

**Title:**

The Fire Resistance Performance Of Four Specimens Of Wall Mounted and Three Specimens Of Floor Mounted Cavity Barrier Systems, When Tested In Accordance With EN 1366-4:2021

**Date Of Test:**

02 October 2024

**Issue 1**

19 November 2024

**WF Report No:**

546815/R



**Prepared for:**

**TIMLOC BUILDING PRODUCTS**

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0249

# Test Specimens

## Summary of Tested Specimens

For the purpose of the test the floor specimens were referenced A to C and the wall specimens were referenced D to G.

The section of floor had overall dimensions of 2230 mm long by 1730 mm wide by nominally 600 mm thick and was made up of autoclaved aerated concrete lintels arranged to provide three cavities of varying widths which were all 1180 mm in length.

The section of wall had overall dimensions of 1810 mm high by 1810 mm wide by nominally 600 mm thick and was made up of autoclaved aerated concrete lintels arranged to provide four cavities of varying widths which were all 1180 mm in length.

Specific details of each of the seals are given in the tables below:

## Floor Specimens

Specimen	Substrate	Seal Details
A	Autoclaved aerated concrete to OSB	Sealed with a 1200 mm long by 65 mm wide by 150 mm deep stone mineral wool cavity barrier wrapped in a 35-micron polythene sleeve referenced 'TIMFRSTOP50'. The barrier was friction fitted at 250 mm from the exposed face with 15 mm compression to the width and 20 mm to the length
B		Sealed with a 1200 mm long by 65 mm wide by 150 mm deep stone mineral wool cavity barrier wrapped in a 35-micron polythene sleeve referenced 'TIMFRSTOP50'. The barrier was friction fitted at 250 mm from the exposed face with 15 mm compression to the width and 20 mm to the length
C		Sealed with a 1200 mm long by 65 mm wide by 150 mm deep stone mineral wool cavity barrier wrapped in a 35-micron polythene sleeve referenced 'TIMFRSTOP50'. The barrier was friction fitted at 250 mm from the exposed face with 15 mm compression to the width and 20 mm to the length

## Wall Specimens

Specimen	Substrate	Seal Details
D	Autoclaved aerated concrete to OSB	Sealed with a 1200 mm long by 110 mm wide by 250 mm deep stone mineral wool cavity barrier wrapped in a 35-micron polythene sock referenced 'PWTIMFRSTOP100'. The barrier was friction fitted at 250 mm from the exposed face with 10 mm compression to the width and 20 mm to the length
E	OSB to OSB	Sealed with a 1200 mm long by 85 mm wide by 150 mm deep stone mineral wool cavity barrier wrapped in a 35-micron polythene sock referenced 'TFRSTOP50'. The barrier was friction fitted at 250 mm from the exposed face with 35 mm compression to the width and 20 mm to the length
F	OSB to OSB	Sealed with a 1200 mm long by 130 mm wide by 150 mm deep stone mineral wool cavity barrier wrapped in a 35-micron polythene sock referenced 'TFRSTOP100'. The barrier was friction fitted at 250 mm from the exposed face with 30 mm compression to the width and 20 mm to the length
G	Autoclaved aerated concrete to OSB	Sealed with a 1200 mm long by 65 mm wide by 150 mm deep stone mineral wool cavity barrier wrapped in a 35-micron polythene sock referenced 'TIMFRSTOP50'. The barrier was friction fitted at 250 mm from the exposed face with 15 mm compression to the width and 20 mm to the length

*Detailed drawings of the test specimen(s) and a comprehensive description of the test construction based on a detailed survey of the specimen(s) and information supplied by the sponsor of the test are included in the Test Specimen and Schedule of Components sections of this report.*



# Performance Criteria and Test Results

<b>Integrity</b>	It is required that the specimen retains its separating function, without either causing ignition of a cotton pad when applied as specified in BS EN 1363-1:2020 or resulting in sustained flaming on the unexposed surface.																																				
<b>Insulation</b>	The requirements of the standard are that the maximum temperature rise shall not be greater than 180°C. Insulation failure also occurs simultaneously with integrity failure as specified in BS EN 1363-1:2020.																																				
<b>Test Results</b>	<table border="1"> <thead> <tr> <th rowspan="2">Specimen</th> <th colspan="2">Integrity (minutes)</th> <th rowspan="2">Insulation (minutes)</th> </tr> <tr> <th>Cotton Pad</th> <th>Sustained flaming</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>67*</td> <td>67*</td> <td>67*</td> </tr> <tr> <td>B</td> <td>67*</td> <td>67*</td> <td>67*</td> </tr> <tr> <td>C</td> <td>67*</td> <td>67*</td> <td>67*</td> </tr> <tr> <td>D</td> <td>67*</td> <td>67*</td> <td>67*</td> </tr> <tr> <td>E</td> <td>67*</td> <td>67*</td> <td>67*</td> </tr> <tr> <td>F</td> <td>67*</td> <td>67*</td> <td>67*</td> </tr> <tr> <td>G</td> <td>67*</td> <td>67*</td> <td>67*</td> </tr> </tbody> </table> <p style="text-align: center;">*Test was discontinued after a period of 67 minutes.</p>			Specimen	Integrity (minutes)		Insulation (minutes)	Cotton Pad	Sustained flaming	A	67*	67*	67*	B	67*	67*	67*	C	67*	67*	67*	D	67*	67*	67*	E	67*	67*	67*	F	67*	67*	67*	G	67*	67*	67*
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G	67*	67*	67*																																		

**Date of Test** 02 October 2024

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# Quality Management

Issue No: 1	Issue Date: 19 November 2024
Responsible Officer: <b>M. A. Rana*</b>	Approved By: <b>G. Edmonds*</b>
	

\* For and on behalf of **Warringtonfire**.

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# Test Conditions

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<b>Standard</b>	BS EN 1366-4:2021 Fire resistance tests for service installations – Part 4: Linear joint seals.
<b>Sampling</b>	<p><b>Warringtonfire</b> was not involved in the sampling or selection of the tested specimen or any of the components.</p> <p>The results obtained during the test only apply to the test samples as received and tested by <b>Warringtonfire</b>.</p>
<b>Installation</b>	<b>Warringtonfire</b> supplied the wall and floor constructions. The gap sealing systems were provided and installed by a representative of Timloc Building Products on 13 September 2024.
<b>Conditioning</b>	The specimen's storage, construction, and test preparation took place in the test laboratory over a total, combined time of twenty-four days. Throughout this period both the temperature and the humidity of the laboratory were measured and recorded as being within a range of from 15.5°C to 30.5°C and 28.0% to 75.0% respectively.
<b>Instruction to Test</b>	<p>The test was conducted on the 02 October 2024 at the request of TIMLOC BUILDING PRODUCTS, the test sponsor.</p> <p>Mr. S. Bishop and Mr. J. Gijo, representatives of the <b>Test Sponsor</b> witnessed the test.</p>
<b>Ambient Temperature</b>	The ambient air temperature in the vicinity of the test construction was 17°C at the start of the test with a maximum variation of +5°C during the test.
<b>Furnace</b>	The furnace was controlled so that its mean temperature complied with the requirements of BS EN 1363-1:2020 Clause 5.1 using four plate thermometers, distributed over a plane 100 mm from the surface of the vertical test construction and four plate thermometers, distributed over a plane 100 mm from the surface of the horizontal test construction.
<b>Thermocouples</b>	Thermocouples were provided to monitor the unexposed surface of the specimens. The output of all instrumentation was recorded at no less than one-minute intervals. The locations and reference numbers of the various unexposed surface thermocouples are shown in the Test Construction section of this report.

### Furnace Pressure

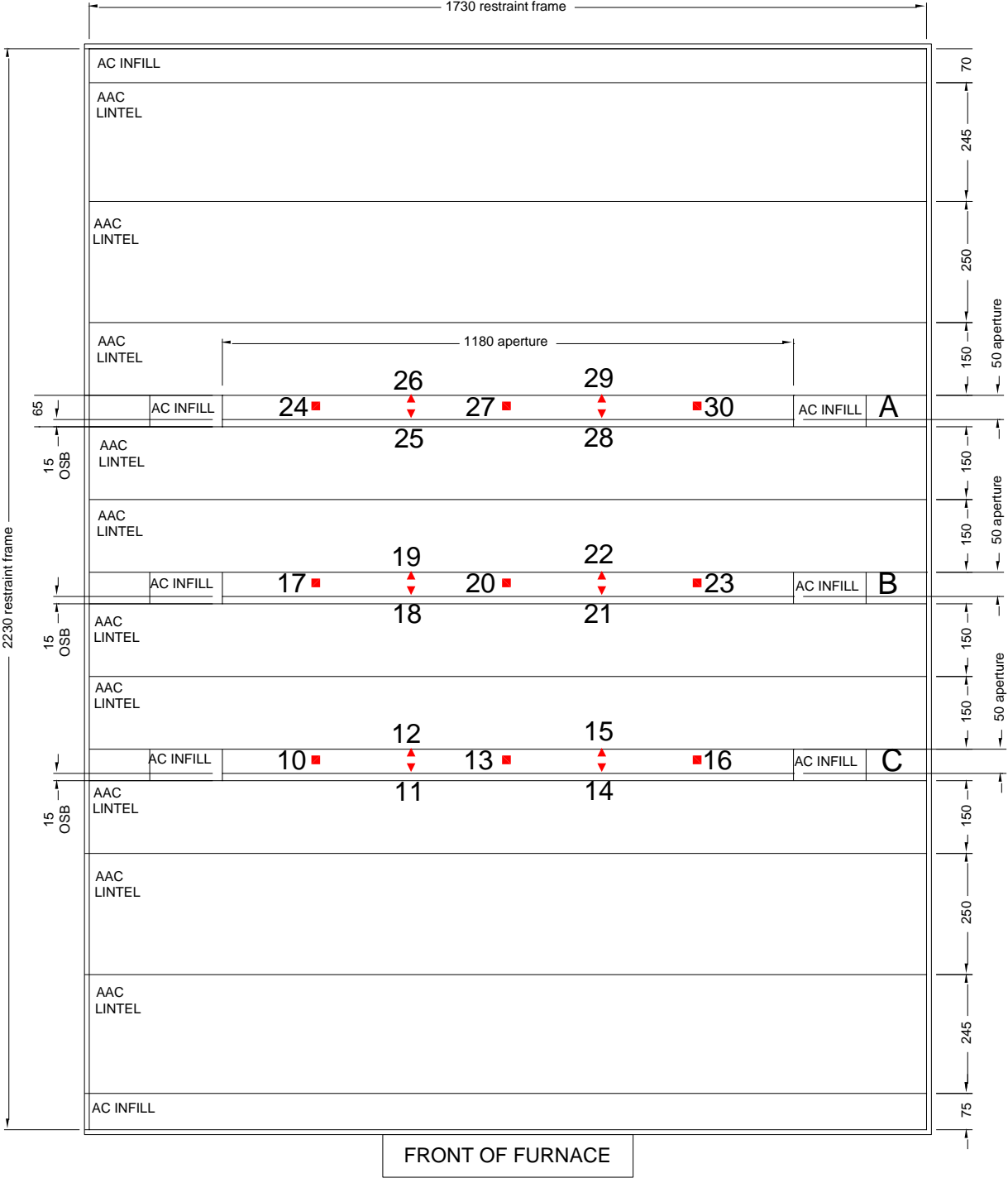
The requirements of BS EN 1363-1:2020, clause 5.2 could not be satisfied due to simultaneous testing of wall and floor specimens. The floor specimens were tested under more onerous conditions, at position 100 mm below the underside of the floor assembly the differential pressure was calculated to be 24 ( $\pm 7$ ) Pa between 5 and 10 minutes and 24 ( $\pm 18$ ) Pa respectively thereafter. The wall specimens satisfied the requirements of BS EN 1363-1:2020, clause 5.2. The calculated pressure differential relative to the laboratory atmosphere at mid height of the wall mounted specimens was 15 ( $\pm 5$ ).

Should the conditions of furnace temperature, furnace pressure or ambient temperature which are achieved during the test represent a more severe exposure to the test specimen, the test is still to be considered valid.



# Test Construction

**Figure 1. General plan of unexposed face showing thermocouple positions**

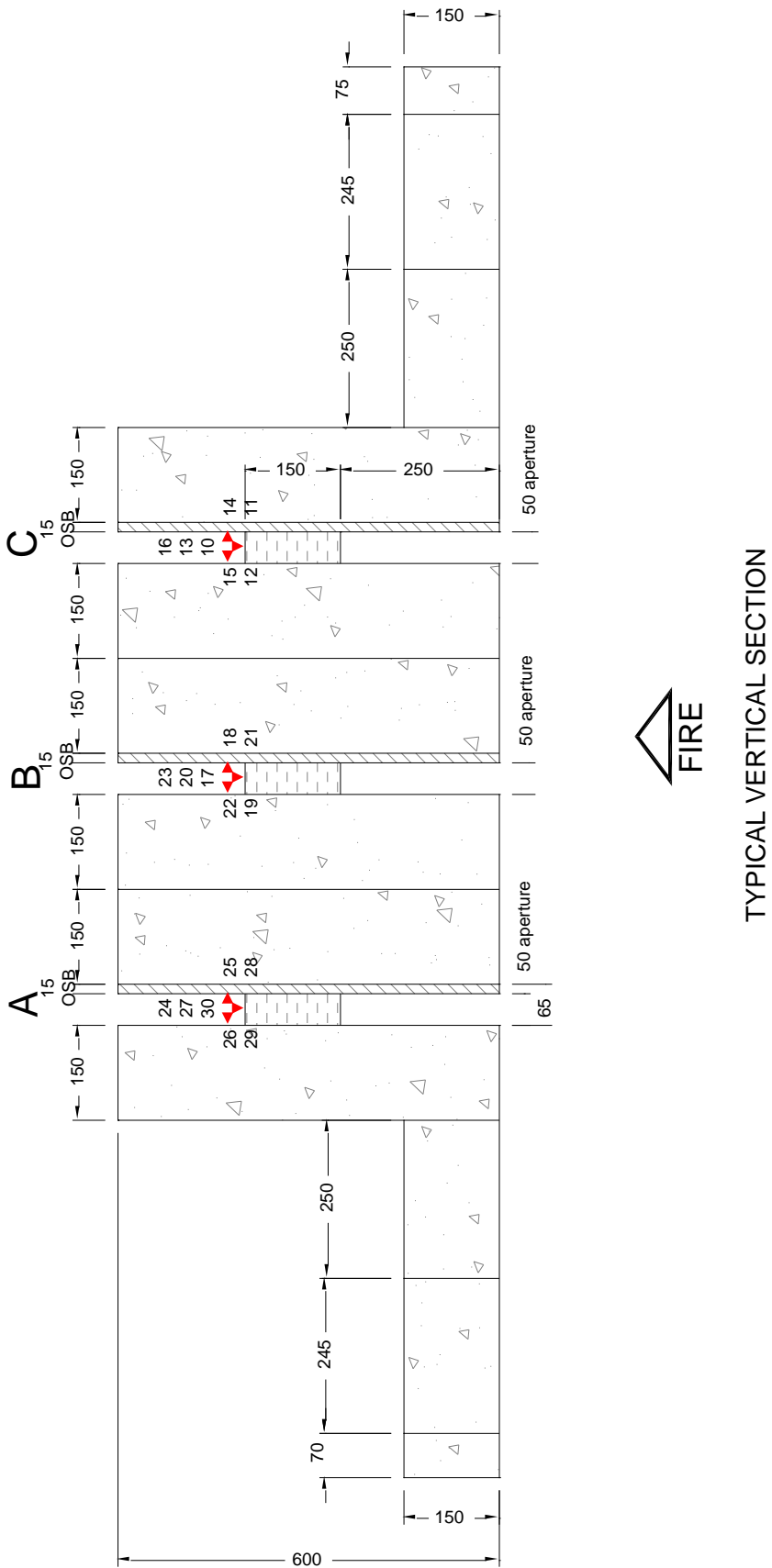


- ▼ Positions of thermocouples
- ⊗ Positions of mineral insulated thermocouples

GENERAL PLAN OF UNEXPOSED FACE SHOWING THERMOCOUPLE POSITIONS

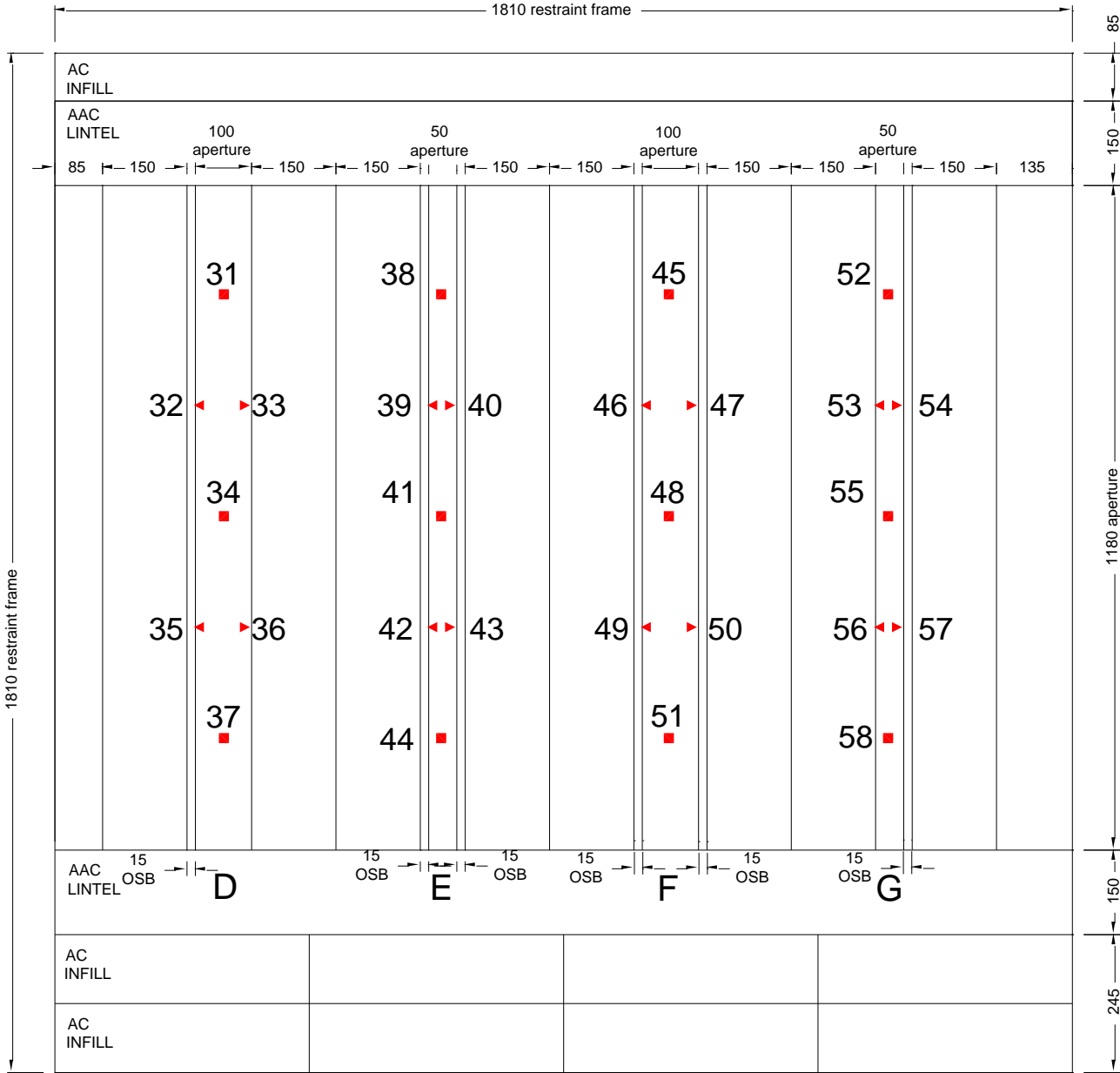
Do not scale. All dimensions are in mm

Figure 2. Typical vertical section through test specimen



Do not scale. All dimensions are in mm

**Figure 3. General elevation of unexposed face showing thermocouple positions**

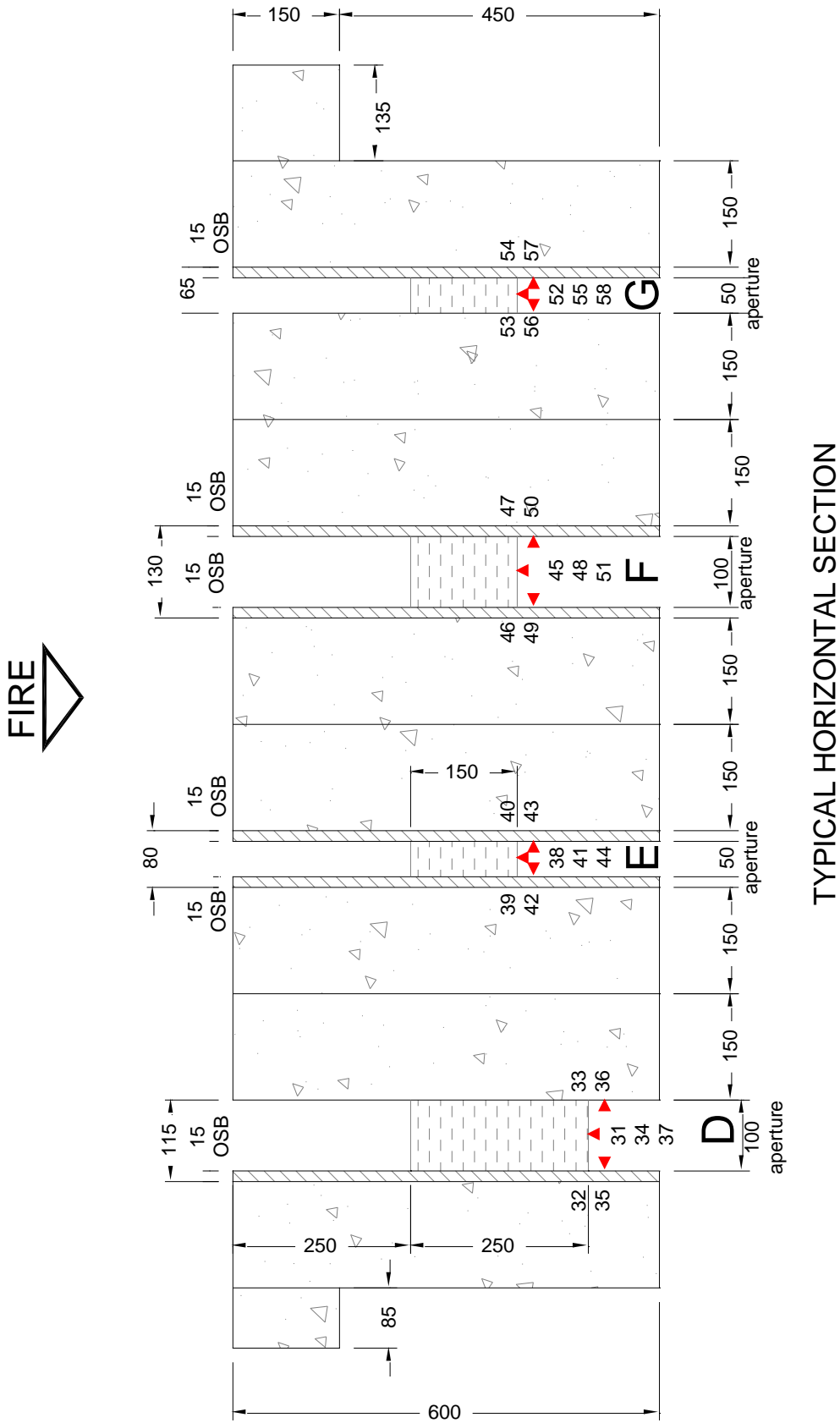


- ▼ Positions of thermocouples
- ⊗ Positions of mineral insulated thermocouples

GENERAL ELEVATION OF UNEXPOSED FACE

Do not scale. All dimensions are in mm

Figure 4. Typical horizontal section through test specimen



Do not scale. All dimensions are in mm

# Schedule of Components

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The schedule of components describes the test specimen and lists the components used in the construction of the test specimen. These were provided by the test sponsor and surveyed by Warringtonfire.

All measurements were verified by Warringtonfire unless stated otherwise in the schedule of components. All components marked with an "\*" have not been verified by Warringtonfire.

<u>Item</u>	<u>Description</u>
<b>1. Specimen A</b>	
<b>Details of aperture</b>	: 50 mm wide x 1180 mm long
<b>Details of barrier</b>	
Manufacturer	: Timloc
Reference	: TIMFRSTOP50
Material	: Stone mineral wool in 35 micron polythene sleeve
Density	: 40 kg/m <sup>3</sup> (stated)
Overall size	: 1200 mm long x 150 mm deep x 65 mm wide
Fixing method	: Compression-fitted into the aperture with 15 mm compression across the width and 20 mm across the length
<b>2. Specimen B</b>	
<b>Details of aperture</b>	: 50 mm wide x 1180 mm long
<b>Details of barrier</b>	
Manufacturer	: Timloc
Reference	: TIMFRSTOP50
Material	: Stone mineral wool in 35 micron polythene sleeve
Density	: 40 kg/m <sup>3</sup> (stated)
Overall size	: 1200 mm long x 150 mm deep x 65 mm wide
Fixing method	: Compression-fitted into the aperture with 15 mm compression across the width and 20 mm across the length
<b>3. Specimen C</b>	
<b>Details of aperture</b>	: 50 mm wide x 1180 mm long
<b>Details of barrier</b>	
Manufacturer	: Timloc
Reference	: TIMFRSTOP50
Material	: Stone mineral wool in 35 micron polythene sleeve
Density	: 40 kg/m <sup>3</sup> (stated)
Overall size	: 1200 mm long x 150 mm deep x 65 mm wide
Fixing method	: Compression-fitted into the aperture with 15 mm compression across the width and 20 mm across the length
<b>4. Specimen D</b>	
<b>Details of aperture</b>	: 100 mm wide x 1180 mm long
<b>Details of barrier</b>	
Manufacturer	: Timloc
Reference	: PWTIMFRSTOP100
Material	: Stone mineral wool in 35 micron polythene sleeve
Density	: 40 kg/m <sup>3</sup> (stated) 43 kg/m <sup>3</sup> (measured)
Overall size	: 1200 mm long x 250 mm deep x 110 mm wide

<u>Item</u>	<u>Description</u>
<b>4. Specimen D (continued)</b>	
Fixing method	: Compression-fitted into the aperture with 10 mm compression across the width and 20 mm across the length
<b>5. Specimen E</b>	
<b>Details of aperture</b>	: 50 mm wide x 1180 mm long
<b>Details of barrier</b>	
Manufacturer	: Timloc
Reference	: TFRSTOP50
Material	: Stone mineral wool in 35 micron polythene sleeve
Density	: 40 kg/m <sup>3</sup> (stated), 40 kg/m <sup>3</sup> (measured)
Overall size	: 1200 mm long x 150 mm deep x 85 mm wide
Fixing method	: Compression-fitted into the aperture with 35 mm compression across the width and 20 mm across the length
<b>6. Specimen F</b>	
<b>Details of aperture</b>	: 100 mm wide x 1180 mm long
<b>Details of barrier</b>	
Manufacturer	: Timloc
Reference	: TFRSTOP100
Material	: Stone mineral wool in 35 micron polythene sleeve
Density	: 40 kg/m <sup>3</sup> (stated), 40 kg/m <sup>3</sup> (measured)
Overall size	: 1200 mm long x 150 mm deep x 130 mm wide
Fixing method	: Compression-fitted into the aperture with 30 mm compression across the width and 20 mm across the length
<b>7. Specimen G</b>	
<b>Details of aperture</b>	: 50 mm wide x 1180 mm long
<b>Details of barrier</b>	
Manufacturer	: Timloc
Reference	: TFRSTOP50
Material	: Stone mineral wool in 35 micron polythene sleeve
Density	: 40 kg/m <sup>3</sup> (stated)
Overall size	: 1200 mm long x 150 mm deep x 65 mm wide
Fixing method	: Compression-fitted into the aperture with 15 mm compression across the width and 20 mm across the length
<b>8. OSB substrate board</b>	
Material	: OSB (oriented strand board)
Density	: 600 kg/m <sup>3</sup> (measured)
Thickness	: 15 mm
Fixing method	: Through fixed to the supporting construction with screws
Fixings	
i. type	: Turbo TX Multi Purpose Gold Screws
ii. size	: 100 mm long x 5 mm diameter
iii. centres	: 500 mm

<u>Item</u>	<u>Description</u>
<b>Supporting construction (comprising items 9 – 10)</b>	
<b>9. Concrete lintels (supplied by Warringtonfire)</b>	
Material	: Steel reinforced autoclaved aerated concrete
Density	: 550 ~ 650 kg/m <sup>3</sup>
Overall size	: 1800 mm long x 600 mm deep x 150 mm wide 1180 mm long x 600 mm deep x 150 mm wide
<b>10. Masonry infill (supplied by WarringtonFire)</b>	
Manufacturer	: THERMALITE
Reference	: THERMALITE Shield
Material	: Lightweight concrete blocks
Overall size	: 150 mm wide x 215 mm high x 440 mm long
Density	: 884 kg/m <sup>3</sup> (measured)
Fixing method	: Ordinary sand/cement mortar, mix 3:1

# Test Observations

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Time		All observations are from the unexposed face unless noted otherwise.
mins	secs	
00	00	<b>The Test Commences.</b>
03	00	Steam/smoke release from all Specimens at OSB and related interfaces.
07	10	Increased steam/smoke release from supporting constructions of the wall and floor.
15	20	Steam/smoke release from all Specimens at the head and foot.
27	50	Thermocouple 58 noted.
29	10	Moisture released in the bags of the Specimens A, B and C.
30	20	Roving Thermocouple applied to Thermocouple 58 – recorded at 16.8 Degrees Celsius.
39	00	OSB considerably burnt away on all Specimens with large sections falling into the furnace. (View from the exposed face).
40	50	Specimens A, B and C bags have inflated and billowed out slightly. Increased moisture visible between bag and mineral wool.
51	40	Partial melting of the bag on the unexposed side of Specimen C at the head.
63	20	Specimens D to G bags inflated and moisture is visible.
64	20	Small area of glowing on Specimen C
67	47	<b>The test is discontinued at the sponsor's request. All barriers maintained their integrity and insulation.</b>



# Test Photographs

The exposed face of the wall assembly prior to testing



The unexposed face of the wall assembly prior to testing



The exposed face of the floor assembly prior to testing



The unexposed face of the floor assembly prior to the start of the test



The unexposed face of the wall assembly after a test duration of 30 minutes



The unexposed face of the floor assembly after a test duration of 30 minutes



The unexposed face of the wall assembly after a test duration of 66 minutes



The unexposed face of the floor assembly after a test duration of 66 minutes



The unexposed face of the wall assembly immediately after the test duration



## Temperature and Pressure Data

Mean furnace temperature, together with the temperature/time relationship specified in BS EN 1363-1:2020

Time Minutes	Specified Furnace Temperature Deg. C	Actual Furnace Temperature Deg. C
0	20	20
2	445	290
4	544	589
6	603	608
8	645	640
10	678	686
12	705	644
14	728	775
16	748	666
18	766	712
20	781	763
22	796	796
24	809	811
26	820	821
28	831	827
30	842	832
32	851	863
34	860	851
36	869	889
38	877	844
40	885	891
42	892	911
44	899	913
46	906	913
48	912	918
50	918	924
52	924	930
54	930	936
56	935	941
58	940	947
60	945	953
62	950	958
64	955	962
66	960	968
67	962	970

**Individual temperatures recorded on the unexposed surface of Specimen A and adjacent to Specimen A**

Time Minutes	T/C Number 24 Deg. C	T/C Number 25 Deg. C	T/C Number 26 Deg. C	T/C Number 27 Deg. C	T/C Number 28 Deg. C	T/C Number 29 Deg. C	T/C Number 30 Deg. C
0	16	17	17	17	17	17	16
2	16	17	17	17	17	17	16
4	16	17	17	17	17	18	17
6	18	17	18	18	17	18	17
8	20	18	20	20	18	19	20
10	23	19	22	22	20	21	22
12	26	20	25	26	21	23	25
14	29	21	27	27	23	25	27
16	29	22	28	28	24	25	28
18	31	23	32	33	27	28	31
20	32	25	36	36	29	31	34
22	33	26	38	37	31	33	36
24	35	28	40	40	34	36	38
26	36	29	42	43	36	39	42
28	38	31	44	44	39	41	44
30	40	32	46	45	41	43	46
32	41	33	47	46	44	45	48
34	42	35	48	48	47	48	49
36	44	37	50	49	49	49	51
38	45	39	52	51	51	53	52
40	47	41	53	53	54	55	53
42	47	42	53	52	55	55	53
44	47	44	54	53	56	56	54
46	48	45	55	54	57	57	56
48	48	46	56	55	59	57	57
50	49	48	56	56	60	57	58
52	50	48	57	56	60	57	59
54	50	49	57	57	62	58	59
56	51	50	58	58	63	58	60
58	51	52	59	59	64	59	60
60	51	52	60	60	66	59	61
62	52	53	60	61	67	59	61
64	52	54	61	62	68	60	61
66	52	55	61	65	70	60	62
67	53	55	62	66	71	59	62

**Individual temperatures recorded on the unexposed surface of Specimen B and adjacent to Specimen B**

Time Minutes	T/C Number 17 Deg. C	T/C Number 18 Deg. C	T/C Number 19 Deg. C	T/C Number 20 Deg. C	T/C Number 21 Deg. C	T/C Number 22 Deg. C	T/C Number 23 Deg. C
0	17	17	17	16	17	16	16
2	17	17	17	16	17	16	16
4	17	17	17	16	17	16	16
6	17	17	17	16	17	17	17
8	17	17	17	17	17	17	17
10	18	17	17	17	17	17	18
12	19	17	17	17	17	17	18
14	21	18	18	18	18	17	19
16	21	18	18	18	18	17	19
18	22	18	18	19	18	17	20
20	23	19	19	20	18	18	21
22	24	19	19	21	18	18	21
24	25	20	19	23	19	18	22
26	27	21	20	24	19	18	23
28	29	22	20	26	20	18	24
30	30	23	21	28	21	19	26
32	32	24	21	29	21	19	26
34	34	25	22	30	22	20	28
36	35	26	23	32	23	20	29
38	36	27	23	33	24	21	31
40	38	28	24	33	25	21	33
42	38	29	25	33	27	22	35
44	39	31	26	35	30	23	36
46	40	33	27	36	32	24	38
48	42	37	28	37	36	25	40
50	44	41	30	39	39	26	42
52	45	45	31	39	42	27	44
54	47	49	32	39	44	28	45
56	48	52	33	38	46	29	47
58	49	54	34	39	48	30	48
60	50	56	36	40	49	31	49
62	51	57	37	41	50	32	50
64	52	58	37	41	51	33	51
66	53	59	38	42	52	33	52
67	53	59	39	42	52	34	52



**Individual temperatures recorded on the unexposed surface of Specimen C and adjacent to Specimen C**

Time Minutes	T/C Number 10 Deg. C	T/C Number 11 Deg. C	T/C Number 12 Deg. C	T/C Number 13 Deg. C	T/C Number 14 Deg. C	T/C Number 15 Deg. C	T/C Number 16 Deg. C
0	17	17	17	16	17	17	16
2	16	17	17	16	17	17	17
4	17	17	17	17	22	19	23
6	17	17	17	18	24	20	29
8	17	17	17	18	22	20	30
10	17	17	17	17	22	20	30
12	17	17	17	17	21	19	27
14	17	17	17	18	22	20	28
16	17	17	17	18	21	20	26
18	17	17	17	18	22	20	29
20	18	18	18	18	22	20	28
22	18	18	18	18	22	20	30
24	18	18	18	18	21	19	28
26	18	18	18	18	21	20	27
28	19	18	18	19	22	20	28
30	20	19	19	19	22	20	27
32	20	21	19	20	21	20	28
34	22	25	21	20	22	20	30
36	23	30	22	22	23	21	32
38	26	36	24	24	24	21	33
40	30	42	26	27	25	22	32
42	33	47	28	29	26	23	32
44	37	51	30	32	28	24	34
46	40	54	32	34	31	25	36
48	43	57	34	37	34	27	38
50	45	59	36	39	39	29	40
52	48	62	38	42	44	31	41
54	50	64	40	44	48	33	43
56	53	66	43	47	51	35	45
58	55	68	45	50	54	37	47
60	58	70	47	53	56	39	50
62	60	72	49	56	57	40	54
64	61	73	50	59	58	40	56
66	63	74	51	62	60	41	59
67	63	75	52	63	61	42	60

**Individual temperatures recorded on the unexposed surface of Specimen D and adjacent to Specimen D**

Time Minutes	T/C Number 31 Deg. C	T/C Number 32 Deg. C	T/C Number 33 Deg. C	T/C Number 34 Deg. C	T/C Number 35 Deg. C	T/C Number 36 Deg. C	T/C Number 37 Deg. C
0	16	16	15	16	15	16	16
2	16	16	15	16	16	16	16
4	16	16	15	17	16	16	16
6	16	16	15	17	16	16	16
8	16	16	15	17	16	16	17
10	16	16	16	17	16	16	17
12	17	16	15	18	16	16	17
14	18	17	16	18	17	16	17
16	19	17	16	19	17	17	17
18	22	17	17	21	16	15	17
20	23	18	17	21	17	17	17
22	25	18	17	21	18	17	17
24	26	18	17	22	17	17	17
26	28	19	18	24	18	17	17
28	30	19	18	25	18	17	18
30	32	20	19	27	18	17	18
32	35	21	19	28	18	17	18
34	36	21	19	30	19	17	18
36	39	22	20	31	19	18	19
38	40	23	21	33	20	17	18
40	43	25	22	35	21	19	20
42	45	26	23	37	22	20	21
44	46	26	23	38	22	20	21
46	48	27	24	40	23	20	22
48	50	28	25	42	23	20	22
50	52	29	26	43	24	21	22
52	54	30	26	45	25	21	23
54	55	32	28	47	26	22	24
56	56	32	28	48	27	22	24
58	57	33	29	49	27	23	25
60	59	34	30	51	28	23	25
62	60	35	31	53	29	24	26
64	61	36	31	53	30	24	26
66	62	37	33	55	30	25	27
67	62	37	33	55	31	25	27

**Individual temperatures recorded on the unexposed surface of Specimen E and adjacent to Specimen E**

Time Minutes	T/C Number 38 Deg. C	T/C Number 39 Deg. C	T/C Number 40 Deg. C	T/C Number 41 Deg. C	T/C Number 42 Deg. C	T/C Number 43 Deg. C	T/C Number 44 Deg. C
0	15	15	15	15	15	15	14
2	15	15	15	15	15	15	14
4	15	14	15	15	15	15	14
6	15	15	15	15	15	15	14
8	15	15	15	15	15	15	15
10	15	15	15	15	15	15	15
12	16	15	15	16	15	15	15
14	17	15	15	16	15	15	15
16	18	15	16	17	15	15	15
18	20	16	16	18	16	16	15
20	21	16	17	20	16	16	16
22	22	16	17	20	16	16	16
24	23	17	18	21	16	16	16
26	25	17	19	22	17	17	16
28	26	18	20	24	17	17	16
30	28	18	21	25	18	18	16
32	30	19	23	26	18	19	16
34	31	20	25	27	19	20	17
36	32	20	26	28	19	21	17
38	33	21	27	28	20	22	17
40	37	22	29	30	21	23	19
42	39	23	31	32	22	24	21
44	41	24	33	33	23	25	22
46	42	25	32	34	24	27	24
48	44	25	32	35	25	28	24
50	45	26	33	35	25	29	24
52	46	27	34	36	26	30	25
54	47	28	35	37	27	31	25
56	49	28	37	38	27	32	25
58	50	30	38	39	29	34	25
60	51	31	40	40	29	35	26
62	52	32	42	40	31	37	26
64	53	33	45	41	32	39	27
66	54	34	47	43	33	41	27
67	55	35	48	43	34	42	28

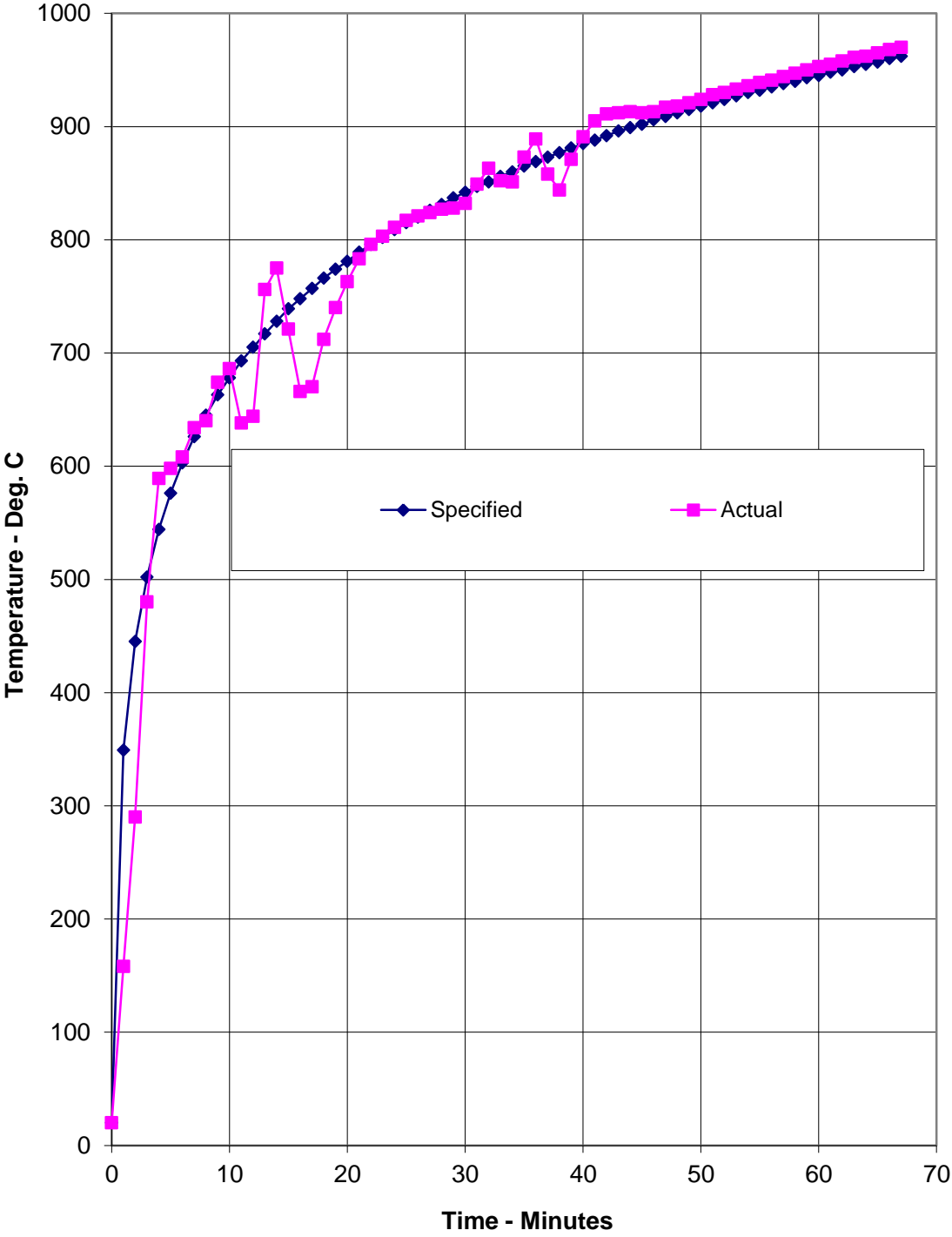
**Individual temperatures recorded on the unexposed surface of Specimen F and adjacent to Specimen F**

Time Minutes	T/C Number 45 Deg. C	T/C Number 46 Deg. C	T/C Number 47 Deg. C	T/C Number 48 Deg. C	T/C Number 49 Deg. C	T/C Number 50 Deg. C	T/C Number 51 Deg. C
0	16	15	15	16	15	15	15
2	17	16	15	16	15	16	15
4	17	16	16	16	15	16	15
6	21	16	16	16	15	20	15
8	31	17	20	16	15	30	15
10	36	18	23	18	16	36	16
12	39	20	24	19	16	38	16
14	41	22	25	20	16	40	16
16	45	22	27	22	16	44	16
18	47	24	29	23	17	46	17
20	48	24	31	23	17	48	16
22	50	26	32	24	17	49	17
24	52	28	35	25	15	52	17
26	56	29	37	26	18	53	17
28	58	31	40	28	19	57	17
30	60	33	42	30	20	59	18
32	62	34	45	31	21	60	18
34	64	37	48	33	22	63	19
36	65	38	50	35	24	65	20
38	68	41	54	36	28	67	21
40	69	43	58	40	32	68	23
42	70	46	60	41	37	69	25
44	72	48	64	43	42	71	26
46	73	51	68	46	47	72	28
48	74	54	70	48	51	73	30
50	75	56	73	50	54	74	31
52	76	59	74	52	58	75	32
54	76	62	76	55	61	75	34
56	77	65	77	57	64	76	36
58	77	67	78	59	66	77	38
60	78	69	79	61	69	77	39
62	78	71	80	63	71	77	42
64	79	72	80	65	73	78	43
66	79	73	81	66	75	78	46
67	80	74	81	66	75	79	46

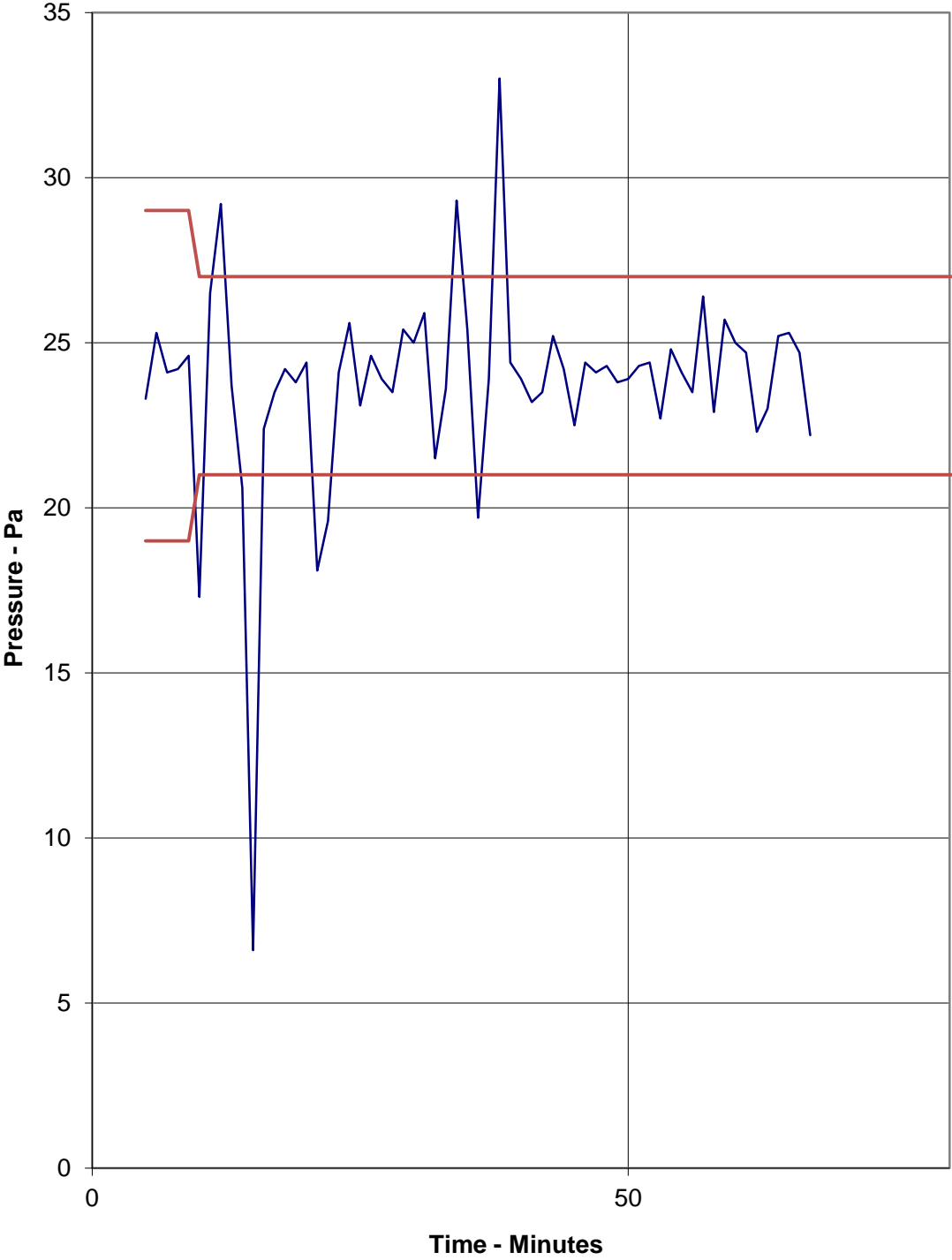
**Individual temperatures recorded on the unexposed surface of Specimen G and adjacent to Specimen G**

Time Minutes	T/C Number 52 Deg. C	T/C Number 53 Deg. C	T/C Number 54 Deg. C	T/C Number 55 Deg. C	T/C Number 56 Deg. C	T/C Number 57 Deg. C	T/C Number 58 Deg. C
0	14	15	15	14	14	14	15
2	15	15	15	14	14	13	15
4	15	15	15	14	14	14	14
6	16	15	15	14	14	14	14
8	16	15	15	14	14	14	14
10	18	15	15	14	15	14	14
12	18	15	15	14	14	14	14
14	20	15	15	14	15	14	14
16	21	15	15	15	15	14	14
18	22	15	15	15	15	14	15
20	24	15	16	15	15	14	15
22	26	15	16	15	15	14	15
24	28	15	16	15	15	14	15
26	30	16	16	15	15	15	15
28	33	16	16	15	15	14	15
30	36	16	17	16	15	14	15
32	39	17	17	16	15	14	15
34	41	17	17	17	15	15	15
36	44	17	18	17	15	15	15
38	46	18	18	17	15	15	16
40	48	18	18	18	16	15	16
42	50	19	19	19	16	16	17
44	52	20	20	20	16	16	18
46	54	20	21	21	17	17	18
48	56	21	21	22	17	17	19
50	57	22	22	23	17	18	19
52	59	23	22	24	18	18	20
54	60	24	23	25	18	19	21
56	61	25	24	26	19	20	21
58	63	26	25	27	19	20	22
60	64	27	25	28	20	21	22
62	64	28	26	30	20	22	23
64	65	29	27	31	21	22	24
66	67	30	28	32	22	23	25
67	67	31	29	33	22	24	26

Graph showing mean furnace temperature, together with the temperature/time relationship specified in BS EN 1363-1:2020



Graph showing recorded furnace pressure 460 mm above the head of the wall specimens



# On-going Implications

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## Limitations

The results relate only to the behaviour of the specimens of the element of construction under the particular conditions of test. They are not intended to be the sole criteria for assessing the potential fire performance of the element in use, nor do they reflect the actual behaviour in fires.

The results may not be applicable to situations where the joint widths, sealant depths, orientations, supporting construction and backing material vary from those tested.

This report details the method of construction, the test conditions and the results obtained when the specific element of construction described herein was tested following the procedure outlined in EN 1363-1, and where appropriate EN 1363-2. Any significant deviation with respect to size, constructional details, loads, stresses, edge or end conditions other than those allowed under the field of direct application in the relevant test method is not covered by this report.

Because of the nature of fire resistance testing and the consequent difficulty in quantifying the uncertainty of measurement of fire resistance, it is not possible to provide a stated degree of accuracy of the result.

## EGOLF

Certain aspects of some fire test specifications are open to different interpretations. EGOLF has identified a number of such areas and have agreed Resolutions which define common agreement of interpretations between fire test laboratories which are members of the Groups. Where such Resolutions are applicable to this test, they have been followed

***Note: The field of direct application may only be defined following the identification of classification(s). The field of direct and, where applicable, extended application will be included in the classification report.***