



**KOREA INSTITUTE OF
CONSTRUCTION TECHNOLOGY**

2311, Daehwa-dong, Ilsan-gu, Goyang-shi, Gyeonggi-do 411-712, Korea
▪Tel:82-31-9100-731 ▪Fax:82-31-9100-011

TEST REPORT

Name of the Test : Fire resistance test for door assemblies.
Report No. : 0406-1038
Receipt No. : 601-472
Applicant : SAM HOON MACHINERY CO.
#532-5, Simgokbon1-dong, Sosa-gu, Buchone-city,
Gyeonggi-do, Korea
Tested Date : JUNE. 2nd. 2004
Name of Specimen : BLAST PROOF WINDOW
Test Standard : UL 10B : 2001(Standard for Fire Tests of Door Assemblies)
Result of Test

(Refer to test Result of Appendix)

Above is the test result of specimen supplied by client,
and the name of specimen belongs to client.

Tested by : Tal J. n choi Approved by : J. H. Yoo

Report issued JUNE. 10th , 2004

The President of Korea Institute of Construction Technology



(Page No. 1 of total 10 pages)

1. SUMMARY

1.1 The fire resistance test was conducted in accordance with the standard for fire tests of door assemblies, UL10B. (excepted hose stream test)

1.2 Furnace temperature was controlled in accordance with the standard time/temperature curve specified in UL10B.(See Appendix 2)

1.3 The pressure within the furnace measured at the top of the specimen was controlled to be maintained as zero.(See Appendix 4)

2. TEST RESULTS

2.1 The actual time/temperature curve is shown in Appendix 2.

The percentage difference in the areas under the standard time/temperature curve and actual time/temperature curve is shown in Appendix 2-A. The percentage difference satisfied the tolerance for the percentage difference of UL10B.

2.3 There was no crack, no flaming on the unexposed face of the specimen during the test. (See Appendix 5)

APPENDIX

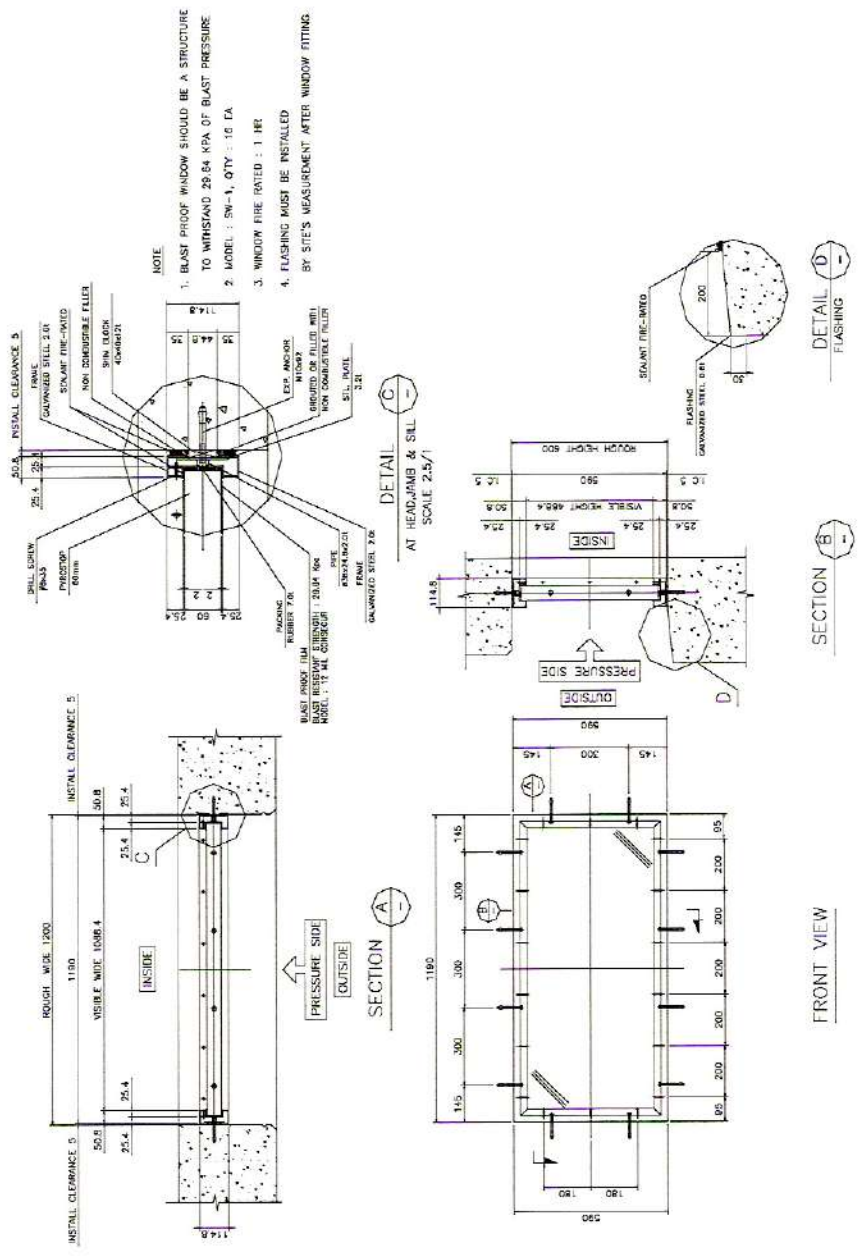
1. Drawing of test specimen	
A. Construction Drawing & Material of test specimen	04
B. Drawing of measurement location	05
2. Heating temperature	
A. Measured heating temperature table	06
B. Fire-resistance temperature curve	07
3. Furnace pressure curve	08
4. Observation	09
5. Test Photographs	10

Report No: 0406-1028

Appendix 1. Drawing of test specimen

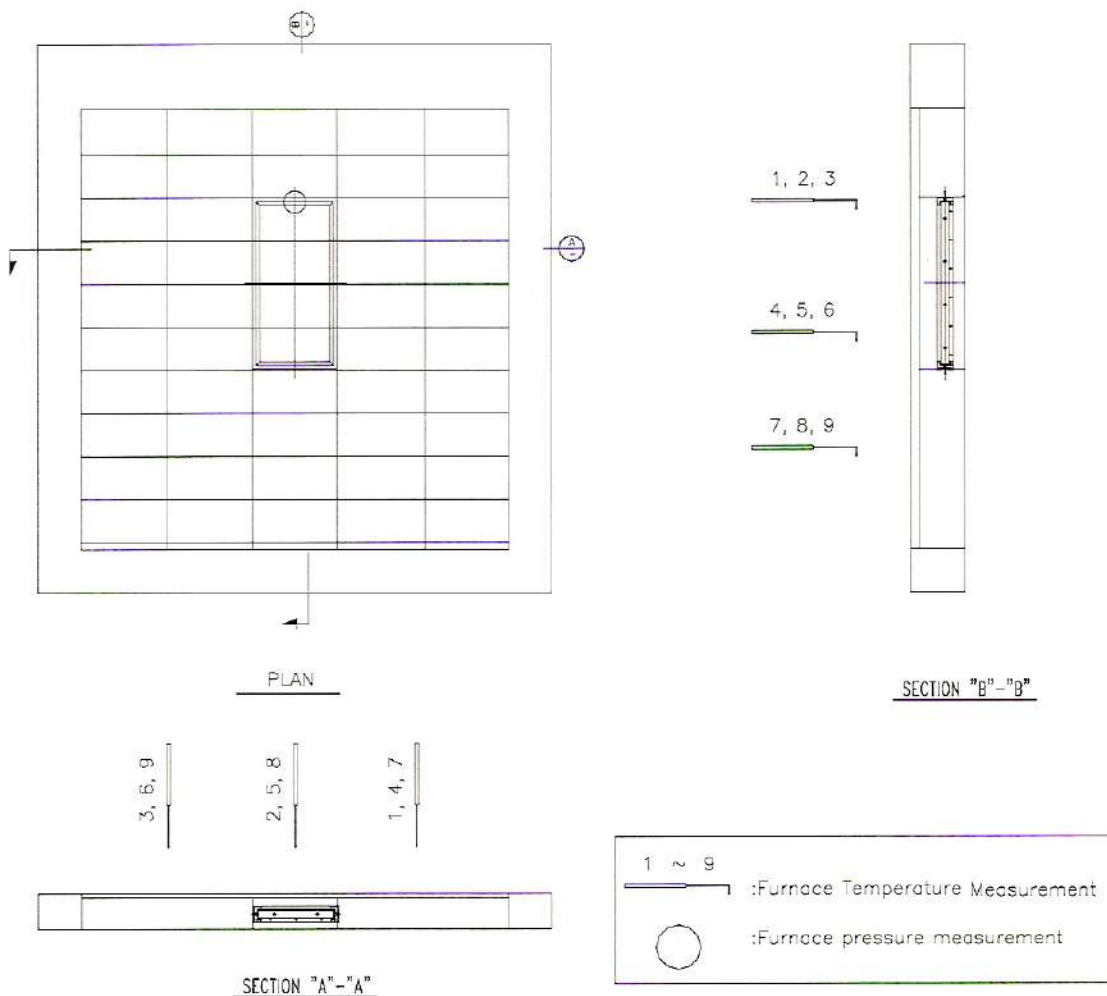
A. Construction Drawing & Material of test specimen

(Dimension : mm)



B. Drawing of measurement location

(Dimension : mm)



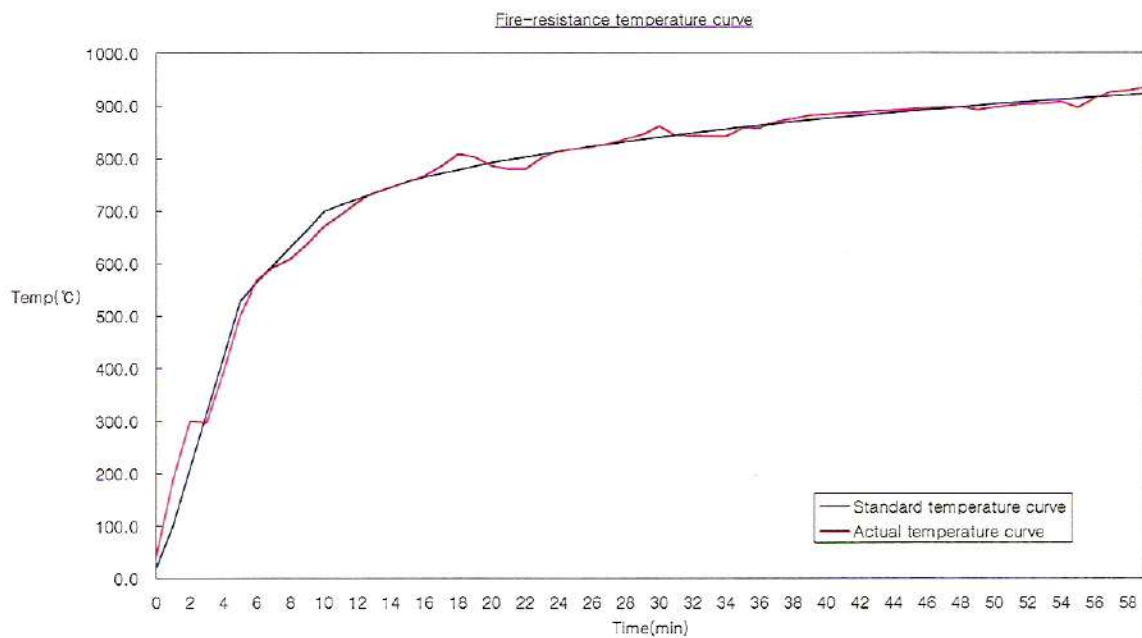
Appendix 2. Heating temperature

A. Measured heating temperature table

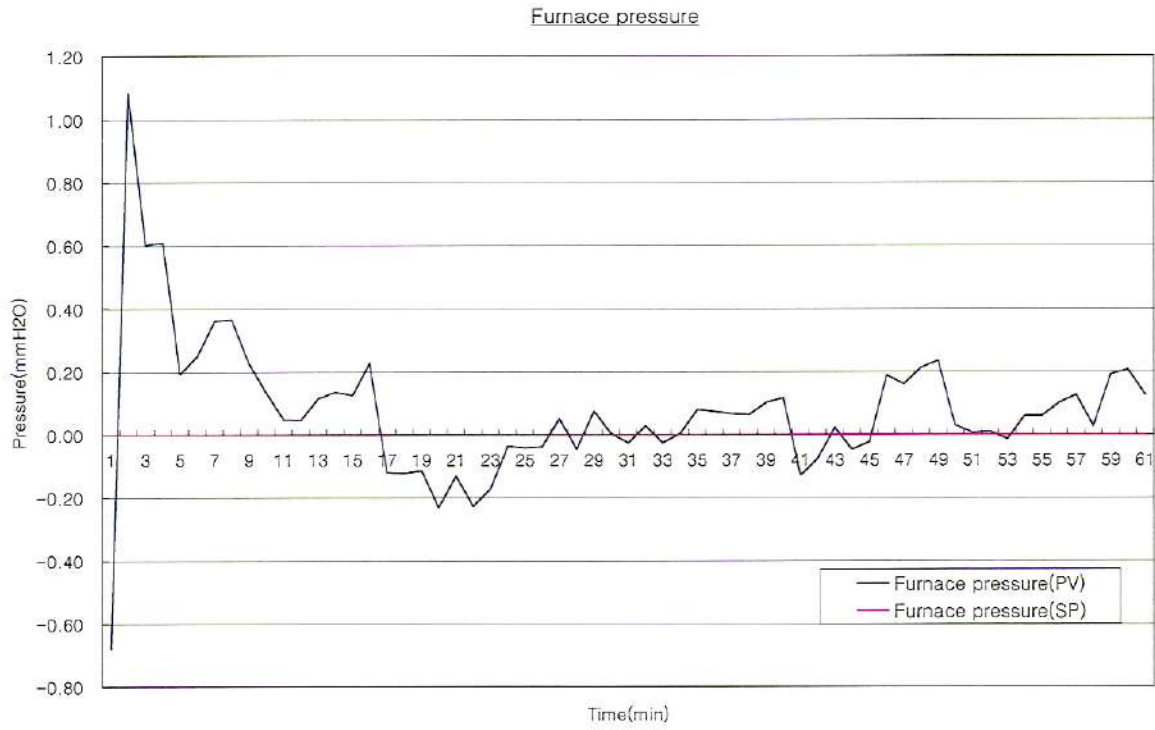
Time (min)	UL10B Furnace Temp. (Deg C)	Actual Furnace Temp. (Deg C)	Area Under Standard Curve. (Deg C)	Area Under Actual Curve. (Deg C)	Difference (%)	Tolerance (+ or-) (%)
0	20	42	20	42		
1	101	189	121	231		
2	208	300	329	531		
3	315	297	644	828		
4	421	394	1065	1221		
5	528	501	1593	1722		
6	564	568	2157	2290		
7	597	592	2754	2882		
8	630	608	3385	3490		
9	663	637	4048	4127		
10	698	670	4747	4797		
12	722	716	6180	6205		
14	745	745	7658	7685		
16	764	767	9178	9206		
18	777	808	10726	10799		
20	792	786	12302	12386		
22	802	779	13901	13945		
24	812	813	15521	15558		
26	822	821	17160	17196		
28	831	836	18817	18859		
30	839	861	20492	20563		
35	858	857	24746	24786		
40	874	882	29087	29179		
45	889	881	33502	33530		
50	901	912	37984	38088		
55	913	895	42525	42546		
60	924	938	47121	47182	0.1	10

(Page No. 6 of total 10 pages)

B. Fire-resistance temperature curve



Appendix 3. Furnace pressure curve



Report No: 2406-1038

Appendix 4. Observation

Time(min)	Observation
00:00	Test started
00:13	Slight smoke began to be released from the test specimen.
00:23	whole specimen getting dark
01:00	The test was terminated.

(Page No. 9 of total 10 pages)

Appendix 5. Test photography



Before the test



After the test

(Page No. 10 of total 10 pages)