

TEST REPORT



Intertek

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EVALUATION CENTER
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Canada

RENDERED TO

Worldwide Door Components Inc.
5017 North Coolidge
Tampa, FL 33614
USA

PRODUCTS EVALUATED: 4-1/2" Wide Composite Frame –
4Ever Frame, J-CP-4F
EVALUATION PROPERTY: 20-Minute Fire Resistance

Report of testing a 4-1/2" wide composite frame for compliance with a 20-minute rating in accordance with: UL 10(c) (2009) – Positive Pressure Fire Tests of Door Assemblies, and CAN/ULC S104-10 – Standard Method for Fire Tests of Door Assemblies.

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2 Introduction

Intertek Testing Services NA Ltd. (Intertek) has conducted testing for Worldwide Door Components Inc. on a 4-1/2" composite frame to evaluate eligibility for a 20-minute fire rating. Testing was conducted in accordance with the following standard methods of UL 10(c) (2009) - Positive Pressure Fire Tests of Door Assemblies, and CAN/ULC S104-10 – Standard Method for Fire Tests of Door Assemblies.

This evaluation began November 29, 2012 and was completed the same day. Testing was witnessed by Mr. Jerry Montf De Oca representing Worldwide Door Components Inc.

3 Test Samples

3.1. SAMPLE SELECTION

Sample construction was not witnessed. The frame components were manufactured at the Worldwide Door Components Inc. manufacturing facility, located at 5017 North Coolidge, Tampa, FL. The subject test specimen is not a traceable sample selected from the manufacturer's facility. Intertek has not selected the specimen and has not verified the composition, manufacturing techniques or quality assurance procedures. Samples were retained for follow up services. The sample was received at the Evaluation Centre on November 13, 2012.

3.2. SAMPLE AND ASSEMBLY DESCRIPTION

Door

Type: WSCP listed composite door
Size: 3'0" by 6'8" by 1-3/4 in. thick

Frame

Type: Primed composite frame, Part No. J-CP-4F
Size: 38-1/2 in. wide x 81-1/2 in. high
4-1/2 in. depth, 1-1/4 in. thick

Installation: 1/2 in. gap between frame and opening
#8 x 3 in. wood screws to secure the frame into opening

- 1x 2 in. from bottom of both jambs
- 1x at top and bottom hinge heights along latch jamb
- 2x through the latch catch plate
- 2x through each hinge
- 1x each at the outside quarter points along the head

Wood shims were used at each 3 in. screw location

Hardware

Latchsets: Cylindrical lock
Hinges: Three, 4 x 4 in. steel butt hinges

4 Testing and Evaluation Methods

4.1. TEST WALL CONSTRUCTION

The Worldwide Door Components Inc. frame assembly was mounted into a drywall and wood stud test wall built into our moveable mid-scale fire endurance test restraint frame. The finished test wall measured 10 ft. 6 in. in height and 6 ft. in width. The restraint frame is mounted on a cart, which allows it to be moved in front of the furnace for fire tests and away from the furnace for hose stream tests. See Appendix A – Photographs.

4.2. THE FIRE TEST

The moveable wall containing the test assembly was secured to the furnace. The pilot burners were ignited and burned until the temperature inside the furnace reached $20 \pm 2^{\circ}\text{C}$ ($70 \pm 3^{\circ}\text{F}$).

All burners were fired and timing was begun immediately upon achieving maximum high fire.

Observations were made throughout the fire exposure period.

The temperatures inside the furnace are monitored by eight equally spaced thermocouples. These readings were recorded by a Yokogawa data acquisition system (ID no. WH D3593/WH D3595) recorded every 30 seconds and displayed every 15 seconds. See Appendix B – Temperature Data.

The furnace pressure was monitored throughout the fire test period. At 5 minutes from the start of the test, the furnace damper was closed to set the neutral pressure plane at the latch level. This zero pressure at latch level was maintained throughout the remainder of the test duration. The incline manometer ID no. 1038 and the pressure transducer ID no. P60548 were used.

4.3. THE HOSE STREAM TEST

Immediately following the Fire Endurance Test, the moveable test wall was uncoupled from the furnace and was positioned for a standard Hose Stream Test on the fire exposed face. In accordance with the test standards, the fire assembly was subjected to the impact, erosion, and cooling effects of the hose stream.

The hose stream was delivered through a 2-1/2 in. hose discharging through a National Standard play pipe of corresponding size equipped with a 1-1/8 in. discharge tip of the standard-taper smooth bore pattern without shoulder at the orifice. The water pressure was 30 psi at the nozzle. The calibrated pressure gauge (ID no. P60542) was used. The hose stream was applied for a period of 1.5 seconds per square foot of exposed area. The hose stream was directed first at the middle of the door and then at all parts of the exposed surface, changing direction slowly.

5 Testing and Evaluation Results

5.1. FIRE TEST OBSERVATIONS

TIME (min.)	EXPOSED SIDE	UNEXPOSED SIDE
1:40	Surface Ignition	
12:15		Venting from top corner latch side
20:00	Test discontinued	

5.2. HOSE STREAM TEST OBSERVATIONS

The door and frame assembly remained in place and did not allow the passage of a stream of water through to the unexposed side. The door assembly met the conditions of acceptance of all standards throughout the hose stream test.

6 Conclusion

The Worldwide Door Components Inc composite frame, J-CP-4F, met the fire endurance requirements for a 20 minute rating when tested in accordance with UL 10(c) (2009) - Positive Pressure Fire Tests of Door Assemblies, and CAN/ULC S104-10 – Standard Method for Fire Tests of Door Assemblies, when constructed and installed as described in this report.

The conclusions of this test report may be used as part of the requirements for Intertek product certification. Authority to Mark must be issued for a product to become certified.

INTERTEK TESTING SERVICES NA LTD.

Tested and
Reported by:



David Park
Technician – Building Products Testing

Reviewed by:



Greg Philp
Reviewer – Fire Testing

APPENDIX A

Photographs



Unexposed Side Prior to the Fire Test



Exposed Side Prior to the Fire Test



Exposed Side After the 20 min Fire Test

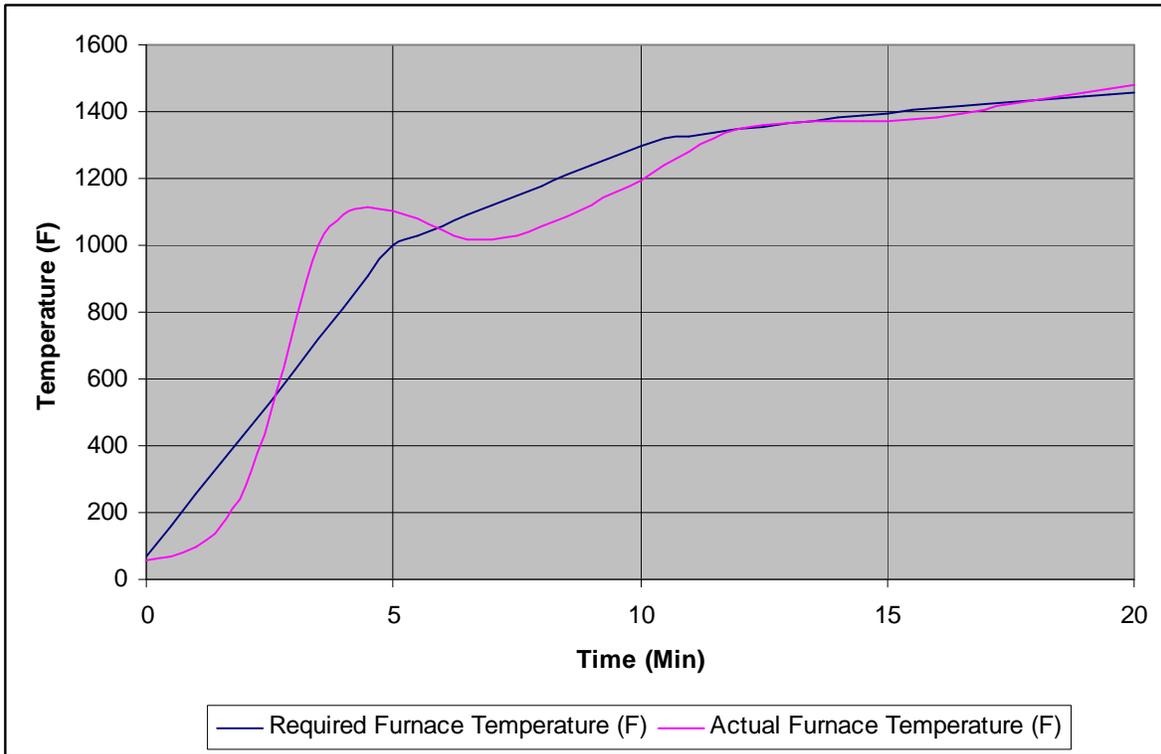


Exposed Side After the Hose Stream Test

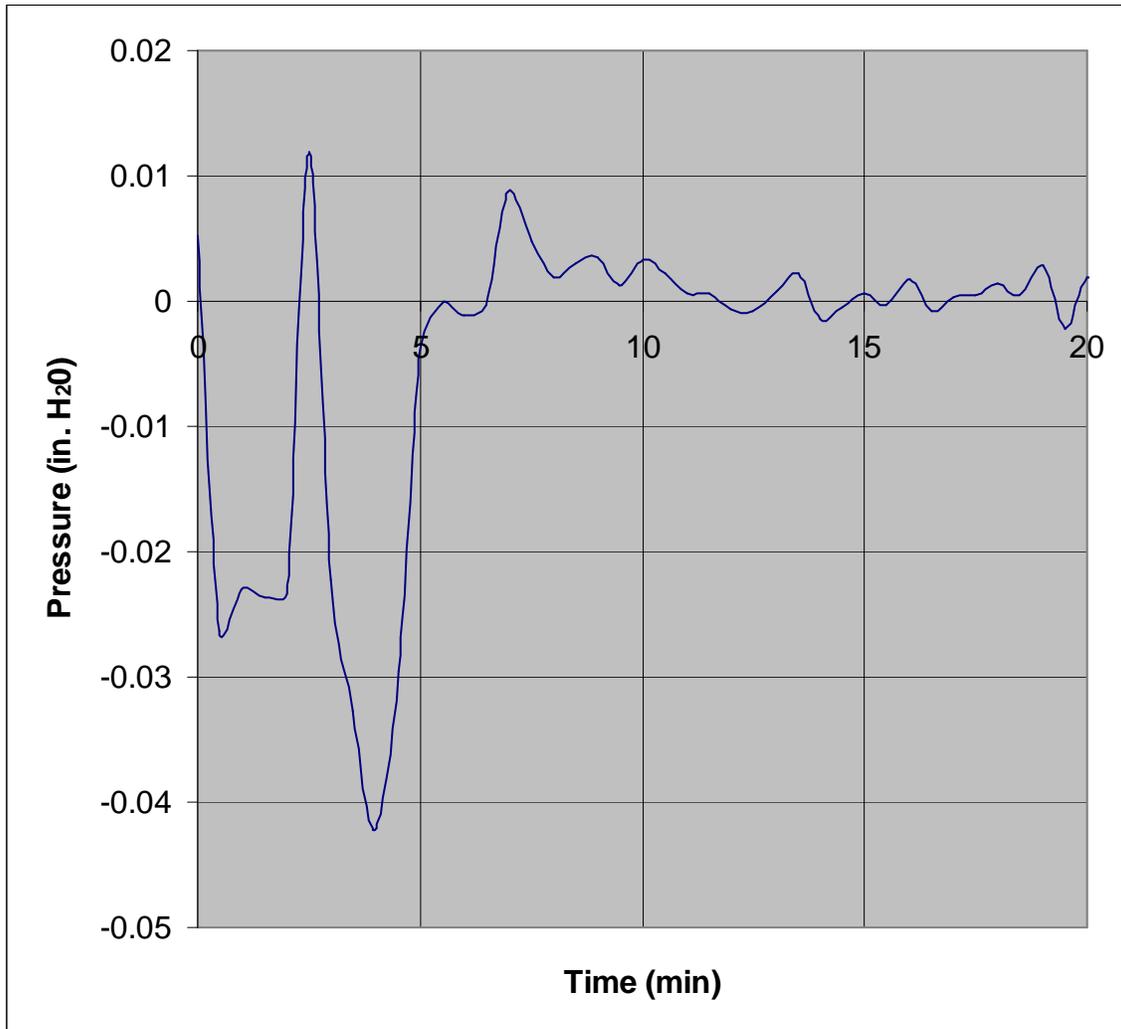
APPENDIX B

Temperature and Pressure Data

TIME TEMPERATURE CURVE AVERAGE TEMPERATURE OF FURNACE DURING THE FIRE TEST



TIME PRESSURE CURVE
THE PRESSURE INSIDE THE FURNACE 40 IN. ABOVE THE SILL



REVISION SUMMARY

DATE	PAGE	SUMMARY
December 7, 2012	--	Original Issue Date