

## INDEX

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ITEM	PAGE
1. GENERAL	2
2. WEATHER CONDITION	2
3. PARTICIPANTS	2
4. INSTALLATION SCHEDULE OF SPECIMEN	3
5. SPECIMEN DESCRIPTION	3
6. TEST SPECIFICATION	4
7. METHOD & RESULT OF TEST : MAR. 12 <sup>TH</sup> . 2009.	5
7- 1. DOOR OPERATION	
7- 2. STATIC AIR INFILTRATION	(ASTM E 283)
8. SUMMARY	6
9. MOCK-UP DWG.	7

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ATTACHED : PHOTOS & CERTIFICATES OF MOCK-UP TESTING LABORATORY

9

### 1. GENERAL

- 1-1. PROJECT : KOREA INSTITUTE OF NUCLEAR NONPROLIFERATION AND CONTROL(KINAC) AIR LOCK DOOR  
1-2. PLACE OF TEST : CNC TESTING LABORATORY  
1-3. DATE OF TEST : MAR. 12<sup>TH</sup>. 2009. 3:00 P.M. ~ 4:35 P.M.  
1-4. DATE OF REPORT : MAR. 16<sup>TH</sup>. 2009.  
1-5. CLIENT : SAMHOON CO.,LTD

### 2. WEATHER CONDITION

- MAR. 12<sup>TH</sup>. 2009.
- 2-1. WEATHER : CLOUDY  
2-2. TEMPERATURE : 16 deg.C  
2-3. HUMIDITY : 26 %  
2-4. ATMOSPHERIC PRESSURE : 1010 HPa

### 3. PARTICIPANTS

WOO-SUNG KIM (EXECUTIVE MANAGING DIRECTOR) : SAMHOON CO.,LTD  
JAE-SIL KIM (PRODUCE DIRECTOR) : SAMHOON CO.,LTD  
GI-IN PARK (PLANT MANAGER) : SAMHOON CO.,LTD  
CHANG-HOON KIM (DEPUTY MANAGER) : SAMHOON CO.,LTD  
BYOUNG-HOON GIL (ASSISTANT MANAGER) : CNC  
JIN-SE CHUNG (PRESIDENT) : CNC

## 4. INSTALLATION SCHEDULE OF SPECIMEN

- 4-1. INSTALLATION OF CHAMBER : MAR. 7<sup>TH</sup>, 2009.
- 4-2. INSTALLATION OF SPECIMEN : MAR. 9<sup>TH</sup>, 2009.
- 4-3. CHAMBER CLOSING : MAR. 9<sup>TH</sup>, 2009.

## 5. SPECIMEN DESCRIPTION

- 5-1. SPECIMEN DIMENSION : 975 mm (W) × 2,060 mm (H)
- 5-2. GASKET : E.P.D.M.
- 5-3. SEALANT : DAWOO 808

## 6. TEST SPECIFICATION

### 6-1. AIR INFILTRATION TEST

: ASTM E 283

STANDARD TEST METHOD FOR DETERMINING RATE OF AIR  
LEAKAGE THROUGH EXTERIOR WINDOWS, CURTAIN WALLS,  
AND DOORS UNDER SPECIFIED PRESSURE DIFFERENCES  
ACROSS THE SPECIMEN

## 7. METHOD & RESULT OF TEST

### 7-1. DOOR OPERATION

5(FIVE) CYCLES OF OPENING, CLOSING AND LOCKING FOR DOOR

SPECIFICATION : NO FAILURE

**TEST RESULTS ARE SATISFACTORY.**

### 7-2. STATIC AIR INFILTRATION TEST : ASTM E 283

AT +40.8 kg/m<sup>2</sup> (=400 Pa) STATIC PRESSURE

7-2-1 ; FILM ON : 44.0 cfm (AIR LEAKAGE AT CHAMBER)  
FILM OFF : 45.0 cfm  
=> AIR LEAKAGE AT SPECIMEN : 1.0 cfm  
SPECIFICATION : LESS THAN 0.18 cfm/ft<sup>2</sup> (3.4 m<sup>3</sup>/hr-m<sup>2</sup>)  
ALLOWABLE : 21.62 ft<sup>2</sup> × 0.18 cfm/ft<sup>2</sup> = 3.8 cfm > 1.0 cfm

7-2-2 ; TOTAL AREA  
=> AIR LEAKAGE OF SPECIMEN : 1.0 cfm

TOTAL ALLOWABLE : 3.8 cfm > 1.0 cfm

**TEST RESULTS ARE SATISFACTORY.**

8. SUMMARY

TEST RESULTS OF KINAC AIR LOCK DOOR OF MOCK-UP ARE AS FOLLOWS

- 1) THE TEST RESULTS OF AIR INFILTRATION WERE WITHIN THE ALLOWABLE.

PLEASE DO NOT HESITATE TO ASK TO LABORATORY WHEN YOU HAVE QUESTIONS ABOUT THIS TEST OR TEST REPORT.

**CNC**

TESTING LABORATORY

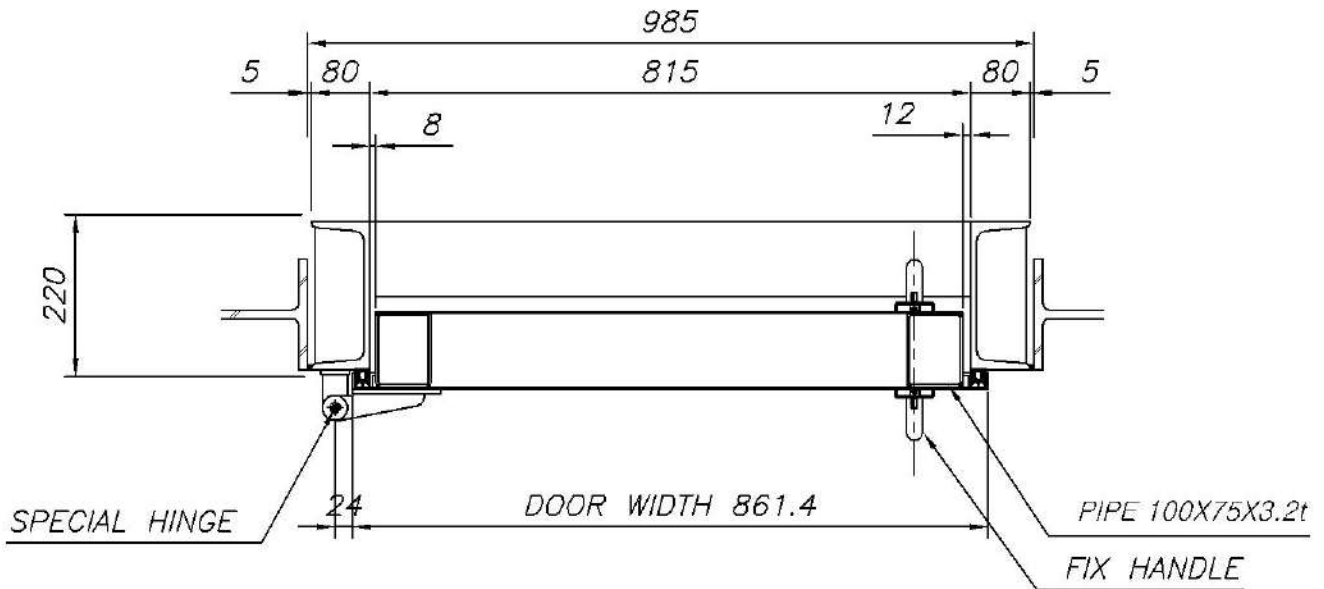
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President    CHUNG, JINSE

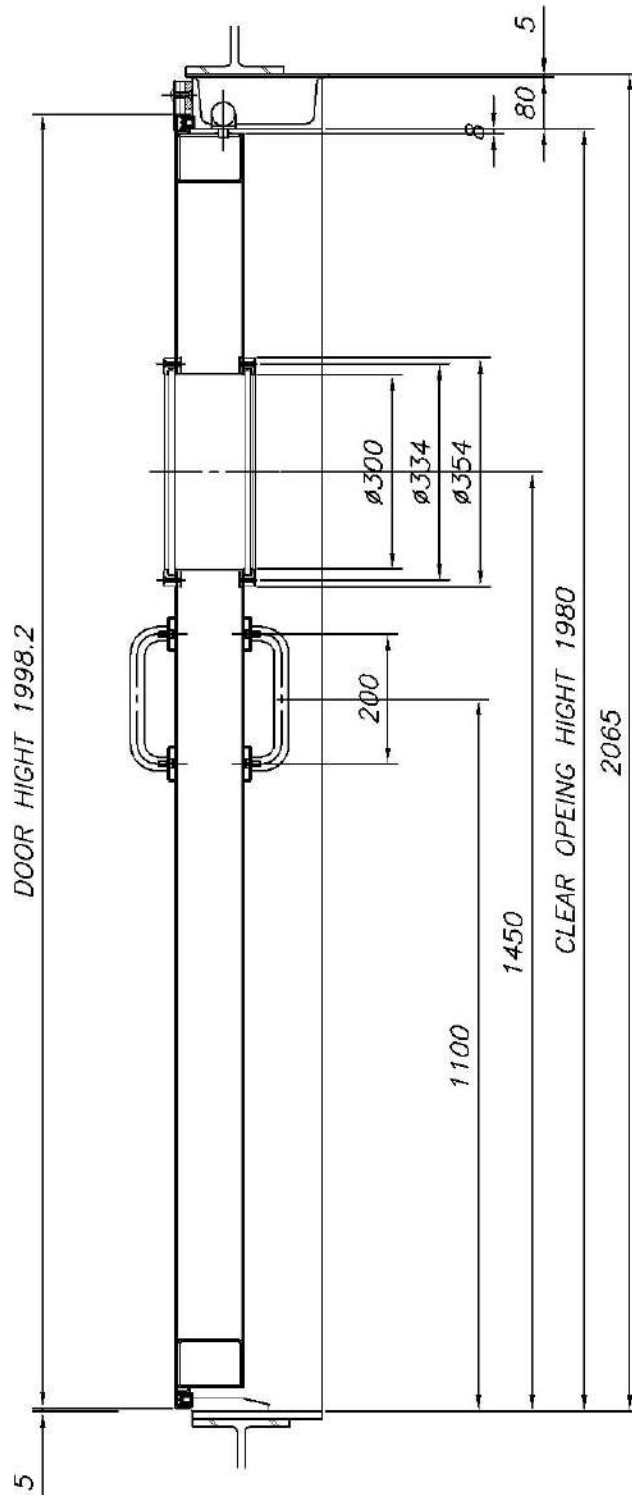
9. MOCK-UP DWG.

\* REFER TO ADDITIONAL DETAIL OF MOCK-UP DWG.

9-1. HORIZONTAL SECTION



### 9-2. VERTICAL SECTION





## PHOTOS OF MOCK-UP TEST

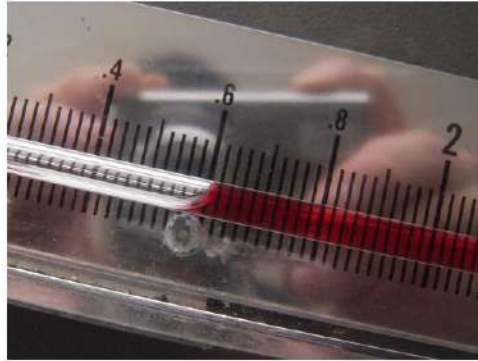
### 1. A PANORAMIC PHOTO OF SPECIMEN



### 2. BRIEFING OF MOCK-UP TEST SPEC



### 3. STATIC AIR INFILTRATION TEST ; ASTM E 283



△ AIR PRESSURE DIFFERENCE 1.6" H<sub>2</sub>O (= 400 Pa, 40.8 kg/m<sup>2</sup>)



△ 44 cfm  
(AIR LEAKAGE @CHAMBER)



△ 45 cfm  
(AIR LEAKAGE @CHAMBER & SPECIMEN)