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Please find attached the related material on Project 4791483603

For your convenience, the below describes the related updates:

R40884-vol1-Index
R40884-vol1-Appendix
R40884-vol1-SectionGeneral
R40884-20250212-DescriptionIP
Illustration-2-Total

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<u>Models</u>	<u>Section</u>	<u>Report Date</u>
A Single Swinging, wood covered composite type fire door assemblies, Model RC-FONS 04D , intended to provide protection in opening up to 1 hour fire rating in masonry construction.	1	2022-11-29
A Single Swinging, wood covered composite type fire door assemblies, Model RC-FONS-45, intended to provide protection in opening up to 3/4 hours fire rating in masonry construction.	2	2025-02-12

APPENDIX A

INSTRUCTIONS TO THE FIELD REPRESENTATIVE
FOR EXAMINATION OF PRODUCT

UL REPRESENTATIVE'S DUTIES:

At each inspection, the UL Representative shall determine that the doors intended to bear UL Classification Markings are manufactured in accordance with the specifications contained in the following sections of this Procedure with special attention to the following:

1. Species of lumber.
2. Density, thickness and/or other specifications and manufacturer/supplier of the raw materials described in the procedure. Instruction details see Standard Appendix.
3. Type, manufacturer/supplier of all adhesives to be used.
4. Size and construction of door.
5. Types and installation of hardware. Hardware is UL Listed, as specified herein.
6. Use of any required gaskets and sealing materials.
7. The installation instructions and any special markings that is required to be provided.

PROCEDURE IN CASE OF NONCONFORMANCE:

The UL Representative shall record each item of nonconformance on a UL Variation Notice, a copy of which shall be given to the manufacturer. The UL Representative shall:

1. Record any deviations from the Procedure description.
2. Record any corrective measures taken.

The Classification Mark shall not be applied until the noncompliant items have been corrected.

APPENDIX B

INSTRUCTIONS FOR SAMPLE PICK-UP BY FIELD REPRESENTATIVE

FIELD REPRESENTATIVE:

The Pick-Up Frequency and Number of Samples of the following non-Classified materials shall be as indicated in Table I.

Samples selected from current production or from Labeled stock shall be properly tagged and identified to indicate the manufacturer's name, UL file number, the material designation, lot number and the date of production.

For the same type of non-Classified material applied in different sections or volumes in R40884, pick up only one sample for each type of the materials. Forward the samples to the Follow-Up Services Department at the Suzhou Office.

The tests to be conducted are indicated in App. C.

TABLE I

Item No.	Type of Product	Sample size	Number of Samples	Pick-Up Frequency
1	Adhesive - Inorganic polysilicon gel, Model WJ-2017 (Wuyi Weijin Science & Technology Co., Ltd.)	300 ml	1	Once a year
2	Gasketing: Fireproof edge intumescent strip - Model 20mm(W) x 4mm(T) (Wenzhou Yongtai Electric Co., Ltd.)	Approx. 6 in. long	1	Once a year
3	Adhesive - Fireproof adhesive, Model WJ-2021 (Wuyi Weijin Science & Technology Co., Ltd.)	300 ml	1	Once a year
4	Bottom Seal strip - Rubber strip, Model BM-A01 (Shenzhen Baimi decoration materials Co., LTD)	Approx. 20 in. long	1	Once a year
5	Gasketing: Fireproof edge intumescent strip - Model 1 mm thick Expand graphite (Zhejiang Meihe Hardware Industry Co., LTD	Approx. 6 in. long	1	Once a year

APPENDIX C

INSTRUCTIONS FOR FOLLOW-UP TEST AT UL

The samples forwarded by the inspector shall be subjected to the appropriate tests described in Table II.

TABLE II

Item No.	Type of Product	Test to be performed (Reference dates)
		IR / Spectrum ID
1	Adhesive - Inorganic polysilicon gel, Model WJ-2017 (Wuyi Weijin Science & Technology Co., Ltd.)	Z10-01-22
2	Gasketing: Fireproof edge intumescent strip - Model 20mm(W) x 4mm(T) (Wenzhou Yongtai Electric Co., Ltd.)	Z10-02-22
3	Adhesive - Fireproof adhesive, Model WJ-2021 (Wuyi Weijin Science & Technology Co., Ltd.)	Z12-02-24 Z12-04-24
4	Bottom Seal strip - Rubber strip, Model BM-A01 (Shenzhen Baimi decoration materials Co., LTD)	Z12-01-24
5	Gasketing: Fireproof edge intumescent strip - Model 1 mm thick Expand graphite (Zhejiang Meihe Hardware Industry Co., LTD)	Z12-03-24

APPENDIX D

INSTRUCTIONS FOR
TESTS AND/OR INSPECTION AT THE FACTORY

RESPONSIBILITY OF THE MANUFACTURER:

GENERAL

It is the responsibility of the manufacturer to establish and maintain an effective quality control program to assure that all purchased hardware parts, parts fabricated within the manufacturer's factory and finished product intended to bear Listing Marks comply with the construction requirements detailed in the individual sections of this Procedure.

It is the manufacturer's responsibility to ensure that all products intended for identification as UL Listed or Classified products (refer to Marking Section for details of required identification) be produced in accordance with the requirements of this Procedure. Proposed changes or additions to this product, the manufacturing process or the Quality Control Program are to be submitted to the Engineering Department of UL LLC., as indicated by this Procedure's Authorization Page for review. If the changes or additions are judged to be acceptable, this Procedure will be revised to authorize the use of the specified marking so such product.

Labels and Listing/Classification Marks serve as evidence of examination and tests by the manufacturer at the factory at which the product is made. Labels shall not be shipped from one factory to another nor shall they be furnished by a manufacturer to anyone for attachment to products outside the factory in which they are manufactured without the express authorization of UL LLC. indicated by this Procedure's Authorization Page. The use of other Listing Marks, where permitted in the Marking Section of this Procedure, is restricted to the manufacturer or other agency designated in this Procedure at the location(s) shown and may not be transferred without the express authorization of UL LLC., as indicated by this Procedure's Authorization Page.

The manufacturer shall extend to representatives of UL LLC. the required assistance and facilities to enable them to conduct a thorough and complete examination and tests of listed products during routine visits to the factory.

It is the responsibility of the manufacturer to conduct the tests if any, detailed below, or in Special Appendix D, if any to assure that the devices bearing the Listing/Classification Marks meet the performance requirements specified.

In addition, the manufacturer shall provide periodically calibrated gauges it detailed.

GENERAL

PRODUCT COVERED:

Single Swinging, Wood covered composite type fire door assemblies, **Model RC-FONS 04D**, intended to provide protection in opening up to 1 hour fire rating.

Single Swinging, Wood covered composite type fire door assemblies, **Model RC-FONS-45**, intended to provide protection in opening up to 3/4 hours fire rating.

USE:

* These fire doors are intended to be installed in masonry wall construction for use with UL Listed wooden fire door frames.

TRADEMARK DESIGNATION:

The following trademark, trade name, or File Number may be used to identify products described in this Procedure.



DESCRIPTION

PRODUCT COVERED:

USC/CNC - Single Swinging, Wood Covered Composite Type Fire Door Assemblies, Model RC-FONS-45, intended to provide protection in openings up to 3/4 hours fire rating in masonry wall construction.

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TECHNICAL CONSIDERATIONS (NOT FOR FIELD REPRESENTATIVE'S USE):

When necessary, units may be adjusted to represent the regional type. Example: If product thickness is represented in Millimeters rather than Gauge, the units within this procedure may be modified accordingly.

FIELD REPRESENTATIVE CONSIDERATIONS:

DOOR SIZE:

The door assemblies are intended for openings as indicated in the table below:

Model series	Opening Type	Minimum Size, mm			Maximum Size, mm			Hourly Rating, Hour
		Thickness	Width	Height	Thickness	Width	Height	
RC-FONS-45	Single Swing	50	N/A	N/A	62	1200	2400	3/4

MARKING:

Each door complying with the descriptions and illustrations contained in this section of the Procedure is eligible to bear the Underwriters Laboratories Inc., Classification Marking as indicated by the Label Codes below:

Door Type	Max Hourly Rating	Temperature Rise Rating
Single Swinging	3/4	30 MIN - 250°F

The minimum latch throw shall be stamped or printed by the manufacturer in numerals at least 1/8 in. (3.2 mm) high.

The Classification Marking for single-swing doors shall show a 3/4 in. minimum latch throw.

The Classification Mark shall be securely attached to the hinge edge of each door. The label should be applied approximately 60 in. (1524 mm) up from the sill. If the hinge edge location will be covered by hardware or an edge guard, the Mark can be applied to the top edge of the door.

In addition, the manufacturer shall provide, either on the Classification Mark containing the above information or on a separate label of similar material, the Classified company's name or File Number.

Metal labels may be fastened by welding, minimum of two spot welds, by using drive screws, by metal pop rivets, or by permanent adhesive. Mylar labels may also be used.

SUPPLEMENTAL MARK REFERENCE (OPTIONAL):

Provide a sticker marking applied to the hinge edge of the door in the same location as the UL Classification Markings are presently applied where inspection authorities are used to looking for them. The sticker will have the following text in large block letters: "SEE UL CLASSIFICATION MARK ON TOP RAIL." The sticker is to be of the removable pressure-sensitive type, so it can be removed and replaced after any fitting work is done to the door. The sticker could alternately be placed on the face of the door in the same area, to be removed after the installation had been approved by the local inspection authority.

CONSTRUCTION DETAILS:

General - The general design, shape and construction shall be as illustrated in ILL.1. It shall be the responsibility of the door manufacturer to determine the type of hardware required for installation prior to the manufacturing of the doors, to make sure that the hardware and materials, as specified below, are provided.

First lamination - Laminated 18.0 mm thick mineral fiber board strips to compose new 36.0 mm thick mineral fiber board strips.

Door Stile and Bottom Rail - Attached 18.0 mm thick mineral fiber board strips with 36.0 mm thick mineral fiber board strip by adhesive, to compose 54.0 mm thick strips as door stile and bottom rail. See Ill.1 for more details.

Mineral fiber board boards mentioned is specified in below table.

Product Designation	Manufacturer	Application	Width, mm	Thickness, mm	Min. Density, kg/m ³
Mineral Fiber Board Strips	Zhejiang Yanmu Technology Co., LTD	Door stile and rail	34.0	18.0	1280

Top Rail - Four 18.0 mm thick mineral fiber board strips were glued with a 36.0 mm thick mineral fiber board strip as the top rail. See Ill.1 for more details.

Lock Reinforcement - Attached three 18.0 mm thick mineral fiber board strips, 400.0 mm long, to inside face of door stile with adhesive at the lock position.

Door Viewer Reinforcement - Two 36.0 mm thick mineral fiber board strips were put inside the door to compose a 72.0 mm thick door viewer reinforcement by adhesive. See Ill.1 for more details.

Door Core - 34.0 mm thick cement foam boards were filled in the door as the door core.

Product Designation	Manufacture	Application	Min. Thickness, mm	Min. Density, kg/m ³
Cement Foam Boards	Wuyi Quanxi town Xinsheng fire door core factory	Door Core	34.0	312

Mineral Fiber Board Veneer - Attached 8.0 mm thick mineral fiber board on one side of door stile and door rail with adhesive and air nails. Attached another mineral fiber board on another side of door stile and door rail after filling the door with door core material. These mineral fiber boards could be fully covering the door stiles and door rails.

Mineral Fiber Board Veneer mentioned is specified in below table.

Product Designation	Manufacturer	Application	Thickness, mm	Min. Density, kg/m ³
Mineral Fiber Board Veneer	Zhejiang Yanmu Technology Co., LTD	Upon Core	8.0	1280

Second lamination - Laminated above door assembly after adhesion.

Adhesive - The following adhesives are used for adhesive core frame, core and fireproof board:

Product Designation	Manufacturer	Min. Usage (kg/m ²)	Follow-up Reference
Fireproof Adhesive, WJ-2021	Wuyi Weijin Science & Technology Co., Ltd.	1.5	IR Spectrum found in Appendix (Liquid adhesive sample)

All other construction refers to the INDEX OF ILLUSTRATION.

Lamination Process: 10 ton Pressure Force (2×φ125mm oil cylinder) , Room Temperature, Minimum 24 hours for each lamination.

GASKETING

Edge Intumescent

Attached self-adhesive strips, specified in below table, on each edge of doors and between door viewer and door sheet.

Product Designation	Manufacturer	Size, mm	Application	Follow-up Reference
20mm*4mm	Zhejiang Meihe Hardware Industry Co., LTD	4.0 mm thickness, 20 ± 0.5 mm width	Fireproof edge intumescent strip	N/A (conducted in Vol.1, Sec.1)
Expand Graphite		1.0 mm thickness	Door viewer	IR Spectrum found in Appendix (solid, graphite sheet)

Gasketing Materials for Fire Doors (GVWZ) or Gasketing and Edge-sealing Materials for Fire Doors, Positive Pressure Tested (GVYI). The gasket materials shall be applied per the gasket manufacturer's installation instructions. The hourly fire rating and test standard of the gasket materials shall meet or exceed the ratings of the door. All intumescent materials used shall be installed prior to shipment from the plant.

Smoke/Sound Gasket

Concealed auto bottom sealing specified below table should be applied.

Product Designation	Manufacturer	Model	Follow-up Reference
Bottom Sealing Component	Shenzhen Baimi decoration materials Co., LTD	BM-A01	IR Spectrum found in Appendix (inside rubber strip)

UL Classified Category "H" Gaskets (GVYI) may also be applied to the edge of the door.

LATCHES - The doors shall incorporate a UL Listed Latch, Model ML008, supplied by JIANGMEN LIKCOO HARDWARE MANUFACTURING CO LTD or other UL Listed Latch that have an equal or exceed fire ratings of the door and may be factory or field supplied. The latch shall be of the following type:

Latch Type	Associated CCNs
Single Point Latch - Mortise Type	Single-point Locks & Latches - GYJT; Electrically-controlled Single-point Locks & Latches - GYQS

The corresponding latch throw for each type of latch is described in the table below:

Opening Type	Minimum Latch Throw, in.			Minimum Hourly Rating, Hours
	Single Point Latch	Fire Exit Hardware (Rim and Mortise)	Fire Exit Hardware (SVR and CVR)	
Single Swing	3/4	N/A	N/A	3/4

DOOR VIEWER (optional) - The doors could be prepared with UL listed door Viewer, Model 1012B, supplied by BEIJING OUPUOPTIC INSTRUMENT CO LTD.

In addition, the doors may be provided with a UL Listed Auxiliary Lock (GWXT), and/or Fire Door Viewer (HAAU). The fire rating (including duration and pressure exposure) of the auxiliary lock, fire door coordinator and/or door viewer shall meet or exceed the ratings of the door.

HINGES AND PIVOTS:

The door shall incorporate a UL Listed stainless-steel ball bearing hinges, Model SSA002, supplied by JIANGMEN LIKCOO HARDWARE MANUFACTURING CO LTD or other Listed hinge that have an equal or exceed fire ratings of the door with size of minimum 114.3 mm (4-1/2 in.) height by minimum 3.4 mm (0.134 in.) thickness steel or stainless-steel ball bearing hinges. And the minimum 2.7 mm (0.106 in.) thickness steel or stainless-steel ball bearing hinges are accepted as well.

Refer to NFPA 80, Table 6.4.3.1 for door and hinge size limits. Doors up to 1520 mm (60 in) in height shall be provided with two hinges and an additional hinge for each additional 760 mm (30 in.) of the door height or fraction thereof.

DOOR CLOSERS (optional):

The doors could be prepared with Concealed door closer, Model D70, supplied by ZHEJIANG DORRENHAUS HARDWARE INDUSTRY CO LTD or other UL Listed Concealed door closer. UL listed Surface Mounted type door closers (GVEV) could be mounted too.

Note: All Cutouts for hardware can't beyond the size specified in ILL.1.

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