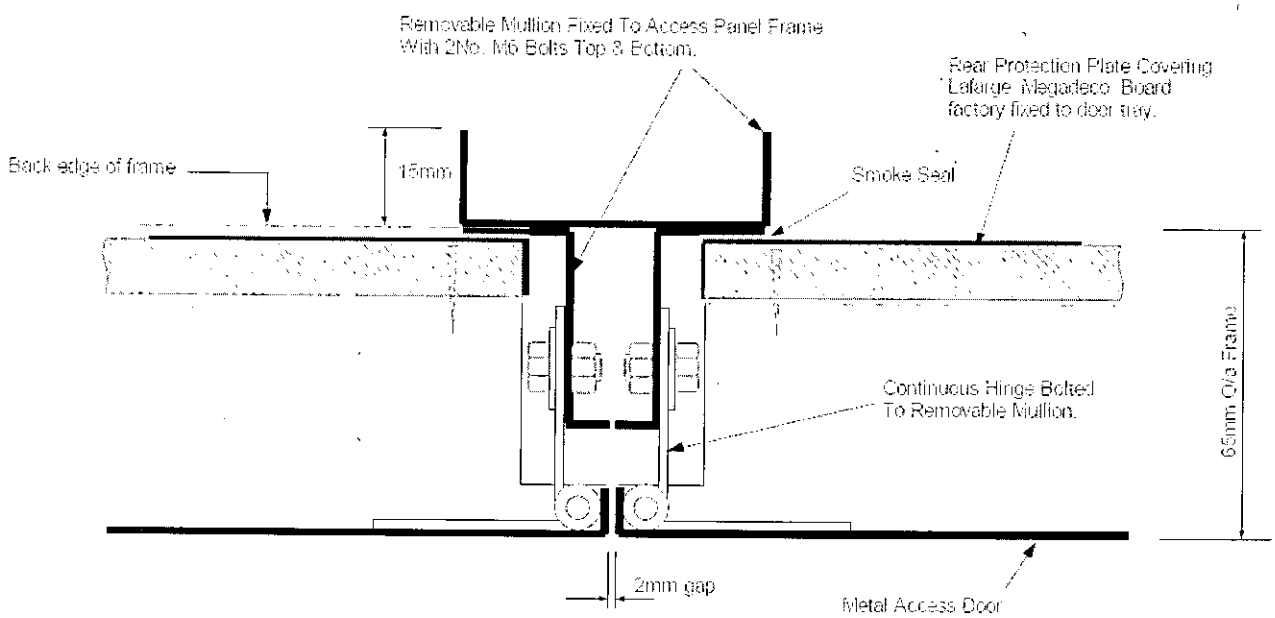
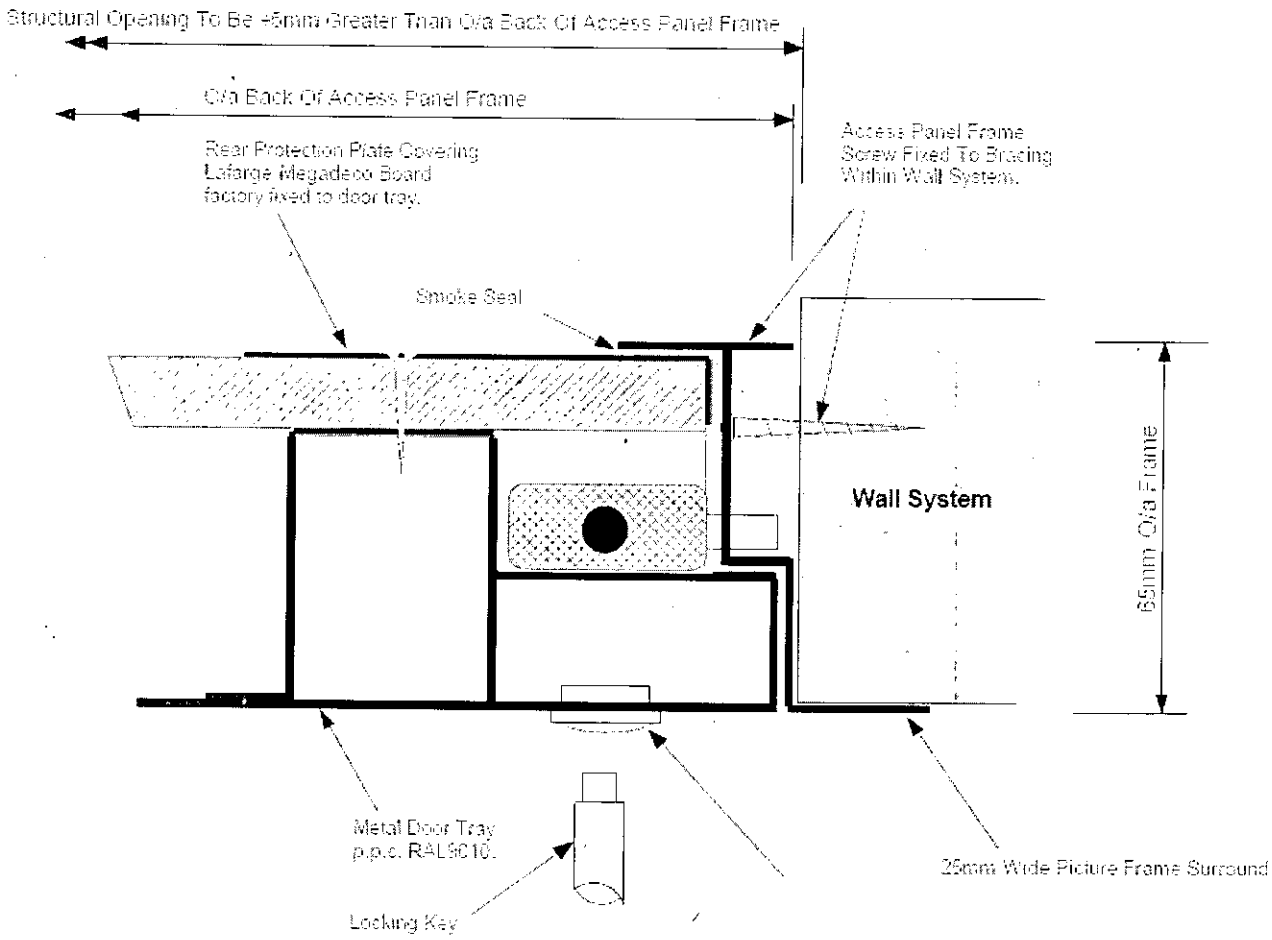


Figure 1



Horizontal Section Showing Removable Mullion Detail - Fire Rated

Figure 2



Horizontal Section Showing End Door Locking Detail - Fire Rated

Figure 3

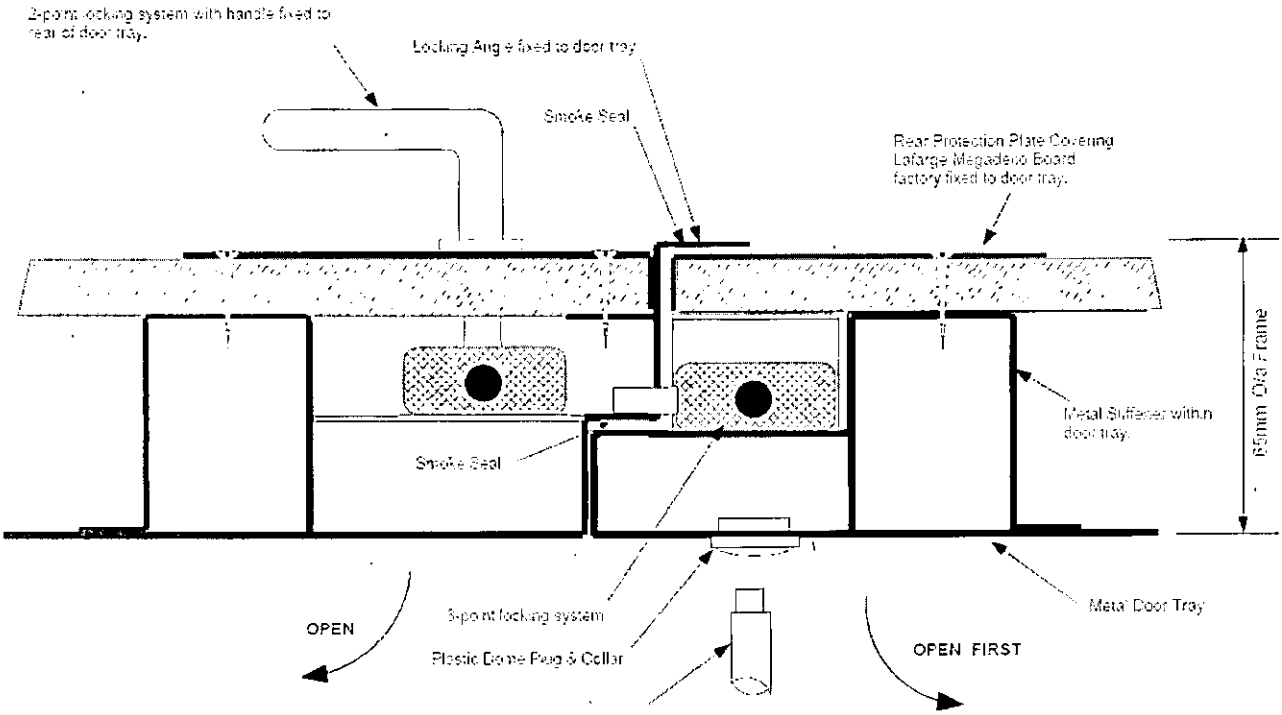


Figure 4

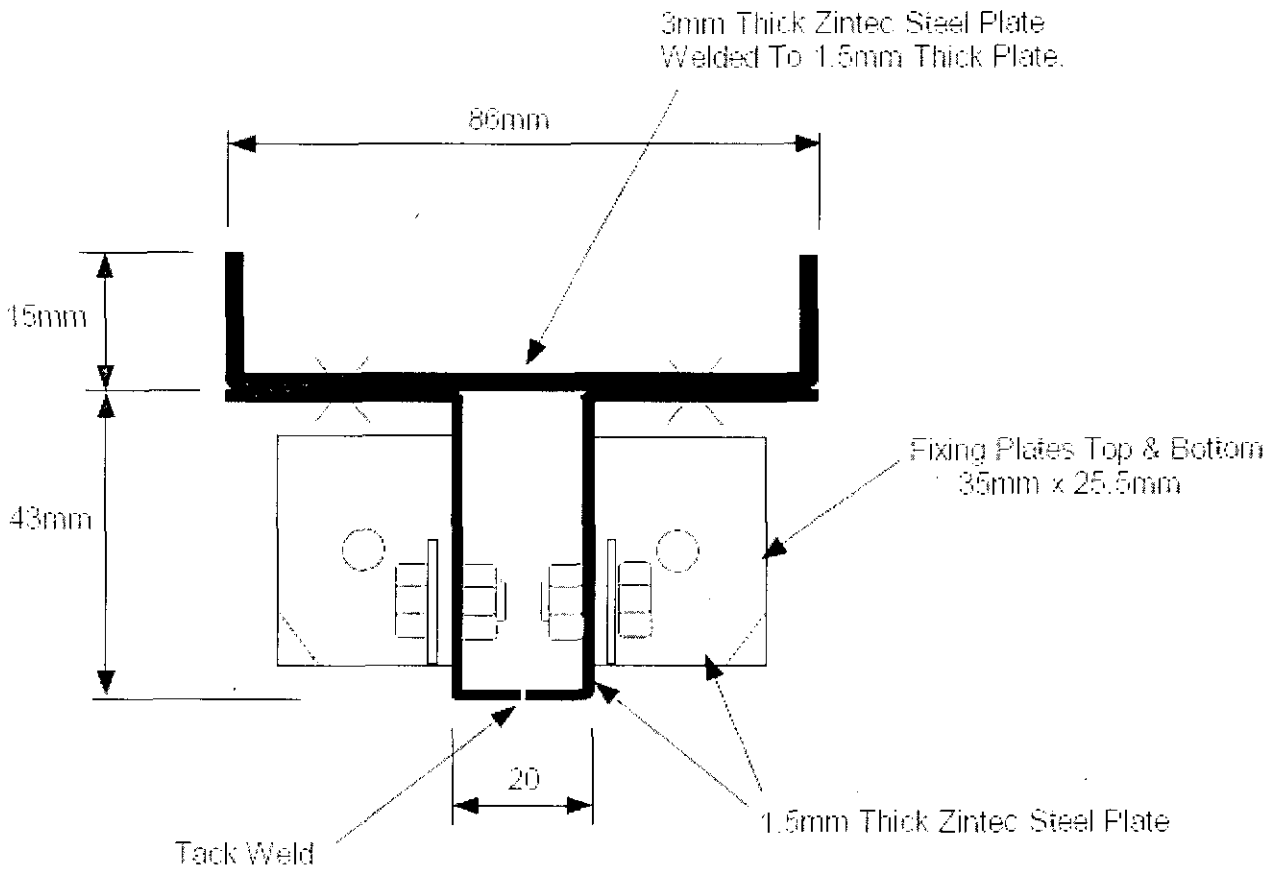


Figure 5

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