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MA 39 – VFA 2006-1239.01

Vienna, 12 September 2006

Test report

for

**the fire properties of laundry / refuse infeed doors
size 500 mm x 750 mm and 400 mm x 600 mm
(Test carried out on 27 June 2006)**

Applicant	Ostermeier Ges.m.b.H.
Date of application	6 June 2006
Test material	Four laundry / refuse infeed doors Sizes 500 mm x 750 mm and 400 mm x 600 mm
Test programme	Test the laundry / refuse infeed doors in terms of performance criteria E (chamber seal) and I (heat insulation) in accordance with ÖNORM EN 1364-1 installed in a standard support construction with a solid design with a low raw density in accordance with ÖNORM EN 1363-1, point 7.2.2.2.
Testing	The laundry / refuse infeed doors installed in a standard support construction with a solid design with a low raw density were tested to identify the two performance criteria of chamber seal and heat insulation over a total testing period of 80 minutes (observations are shown in point 6).

This report comprises 5 pages and 1 appendix (25 pages).

1 General

In its letter dated 6 June 2006, MA 39 – VFA received an order from the applicant to conduct fire safety tests on laundry and refuse infeed doors.

As part of this order, a consultation process was entered with MA 39 – VFA (selection of the specimens) relating to the constructions for testing.

2 Test procedure

The test procedure for determining the fire resistance duration of non-load-bearing component walls is set out in ÖNORM EN 1364-1 in conjunction with ÖNORM EN 1363-1 which state that the test specimens must be subjected to the temperature of the unit temperature/time curve and the performance criteria "Heat insulation" and "Chamber seal" must then be assessed.

3 Test specimens

The applicant's specialist personnel installed two laundry / refuse infeed doors with external frame dimensions of 600 mm x 800 mm (W x H) and two laundry / refuse infeed doors with external frame dimensions of 700 mm x 950 mm (W x H) in the period between 20 June 2006 and 27 June 2006 in a standard load bearing construction with a solid design with a low raw density in accordance with ÖNORM EN 1363-1, point 7.2.2.2.

Before the fire safety test the design drawings were compared by MA 39 – VFA with the installed specimens and reviewed to ensure that they were correct.

Test specimen 1

Laundry / refuse infeed door without door closer, measuring 400 mm x 600 mm
Door filler: Fire safety insert STH/T 7152 supplied by Isover, thickness 50 mm
Details of the structure of the laundry / refuse infeed door are in the appendix, pages 1 and 2.

Test specimen 2

Laundry / refuse infeed door with door closer, measuring 400 mm x 600 mm
Door filler: Fire safety insert STH/T2 – 60 30 supplied by Isover / panel TFP 90 supplied by Isover / fire safety insert STH/T2 – 60 30 supplied by Isover
Details of the structure of the laundry / refuse infeed door and a parts list are in the appendix, pages 3 to 7.

Test specimen 3

Laundry / refuse infeed door with door closer, measuring 500 mm x 750 mm
Door filler: Fire safety insert STH/T 7152 supplied by Isover, thickness 50 mm
Details of the structure of the laundry / refuse infeed door are in the appendix, pages 8 and 9.

Test specimen 4

Laundry / refuse infeed door without door closer, measuring 500 mm x 750 mm
Door filler: Fire safety insert STH/T2 – 60 30 supplied by Isover / panel TFP 90 supplied by Isover /
fire safety insert STH/T2 – 60 30 supplied by Isover
Details of the structure of the laundry / refuse infeed door and a parts list are in the appendix, pages 10 to 14.

4 Test apparatus

The test frame was placed in front of the combustion chamber with a clear test opening measuring 2970 mm x 3030 mm (W x H) and sealed against it using mineral wool strips.

The test specimens were conditioned as described in ÖNORM EN 1363-1.

The specimens were installed on the shaft side for this test (flame exposure from the shaft side).

5 Completion of the test

The combustion chamber was heated by four oil burners (extra light heating oil in accordance with ÖNORM C 1109). The temperature in the combustion chamber was regulated using the mean value of the combustion chamber temperature measurement points on the basis of the unit temperature/time curve.

The test was carried out on 27 June 2006.

The temperature in the hall in which the test was carried out was 26 °C before the start of the test.

The furnace pressure was monitored and regulated in accordance with ÖNORM EN 1363-1.

Six panel thermal elements were installed at a distance of approximately 10 cm from specimen 6 to measure the temperatures in the combustion chamber (see appendix, page 15). Some 40 thermal elements which complied with ÖNORM EN 1364-1 were installed on the surface of the specimens facing away from the combustion chamber (see appendix, page 16). The sag measurement points are also shown in the appendix, page 16.

6 Results

Observations during the test

1 minute:	Slight smoke generation from specimen 2
30 minutes:	Heat insulation and chamber seal intact
33 minutes and 20 seconds:	The maximum temperature increase was exceeded at measuring point No. 6 – heat insulation on specimen 1 no longer intact
43 minutes and 20 seconds:	The maximum temperature increase was exceeded at measuring point No. 26 – heat insulation on specimen 3 no longer intact
60 minutes:	Chamber seal and heat insulation on specimen 2 and specimen 4 intact
71 minutes:	Swab test on specimen 1 around measuring point No. 1 – swab glows – chamber seal no longer intact
72 minutes:	The maximum temperature increase was exceeded at measuring point No. 37 – heat insulation on specimen 4 no longer intact
74 minutes:	The maximum temperature increase was exceeded at measuring point No. 17 – heat insulation on specimen 2 no longer intact
80 minutes:	End of test

The temperatures (combustion chamber temperatures), deformation measurements and the records of the pressure measurements taken during the test are shown in the appendix, pages 17 to 22.

The photo documentation is in the appendix, pages 23 to 25.

The laundry / refuse infeed doors which were the subject of the test were tested in terms of the performance criteria of heat insulation and chamber seal over a test period of 30 minutes (specimen 1 and specimen 3) and 60 minutes (specimen 2 and specimen 4) with positive results.

This test report describes the installation process, the test conditions and the test results of the specific component described here. The specimen was tested in accordance with ÖNORM EN 1363-1 and (where applicable) ÖNORM EN 1363-2. No major discrepancies in terms of the size, constructive details, loads, stress conditions and marginal conditions, apart from those which are permitted in the relevant test procedure for the direct scope, are covered in this test report.

As a result of the special nature of the tests on the fire resistance duration and the difficulties they entail for the quantification of the uncertainty of the measurement of the fire resistance duration, it is not possible to specify a defined level of accuracy for the results.

7 Direct scope of the test results

Relevant standard ÖNORM EN 1364-1:	Permitted changes compared to the tested construction with evaluation and supplement on the basis of the test results
13.1 General	<p>The results of the fire resistance tests can be directly transferred to similar designs in which one or more of the following changes are made and for which the design in terms of its rigidity and stability continue to satisfy the relevant design standard.</p> <ul style="list-style-type: none"> -) Reduction of height -) Increase in the thickness of the components -) Reduction in the length dimensions of panels but not their thickness -) Reduction in the distances between fastening elements

The Executive

The Laboratory Manager with Signatory Rights

Ing. K. Danzinger

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Round stamp: Testing and Research Institute
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