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Testing. Advising. Assuring.

Title:

The Fire Resistance
Performance of an
Uninsulated, Two-Panel,
Side-Opening, Lift Landing
Doorset Referenced MDS1
Ty. 11/R-L

**WF Assessment Report
No:**

188348A (Issue 6)

Prepared for:

**WITTUR Deutschland
Holding GmbH**

Rohrbachstrasse 26-30
D-85259 Wiedenzhausen
Germany

Date:

26th January 2010

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Executive Summary

Objective	This report presents an appraisal of the fire resistance performance of an uninsulated, two-panel, side-opening, lift landing doorset referenced MDS1 Ty. 11/R-L, if subjected to a fire resistance test in accordance with EN 81-58: 2003.
Sponsor	WITTUR Deutschland Holding GmbH
Address	Rohrbachstrasse 26-30 D-85259 Wiedenzhausen Germany
Authorised Doorset Manufacturers	Wittur S.p.A. (Italy) Wittur E.C. (Spain) Wittur Suzhou (China) Wittur Asansor (Turkey) Wittur GmbH (Austria) Wittur S.R.O. (Slovakia) Wittur LTDA (Brazil) Wittur S.A. (Argentina) Wittur Elevator Components India Pvt Ltd.
Summary of Conclusions	It can be concluded that the proposed lift landing doorsets should be capable of maintaining the required 120 minutes integrity performance, if subjected to a fire resistance test in accordance with EN 81-58: 2003.
Valid until	1 st February 2017

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Introduction

This report presents an appraisal of the fire resistance performance of an MDS1 Ty. 11/R-L lift landing doorset, which shall be similar to that previously fire tested under the reference WF Report No. 186796.

The doorset is required to provide 120 minutes integrity performance if subjected to a fire resistance test in accordance with EN 81-58: 2003.

FTSG

The data referred to in the supporting data section has been considered for the purpose of this appraisal which has been prepared in accordance with the Fire Test Study Group Resolution No. 82: 2001.

Assumptions

General Construction

It is assumed that the general construction of the doorsets and the materials used in the construction will, unless specifically detailed in this report, be identical to those of the assembly tested under the reference WF Report No. 186796.

Supporting Construction

It is assumed that the doorset shall be installed within a concrete or masonry supporting construction which is capable of providing adequate support without detracting from the required 120 minutes integrity performance.

Door Gaps

It is assumed that the door panel clearance gaps shall be similar those of the previously fire tested assembly.

Installation

It is assumed that the doorset will be installed by competent installers in a similar manner to that used when installing the fire tested assembly.

Direction of Exposure

It is assumed that the doorset is required to provide the designated fire performance when exposed to the heating conditions from the landing face only.

Proposals

General

The proposed doorset design shall be based upon the assembly previously fire tested under the reference WF Report No. 186796. It is, however, proposed that the doorset may incorporate various modifications. The proposed options for incorporation on the doorset, which are detailed in the drawings appended to this report, are summarised as follows:

Clear Opening Size

It is proposed that the clear opening height and width may fall within the following parameters:

Clear Opening Width	600 – 1200 mm
Clear Opening Height	1800 – 2300 mm

Panel Construction

The panels may be constructed from profiled mild steel of between 1 and 1.5 mm thickness.

Panel Cladding

Optionally, the panels may incorporate a stainless steel cladding of between 0.6 and 0.8 mm thickness. The cladding shall be bonded to the main panel using a thin layer of intumescent mastic and secured using aluminium rivets

Interlocks

The interlocking sections fixed to the edges of the door panels may be either riveted in position or fixed using a method referenced 'clinging', which does not require the use of fixings.

Frame Construction

The door frame shall comprise profiled mild steel of 1.2 mm thickness or stainless steel of 1.5 mm thickness. The mild steel frame may optionally incorporate a stainless steel cladding of 0.7 mm thickness, fixed to the frame in a similar manner to the proposed door panel cladding.

Frame Dimensions

The opening and closing door frame sections may have a width of between 50 and 750 mm wide. The upper frame shall have a height of between 50 and 480 mm. See drawing referenced 3250.34.0018V08.

Extended Upper Frame

As an alternative to the above, the upper frame may be further extended to 980 mm height, subject to a maximum clear opening height of 2300 mm. In such cases, the overall height of the doorset (clear opening plus upper frame) is restricted to 3000 mm. See drawing referenced 3250.34.0018V07.

Floor Indicator Void

An aperture of 300 mm by 130 mm maximum dimensions may be incorporated within the upper frame member for the installation of a floor indicator device. This void shall be enclosed by a steel box welded to the reverse face.

Push Button Void

The side frame posts may also incorporate a void of 600 mm by 130 mm maximum dimensions for the installation of a push-button device. This void shall also be enclosed by a steel box welded to the reverse face of the frame.

Frame Installation	The doorset may be bolted to the shaft face of the wall or alternatively it may be installed inside the wall opening, using integral frame anchors which are embedded within the wall. See drawing 3250.34.0002V07 appended to this report.
Gap Covering Profile	The doorset may be installed using a steel gap covering profile positioned around the perimeter of the frame. This profile may be used to seal gaps of up to 75 mm wide. See drawings 3250.34.0017V09 and 3250.34.0019, appended to this report.
Grouting Containment Angles	As an alternative to the above, for situations where the clearance between the wall and door is 30mm (\pm 25mm), the door frame may be fixed to the wall using continuous angle section. The angle section then provides shuttering for a cement infill between the frame and wall. See drawing 3250.34.0018V06.
Fixing Brackets	The doorset may incorporate alternative upper and lower fixing brackets as shown on the drawing referenced 3250.34.0018V03, appended to this report.
Sill	The sill may be constructed from aluminium alloy or stainless steel. The sill may be fixed either within the reveal of the wall or may be face fixed such that upper surface of the sill is flush with the structural opening. Further details are shown on the drawings referenced 3250.34.0018V03.
Rollers	The doorset mechanism may incorporate polytetrafluoroethylene, polyamide nylon, polyurethane, polyphenylenesulphide, steel or bronze rollers.
Maintenance Access Panel (MAP)	The MAP is an openable steel cabinet that encloses the control board of the lift and is screwed to the landing side of the side frame. The installation of the cabinet does not require the existing frame to be adapted in any way. Further details of the cabinet are shown on the drawing referenced 3250.34.0020, appended to this report.

Basic Test Evidence

WF Report No. 186796	<p>A fire resistance test performed in accordance with EN 81-58: 2003 on a specimen of a two-panel, side-opening, lift landing doorset referenced MDS1 Ty. 11/R-L.</p> <p>The doorset was installed over an aperture within a brickwork wall to give a clear opening size of 2100 mm high by 900 mm wide. The doorset briefly comprised 1 mm thick mild steel door panels with a 0.8 mm thick stainless steel cladding, fitted within a profiled stainless steel door frame.</p> <p>The specimen provided 132 minutes integrity performance after which time the test was discontinued.</p>
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Assessed Performance

Clear Opening Size

The doorset has previously proven its ability to provide the required 120 minutes integrity performance at a clear opening size of 2100 mm high by 900 mm wide.

In accordance with the Direct Field of application included within EN 81-58: 2003, these successfully tested dimensions provide coverage for doorsets having a clear opening width of between 630 and 1170 mm and a clear opening height of up to 2415 mm.

EN 81-58: 2003 requires that the recorded leakage from the doorset shall not exceed 3 m³/min/m. Throughout the previous test duration of 132 minutes the maximum recorded leakage from the doorset was 1.6 m³/min/m, significantly less than the maximum required to cause integrity failure.

Based upon the relatively low level of leakage recorded throughout the previous fire test it is not expected that a further 30 mm increase/reduction in the range permitted under the direct field of application should not be detrimental to the required 120 minutes fire performance.

The proposed clear opening size range of between 600 and 1200 mm wide and between 1800 and 2300 mm high may therefore be positively appraised.

Door Panel Cladding

The tested doorset has demonstrated its ability to provide the required 120 minutes integrity performance when incorporating door panels of 1 mm thick mild steel construction, clad with 0.8 mm thick stainless steel.

The proposal requires the optional omission of this cladding or the use of a stainless steel cladding of between 0.6 and 0.8 mm thickness.

A separate specimen of an MDS1, two-panel, centre-opening doorset has been fire tested in accordance with EN 81-58: 2003, the details of which are provided within WF Report No. 186797.

Apart from the bi-parting method of opening, this doorset was constructed in an almost identical manner to the side-opening doorset being considered within this report. One further difference was that the 1 mm thick steel door panels did not incorporate a stainless steel cladding.

This test has demonstrated the ability of the unclad steel door panels to contribute to an integrity performance of 132 minutes after which time the test was discontinued.

Throughout both the test on the stainless steel clad doorset and the unclad doorset, the deflection of the door panels was monitored and recorded.

The deflection across the mid-height of both doorsets was fairly comparable, a maximum deflection of 33 mm being recorded across the stainless steel clad door with a corresponding maximum deflection of 26 mm across the mid-height of the unclad door.

The proven fire performance of doorsets separately tested with and without the cladding, along with evidence that a similar level of deformation can be expected in both cases, therefore provides sufficient confidence to justify the proposed optional incorporation of the cladding.

It is further proposed that the cladding may be optionally reduced from 0.8 mm thickness (as tested) to 0.6 mm. Given that the performance of the doorset has been proven both with and without the cladding, it is not anticipated that such a minor deviation in cladding thickness will detract from the required fire performance.

Door Panel Steel Thickness

It is proposed that the thickness of the main door panel construction may optionally be increased from 1 mm as tested, to between 1 and 1.5 mm.

It is expected that an increase in the steel thickness will result in a slightly more rigid door construction which is less conducive to thermally induced deformation.

The HYDRA doorset fire tested in accordance with EN 81-58: 2003 under the reference WF Report No. 146787 comprised door panels of a 1.8 mm thick steel construction. Although this separately tested doorset originates from a different product range than the MDS1 doorset being considered within this report, this test nevertheless provides confidence in the ability of door panels of a thicker construction to perform satisfactorily and to contribute to the required 120 minutes integrity performance.

The proposed optional increase in steel thickness to a maximum of 1.5 mm may therefore be positively appraised.

The proposal also includes an option for the stiffener sections to be rotated through 180°. Since this does not alter the specification of the door and is not expected to influence the rigidity of the panel, this proposed minor modification may be positively appraised.

Interlocks

The doorset tested under the reference WF Report No. 186796 incorporated interlocking sections to the panel edges which were riveted in position.

The MDS1 doorset previously fire tested in accordance with BS 476: Part 22: 1987 under the reference WF Test Report No. 192125 incorporated two door panels. The interlocking section fixed to one door panel was riveted and the section to the other panel was fixed using the 'clinging' method.

Throughout the test, both sections remained attached to the door panels. Although this test was performed in accordance with a different test method to that being considered, this nevertheless demonstrates the suitability of both fixing methods for the required period of fire performance.

It is therefore considered that both methods of fixing these sections should be suitable for the required application.

Door Frame Construction

The door frame of the assembly tested under the reference WF Report No. 186796 comprised 1.2 mm thick stainless steel. The proposal includes an option for the stainless steel thickness to be increased to 1.5 mm. It is expected that such a modification will result in a more rigid door frame construction which can only be beneficial to the fire performance.

A separate specimen of an MDS1, two-panel, centre-opening doorset has been fire tested in accordance with EN 81-58: 2003, the details of which are provided within WF Report No. 186797.

Apart from the bi-parting method of opening, this doorset was constructed in an almost identical manner to the side-opening doorset being considered within this report. One further difference was that the 1 mm thick steel door panels did not incorporate a stainless steel cladding and the door frame was constructed from 1.2 mm thick mild steel.

This test has demonstrated the ability of the mild steel door frame to contribute to an integrity performance of 132 minutes after which time the test was discontinued.

It has already been considered within this report that the previous tests have demonstrated no detrimental influence on the behaviour of the door panels by the incorporation of the stainless steel cladding. The door panels incorporated within both tested specimens exhibited a similar level of deformation.

The incorporation of a stainless steel cladding on the door frame sections, fixed in a similar manner to the stainless steel cladding which may optionally be included on the door panels, is therefore not expected to detract from the required fire resistance performance.

Door Frame Dimensions

The doorset fire tested under the reference WF Report No. 186796 incorporated 100 mm wide frame posts. It is proposed that the frame width may fall within a range of between 50 and 750 mm.

It is expected that a reduction in frame size to 50 mm will have little influence on the overall fire performance. A reduction in frame size should reduce the tendency for deflection across its width.

A larger frame width (i.e. up to 750 mm as proposed) may be slightly more conducive to thermally induced deformation.

The proposed MDS1 range of doorsets shall supersede a similar range of previously fire tested doorsets known as Augusta. There are many similarities between the two types of doorset. The main differences in specification relate to the mechanism and the construction of the door carriages.

A specimen of the Augusta range of doorsets has been previously successfully fire tested in accordance with EN 81-58: 2003 and achieved 120 minutes integrity performance under the reference 06/32301532. This tested doorset incorporated a 650 mm wide door frame adjacent to one edge of the door. Observations contained within the report do not highlight any concerns in relation to the behaviour of the extended frame post throughout the fire resistance test.

Although the fire performance of the proposed MDS1 doorset is therefore unproven when incorporating frames in excess of 100 mm wide, the fire test evidence to support the similarly constructed Augusta doorset when incorporating a frame of close to the maximum width proposed, provides sufficient confidence to justify the proposed increase in size.

Extended Upper Frame

It is proposed that the height of the upper frame may be further extended to 980 mm. In such instances, the overall height of the doorset (clear opening height plus upper frame height) is restricted to a maximum of 3000 mm.

Where the upper frame height is maximised at 980 mm, the clear opening height will therefore be restricted to a maximum 2020 mm.

Although the proposal requires a significant increase in frame height compared with that previously appraised, this is deemed to be more than adequately offset by the restriction on clear opening height. For instance, a frame of 980 mm height will be slightly more conducive to deformation compared with the 300 mm frame previously appraised. It is, however, considered that the 280 mm reduction in clear opening height will be more influential in reducing the overall rate of leakage from the doorset.

The proposed increase in the upper frame height, subject to a restriction on the overall height of the doorset of 3000 mm, may be positively appraised.

Floor Indicator and Push Button Void

It is proposed that the frame sections may incorporate a rectangular void for the installation of a floor level indicator (upper frame) or push-button device (side-frames). These voids shall be fully enclosed on the shaft face by a steel box and the incorporation of such a void will therefore not permit increased leakage from the doorset nor is it likely to increase the risk of flaming at this position.

Doorset Installation

The tested doorset was installed flush against the shaft face of wall construction and fixed to the wall at the bracket positions. The outer edges of the frame sections coincided with the reveal edge of the wall opening. A variation on this method of installation requires that the outer edges of the frame may overlap the wall construction. This can only be beneficial in preventing the formation of through gaps around the doorset.

Another variation requires the doorset to be fitted inside the opening of the wall with the brackets recessed into the wall construction at identical positions to where the doorset was fixed for the previous test.

It is expected that the concealment of the fixing brackets within the wall construction should provide as secure a method of fixing as the bolt fixed method.

All proposed variations on the tested method of installation may therefore be positively appraised.

Gap Covering Profile

The proposal also includes an option for the incorporation of an adjustable gap covering profile between the wall and frame, where the frame is mounted inside the wall opening.

The profile is of all steel construction and provides increased tolerance for the installation of the doorset, without the necessity to infill the frame to construction gap after installation.

Further confidence in the proposal can be gained by its use in a previous fire test to the French national test method under the reference CTICM 00-A-232. Although this test method is based around entirely different principles to EN 81-58: 2003, the test does provide additional confidence in the ability of the system to perform effectively under fire resistance test conditions.

Grouting Containment Angles

Alternatively, where the clearance between the wall and door is 30 mm (\pm 25mm), the door frame may be fixed to the wall using continuous angle section. The angle section then provides shuttering for a cement infill between the frame and wall.

This method of installation is considered to be advantageous to the fire performance. The fixing positions shall be identical to that of the tested doorset but the continuous steel angle and cement infill provide an additional obstruction to leakage from between the doorset and wall.

A fire resistance test has been performed in accordance with EN 81-58 on a different doorset to that being considered in this report, installed using this proposed method. This test, referenced RTE1232/05, has demonstrated the ability of this installation method to contribute to the required integrity performance of 120 minutes.

Although the aforementioned test does not provide direct test evidence for the proposed door type, this provides sufficient confidence that the proposed method of installation will not detract from the fire performance of a similar type of door. The proposed installation method may therefore be positively appraised.

Sill

The tested doorset incorporated an aluminium sill. It is proposed that the sill may also be constructed from stainless steel.

Stainless steel has a higher melting point than aluminium and should therefore be capable of remaining intact and providing at least the same degree of restraint to the panels as the tested aluminium sill.

The proposal also includes an option for the sill to be positioned such that it is aligned with the lower edge of the structural opening. This modification also requires slight changes to the sill support system. The modified support system is, however, still expected to be capable of supporting the weight of the sill throughout the required period of 120 minutes.

Alternative Fixing Brackets

The proposal requires a slight change to the brackets used to fix the upper and lower edges of the doorset to the wall. The changes are only minor and, as such, should not detract from the required fire performance.

Rollers

The rollers of the tested door comprised polyamide plastic reinforced with glass fibre. The MDS1 centre-opening doorset fire tested under the reference WF Report No. 186797 incorporated polytetrafluoroethylene rollers. Both types of roller have therefore proven to be suitable for use on the proposed MDS1 doorset.

The proposal also includes an option for bronze or steel rollers to be used. Since neither of these types of roller shall present a risk of flaming, there is little perceived risk with the substitution of the tested plastic rollers for either of these metallic types.

Furthermore, since the metallic rollers possess a higher melting point than the plastic rollers tested, they would be expected to provide support to the panels for at least the same duration.

The fire test detailed within WF Report No. 146787 was performed in accordance with EN 81-58: 2003 on a specimen of an uninsulated, six-panel, centre-opening, doorset from the Hydra series. This doorset incorporated nylon rollers.

Although this tested doorset was of a different type to the MDS1 doorset being considered within this report, the test has nevertheless demonstrated the ability of the proposed nylon rollers to contribute to at least 120 minutes integrity performance when used on a similar uninsulated doorset.

An uninsulated doorset incorporating the proposed polyurethane rollers has demonstrated its ability to provide 132 minutes integrity performance when tested to BS 476: Part 22: 1987. Although this doorset, tested under the reference WARRES No. R11773, was not subjected to the same test method as proposed (EN 81-58: 2003), the report does provide a firm indication that rollers of the type proposed are not susceptible to flaming.

An uninsulated doorset incorporating the proposed polyphenylenesulphide (PPS) rollers has demonstrated its ability to provide 125 minutes integrity performance when tested to EN 81-58: 2003. This test is therefore deemed to provide direct evidence regarding the ability of these rollers to contribute to the fire performance of a similarly constructed door.

Maintenance Access Panel (MAP)

The MAP is an openable steel cabinet that is screwed to the landing face of the side frame and encloses the control board of the lift. The installation of the cabinet does not require the existing frame to be adapted in any way.

Although the proposed cabinet shall include combustible items which may be prone to flaming under fire test conditions, since the cabinet is positioned on the landing side of the doorset, the side exposed to the heating conditions, any flaming is expected to be restricted to this and therefore without consequence to the fire performance.

The specification of the doorset itself shall remain uninfluenced by the incorporation of the cabinet. The surface mounting of the cabinet to the side frame may even have the incidental advantage of stiffening the frame and reducing the tendency for deformation under fire test conditions.

The proposed incorporation of the MAP cabinet may therefore be positively appraised.

Conclusions

It can be concluded that the proposed lift landing doorsets should be capable of maintaining the required 120 minutes integrity performance, if subjected to a fire resistance test in accordance with EN 81-58: 2003.

Validity

This assessment is issued on the basis of test data and information available at the time of issue. If contradictory evidence becomes available to Exova Warringtonfire the assessment will be unconditionally withdrawn and WITTUR Deutschland Holding GmbH will be notified in writing. Similarly the assessment is invalidated if the assessed construction is subsequently tested because actual test data is deemed to take precedence over an expressed opinion. The assessment is valid initially for a period of five years i.e. until 1st February 2017, after which time it is recommended that it be returned for re-appraisal.

The appraisal is only valid provided that no other modifications are made to the tested construction other than those described in this report.

Summary of Primary Supporting Data

**WF Report No.
186796**

A fire resistance test performed in accordance with EN 81-58: 2003 on a specimen of a two-panel, side-opening, lift landing doorset referenced MDS1 Type 11/R-L.

The doorset was installed over an aperture within a brickwork wall to give a clear opening size of 2100 mm high by 900 mm wide. The doorset briefly comprised 1 mm thick mild steel door panels with a 0.8 mm thick stainless steel cladding, fitted within a profiled mild steel door frame.

The specimen provided 132 minutes integrity performance after which time the test was discontinued.

Test date : 7th October 2009

Test sponsor : Wittur S.p.A.

**WF Report No.
186797**

A fire resistance test performed in accordance with EN 81-58: 2003 on a specimen of a two-panel, centre-opening, lift landing doorset referenced MDS1 Type 01/C.

The doorset was installed over an aperture within a brickwork wall to give a clear opening size of 2100 mm high by 900 mm wide. The doorset briefly comprised 1 mm thick mild steel door panels fitted within a profiled mild steel door frame.

The specimen provided 132 minutes integrity performance after which time the test was discontinued.

Test date : 9th October 2009

Test sponsor : Wittur S.p.A.

**Report No.
06/32301532**

A fire resistance test performed in accordance with EN 81-58: 2003 on a specimen of a two-panel, centre-opening, lift landing doorset referenced Augusta Type 01/C.

The doorset was installed over an aperture within a brickwork wall to give a clear opening size of 2000 mm high by 800 mm wide. The doorset briefly comprised mild steel door panels fitted within a profiled mild steel door frame.

The specimen provided 126 minutes integrity performance after which time the test was discontinued.

Test date : 31st October 2006

Test sponsor : Wittur Elevator Components S.A.

**WF Report No.
146787**

A fire resistance test performed in accordance with EN 81-58: 2003 on a specimen of a six-panel, centre-opening, lift landing doorset.

The doorset was installed over an aperture within a brickwork wall to give a clear opening size of 2500 mm high by 2000 mm wide. The doorset was referenced 'Selcom Series 3201-Hydra Ty. 61/C'. The door panels were fabricated from 1.8 mm thick profiled mild steel.

The specimen provided 132 minutes integrity performance.

Test date : 16th June 2005

Test sponsor : Wittur S.p.A.

CTICM 00-A-232

A fire resistance test performed in accordance with l'Arrette du 03 Aout 1999 du Ministere de l'Interieur on a specimen of a two-panel, centre-opening, lift landing doorset.

The doorset was installed over an aperture within a wall to give a clear opening size of 2000 mm high by 800 mm wide. The door panels were fabricated from 1.8 mm thick profiled mild steel. The side frames were fixed to the supporting construction using an adjustable gap covering profile.

The specimen provided 30 minutes fire resistance performance.

Test date : 10th February 2000

Test sponsor : Selcom S.p.A. (now Wittur S.p.A.)

**WARRES No.
R11773**

A fire resistance test performed in accordance with BS 476: Part 22: 1987 on a specimen of a two-panel, side-opening, lift landing doorset.

The doorset was installed over an aperture within a brickwork wall to give a clear opening size of 2000 mm high by 1200 mm wide.

The specimen provided 132 minutes integrity performance.

Test date : 9th March 1995

Test sponsor : Selcom S.p.A. (now Wittur S.p.A.)

**Report No.
08/32309570**

A fire resistance test performed in accordance with EN 81-58: 2003 on a specimen of a two-panel, side-opening, lift landing doorset referenced Augusta Type 11/R-L.

The doorset was installed over an aperture within a brickwork wall to give a clear opening size of 2200 mm high by 1000 mm wide. The doorset briefly comprised mild steel door panels with stainless steel cladding fitted within a profiled mild steel door frame.

The specimen provided 125 minutes integrity performance after which time the test was discontinued.

Test date : 8th July 2008

Test sponsor : Wittur Elevator Components S.A.

**WF Test Report
No. 192125**

A fire resistance test performed in accordance with EN 81-58: 2003 on a specimen of a two-panel, centre-opening, lift landing doorset referenced MDS1 Ty. 01/C.

The doorset was installed within a 2270 mm high by 1800 mm wide opening within a masonry wall construction. The specimen had a clear opening size of 2100 mm high by 900 mm wide. The doorset was faced fixed to the unexposed surface of the wall such that the landing side was exposed to the heating conditions of the test.

The specimen provided 132 minutes integrity performance after which time the test was discontinued.

Test date : 7th May 2010

Test sponsor : Wittur S.p.A.

RTE1232/05

A fire resistance test performed in accordance with EN 81-58: 2003 on a specimen of a two-panel, side-opening, lift landing doorset.

The doorset was installed over an aperture within a brickwork wall to give a clear opening size of 2100 mm high by 1100 mm wide.

The specimen provided 132 minutes integrity performance after which time the test was discontinued.

Test date : 10th February 2005

Test sponsor : Kone Industrial Ltd. (who have provided permission for the use of this report)

Declaration by WITTUR Deutschland Holding GmbH

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.

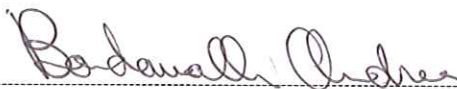
We confirm that the component or element of structure, which is the subject of this assessment, has not to our knowledge been subjected to a fire test to the Standard against which the assessment is being made.

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 Exova Warringtonfire to withdraw the assessment.


Signed:



For and on behalf of:

WITTUR HOLDING GmbH

Signatories



Responsible Officer

D Hankinson* - Principal Certification Engineer



Approved

C Johnson * - Principal Certification Engineer

* For and on behalf of Exova Warringtonfire.

Report Issued: 26th January 2010

Issue 2: Corrections to 'Authorised Door Manufacturers' and to the stated push button opening size (2nd February 2010)

Issue 3: Correction to steel thickness for door frame plus inclusion of additional options (17th December 2010)

Issue 4: Inclusion of extended upper frame, MAP cabinet and Grouting Containment Angles (13th January 2012)

Issue 5: Correction of typographical errors (1st February 2012)

Issue 6: Correction of typographical errors (7th February 2012)

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