



中国认可
国际互认
检测
TESTING
CNAS L14889

Test Report

NO.: BITFR202404076

Date: Apr. 22, 2024

Page 1 of 12

Applicant : BRD NEW MATERIALS CO.,LTD
WEST SOUTHERN OF WEIWU ROAD CHANGGE CITY, HENAN,
CHINA

The following sample(s) was / were submitted and identified by client, BITFR, however, assumes no responsibility to verify the accuracy, adequacy and completeness of the sample information provided by client, results apply to the sample as received.

Name of Sample(s) : Rock wool sandwich panel

Description of Sample(s) : Type/Model: 100mm
Producer: BRD NEW MATERIALS CO.,LTD
Number of sample: RW100

Date Sample(s) Received : Apr. 10, 2024

Date Tested : Apr. 12, 2024 TO Apr. 16, 2024

Test Requested : UL 263-2020 Fire Tests of Building Construction and Materials,
clause 7: Nonbearing walls and partitions test

Test Results : According to the test results, the submitted sample fire resistance performance as follows:
Fire resistance time: ≥ 60 min.

Conclusion : According to the test results, the submitted sample **meets** the requirement of **1.0 h** fire resistance test.

Prepared by: Cynthia Luo

Checked by: Kevin Chen



Approved by: Eric Hao

BITFR (Henan) Company Limited

No.5, Weidu High-tech Industrial Park, Hongteng Road, Weidu District, Xuchang City, Henan Province (Zip code: 461000)

Tel: 0374-8323888 Fax: 0374-5378555 Email: hnbizr@bitfr.ha.cn Homepage: www.hnbizr.cn

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I. Test Conducted

This test was conducted in accordance with UL 263-2020 Fire Tests of Building Construction and Materials, clause 7: Nonbearing walls and partitions test.

II. Sample Details

Sample description	Rock wool sandwich panel
Separating elements	Vertical
Exposed surface	Any surface

III. Examination of specimen and Installation

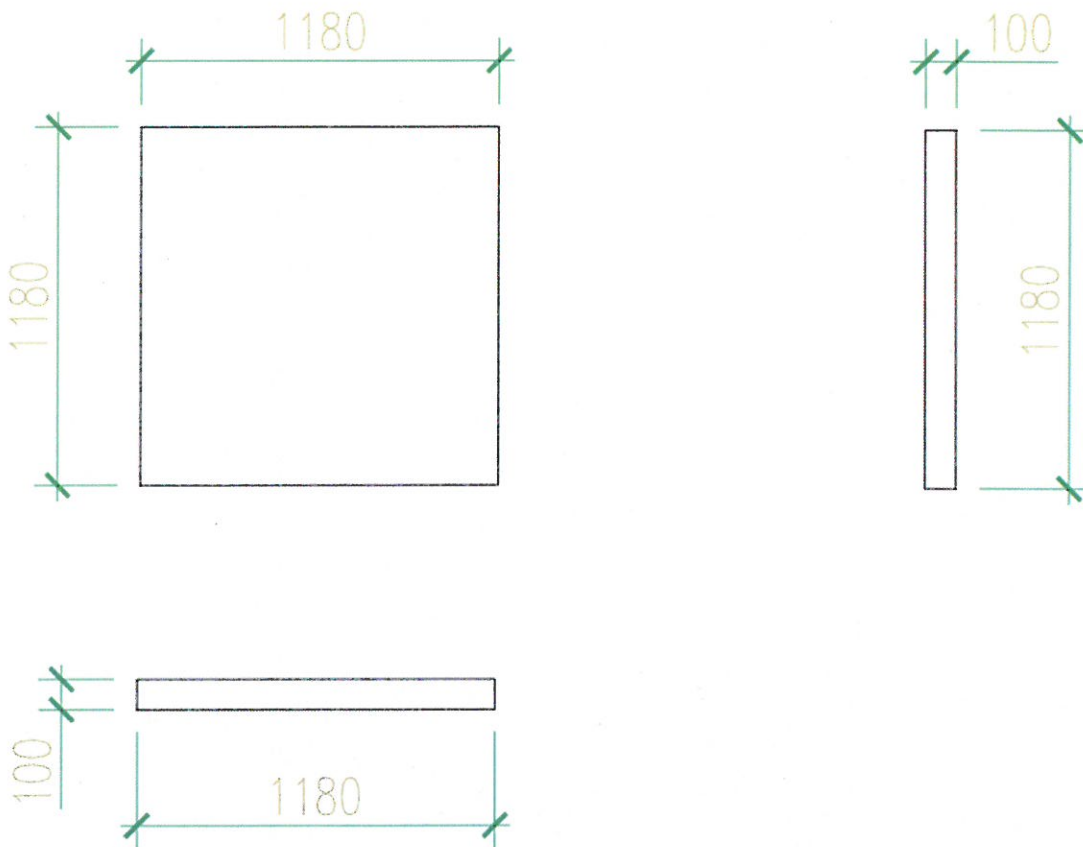


Figure 1-Sample size(mm)

To be continued...



Test Report

NO.: BITFR202404076

Date: Apr. 22, 2024

Page 3 of 12

IV. Test Results

Clause	Conditions of acceptance	Result
UL 263-2020 7.3.1	During the tests, the construction shall have complied with the following conditions: a) The wall or partition shall have sustained the fire endurance test without passage of flame or passage of gases hot enough to ignite cotton waste during the classification period.	60 min, the cotton pad was not ignited.
	b) The wall or partition shall have sustained the hose stream test without development of an opening that would permit a projection of water from the hose stream beyond the unexposed surface.	No passage of water to other side.
	c) Transmission of heat through the wall or partition during the classification period shall not have raised the temperature on its unexposed surface to more than 250° F (139 °C) above its initial temperature.	60 min, the average temperature rise was 105 °C, the top of temperature rise was 112 °C.
UL 263-2020 3.3.8	Where the conditions of acceptance place a limitation on the rise of temperature of the unexposed surface, the temperature end point of the fire-resistance period shall be determined by the average of the measurements taken at individual points; except that if a temperature rise 30% in excess of the specified limit occurs at any one of these points, the remainder shall be ignored and the fire-resistance period judged as ended.	

V. Test behavior:

Fire-resistance test observations

Time(mm:ss)	Test behavior
00:00	Test started.
60:21	Sample kept fire resistance, ended of testing(Meet customer mandate time).

Hose stream test

Time(mm:ss)	Test behavior
00:00	Hose-stream test started.
00:10	No passage of water to other side. Ended of testing.

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Test Report

NO.: BITFR202404076

Date: Apr. 22, 2024

Page 4 of 12

VI. Conclusion

The specimen satisfied the performance requirements for the following period:

Fire resistance time: ≥ 60 min

Hose stream test: Pass

VII. Statement

The test report shall provide detailed structural data of the specimen, test conditions and experimental results obtained from the test of the specimen according to the method specified in this Part UL 263-2020. The test results are invalid if the specimen has large deviations in terms of size, detailed structural data, load, stress, constraint or boundary conditions.

VIII. Test result curve:

The following data were collected during the test:

- a) The standard and actual furnace temperature / time curve, as shown in Figure 2.
- b) The temperature / time curve of unexposed surface, as shown in Figure 3.
- c) Unexposed surface temperature, as shown in Table 1.
- d) Temperature in the furnace, as shown in Table 2.

To be continued...

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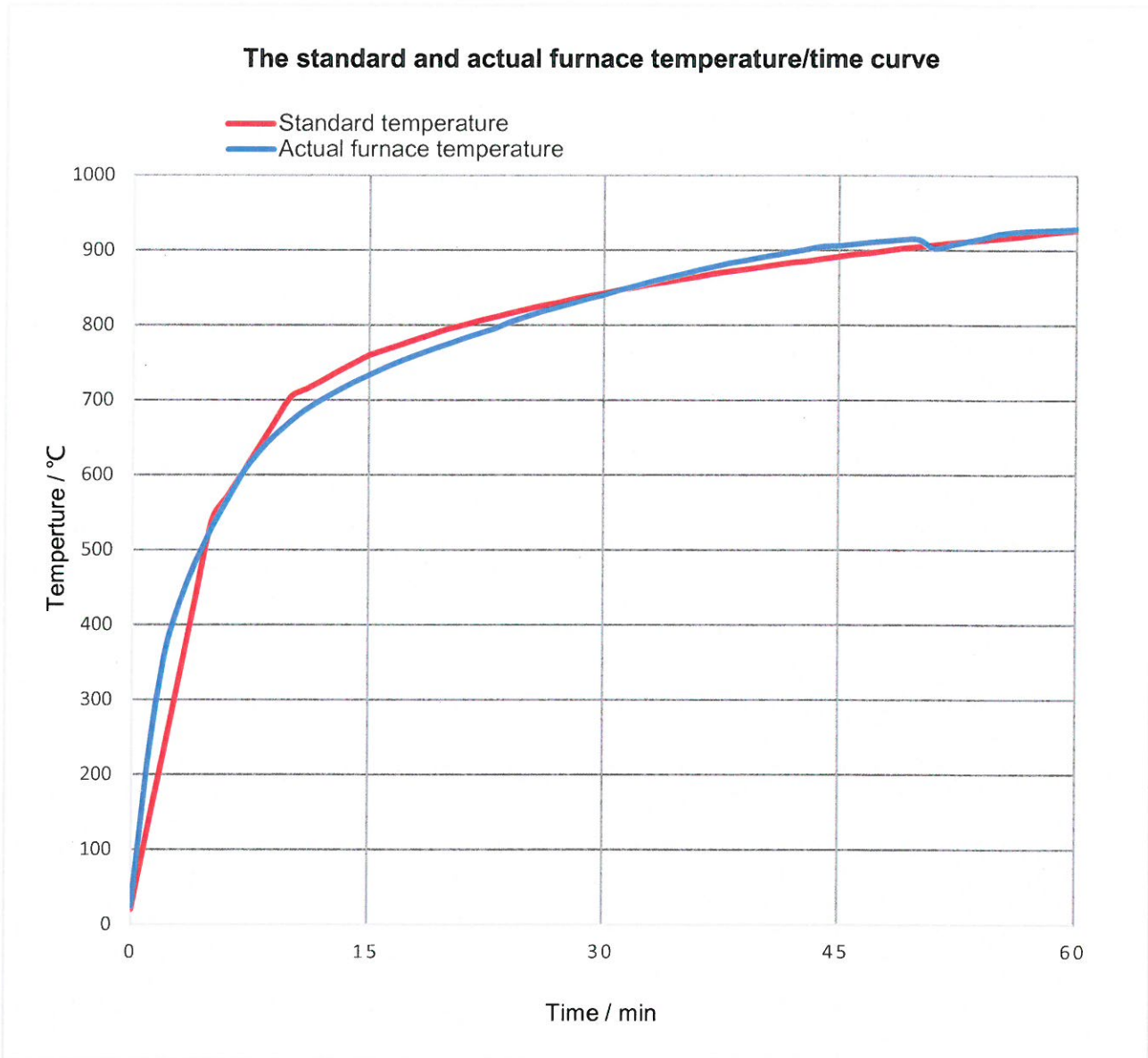


Figure 2 - The standard and actual furnace temperature / time curve

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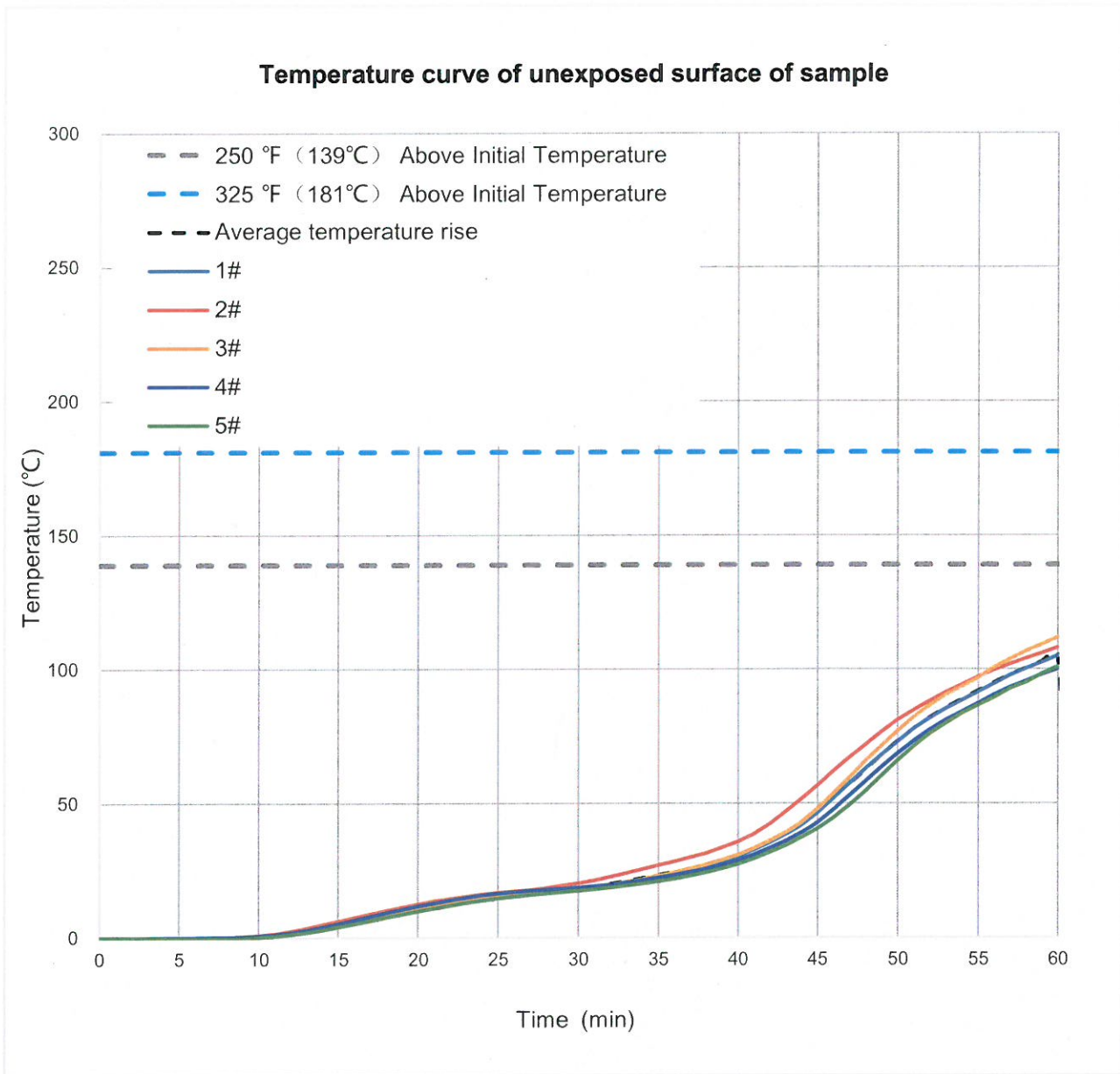


Figure 3 - The temperature / time curve of unexposed surface

To be continued...



Test Report

NO.: BITFR202404076

Date: Apr. 22, 2024

Page 7 of 12

Table 1 - Unexposed surface temperature

Time (min)	Thermocouple No.				
	1#(°C)	2#(°C)	3#(°C)	4#(°C)	5#(°C)
0	0	0	0	0	0
0.5	0	0	0	0	0
1	0	0	0	0	0
1.5	0	0	0	0	0
2	0	0	0	0	0
2.5	0	0	0	0	0
3	0	0	0	0	0
3.5	0	0	0	0	0
4	0	0	0	0	0
4.5	0	0	0	0	0
5	0	0	0	0	0
5.5	0	0	0	0	0
6	0	0	0	0	0
6.5	0	0	0	0	0
7	0	0	0	0	0
7.5	0	0	0	0	0
8	0	0	0	0	0
8.5	0	0	0	0	0
9	0	0	0	0	0
9.5	0	1	0	1	0
10	0	1	0	1	0
10.5	1	2	1	1	0
11	1	2	1	1	0
11.5	1	2	1	2	1
12	1	2	1	2	1
12.5	2	3	2	3	2
13	2	4	2	3	2
13.5	3	5	3	4	3
14	3	5	3	4	3
14.5	4	6	4	5	4
15	5	6	5	5	4
15.5	6	7	6	6	5
16	6	8	6	6	5
16.5	7	9	7	7	6
17	7	9	7	8	6
17.5	8	10	8	9	7

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Test Report

NO.: BITFR202404076

Date: Apr. 22, 2024

Page 8 of 12

Time (min)	Thermocouple No.				
	1#(°C)	2#(°C)	3#(°C)	4#(°C)	5#(°C)
18	8	10	8	9	8
18.5	9	11	9	10	9
19	9	11	10	10	9
19.5	10	12	11	11	10
20	11	13	11	12	10
20.5	12	14	12	13	11
21	12	14	12	13	11
21.5	13	15	13	14	12
22	13	15	13	14	12
22.5	14	15	14	15	13
23	14	15	14	15	13
23.5	14	16	15	16	14
24	14	16	15	16	14
24.5	15	17	16	16	15
25	15	17	16	16	15
25.5	16	17	16	17	15
26	16	17	16	17	15
26.5	16	18	17	17	16
27	16	18	17	17	16
27.5	17	19	17	18	16
28	17	19	17	18	16
28.5	17	19	18	18	17
29	17	19	18	18	17
29.5	18	20	18	19	17
30	18	20	18	19	17
30.5	18	21	19	19	18
31	18	21	19	19	18
31.5	19	22	20	20	19
32	19	23	20	20	19
32.5	20	24	21	20	19
33	20	24	21	20	19
33.5	21	25	22	21	20
34	21	25	22	21	20
34.5	22	26	23	22	21
35	23	27	23	22	21
35.5	24	28	24	23	22
36	24	28	24	23	22

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NO.: BITFR202404076

Date: Apr. 22, 2024

Page 9 of 12

Time (min)	Thermocouple No.				
	1#(°C)	2#(°C)	3#(°C)	4#(°C)	5#(°C)
36.5	25	29	25	24	23
37	25	30	26	24	23
37.5	26	31	27	25	24
38	27	32	27	26	24
38.5	28	33	28	27	25
39	28	34	29	27	26
39.5	29	35	30	28	27
40	30	36	31	29	27
40.5	32	38	32	30	28
41	33	39	33	31	29
41.5	34	41	35	32	31
42	35	42	36	33	32
42.5	37	45	38	35	33
43	38	47	39	36	34
43.5	40	50	41	38	36
44	42	52	43	39	37
44.5	44	55	46	41	39
45	46	57	48	43	41
45.5	49	60	51	46	43
46	52	62	54	48	44
46.5	55	65	57	51	47
47	57	67	60	53	49
47.5	60	70	63	56	52
48	63	72	66	58	55
48.5	66	75	69	61	58
49	68	77	72	63	60
49.5	71	79	75	66	63
50	73	81	77	69	66
50.5	76	83	80	71	69
51	78	85	82	73	71
51.5	80	87	85	75	74
52	82	88	87	77	76
52.5	84	90	89	79	78
53	85	91	91	81	80
53.5	87	93	93	83	82
54	88	94	94	84	84
54.5	90	96	96	86	86

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Test Report

NO.: BITFR202404076

Date: Apr. 22, 2024

Page 10 of 12

Time (min)	Thermocouple No.				
	1#(°C)	2#(°C)	3#(°C)	4#(°C)	5#(°C)
55	91	97	97	87	87
55.5	93	99	99	89	88
56	95	100	101	90	89
56.5	97	101	103	92	91
57	98	102	104	93	93
57.5	99	103	106	94	94
58	100	104	107	95	95
58.5	102	105	108	97	97
59	103	106	109	98	98
59.5	104	107	111	99	100
60	105	108	112	100	101

To be continued...

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NO.: BITFR202404076

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Page 11 of 12

Table 2 - Temperature in the furnace

TIME (min)	Standard temperature (°C)	Actual furnace temperature (°C)	TIME (min)	Standard temperature (°C)	Actual furnace temperature (°C)
0	20	24	31	847	847
1	124	215	32	851	852
2	227	356	33	855	858
3	331	430	34	858	863
4	434	484	35	862	868
5	538	529	36	865	873
6	571	567	37	869	878
7	604	604	38	872	883
8	638	632	39	875	886
9	671	653	40	878	890
10	704	672	41	881	894
11	715	688	42	884	898
12	726	701	43	886	902
13	738	713	44	889	905
14	749	724	45	892	906
15	760	734	46	895	908
16	767	743	47	897	911
17	774	752	48	900	913
18	781	760	49	903	914
19	788	767	50	905	915
20	795	774	51	907	902
21	800	782	52	910	907
22	806	788	53	912	912
23	811	795	54	914	916
24	816	804	55	916	922
25	821	811	56	918	925
26	826	818	57	920	926
27	830	824	58	923	927
28	835	829	59	925	927
29	839	835	60	927	929
30	843	840			

To be continued...

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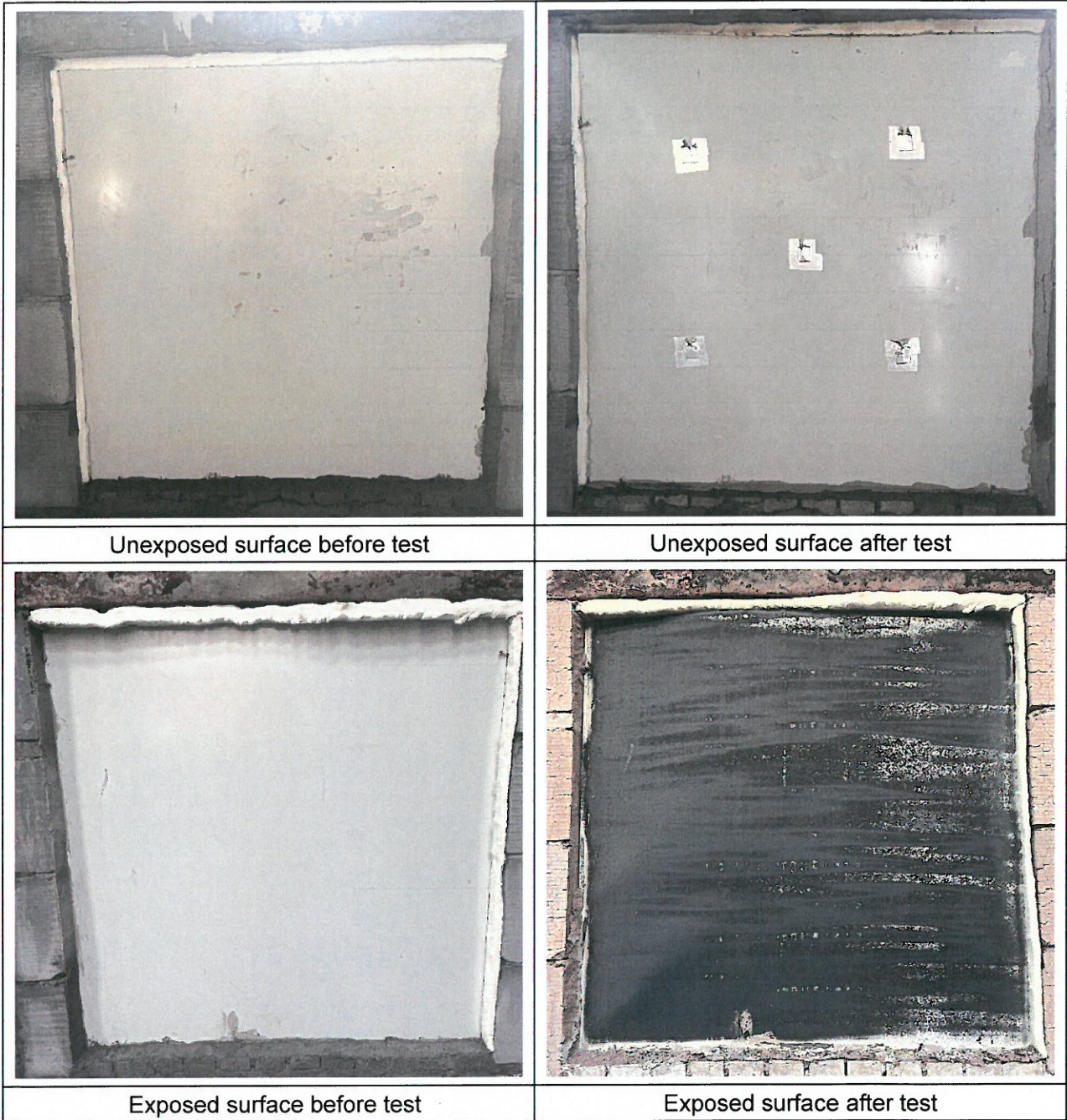
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Photo Appendix



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End of Report*