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Inspections at your plant will be conducted by the Inspection Center in your vicinity. More information on Follow-up Service Inspections can be found at <https://www.ul.com/resources/follow-up-services-additional-resources>.

PLEASE NOTE: YOU ARE NOT AUTHORIZED TO SHIP ANY PRODUCTS BEARING ANY UL MARKS UNTIL THE INITIAL PRODUCTION INSPECTION HAS BEEN SUCCESSFULLY CONDUCTED BY THE UL FIELD REPRESENTATIVE.

An Initial Production Inspection (IPI) is an inspection that must be conducted prior to the first shipment of products bearing the UL Mark. This is to ensure that products being manufactured are in accordance with UL's requirements including the Follow-Up Service Procedure. After the UL Representative has verified compliance of your product(s), authorization will be granted for shipment of product(s) bearing the appropriate UL Marks as denoted in the Procedure.

Marks as needed may be obtained from UL Label Centers. To find a Label Center in your vicinity, visit <https://marks.ul.com/about/ul-listing-and-classification-marks/labels/label-centers>.

Please note, Follow-Up Procedure Revisions or Report Revisions do not include Authorization Pages, Indices, Section General, and/or Appendices unless revisions were required or requested.

Should you have any questions, after reviewing the material, or need to report any inaccuracies, please reach out to your UL representative or find UL contact details for your local Customer Service Department at <https://www.ul.com/about/locations>.

Please find attached the related material

For your convenience, the below describes the related updates:

For revised/new documentation, please reference 2022-11-29 in the page headings. New volume 1.

R40884-Vol1-AuthorizationPage
R40884-vol1-Index
R40884-vol1-Appendix
R40884-vol1-AppendixStandardized
R40884-vol1-SectionGeneral
R40884-20221129-DescriptionIP
Illustration-1-Total

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File R40884

Vol 1

Authorization Page 1

Issued: 2022-12-05

Revised: 2022-12-05

FOLLOW-UP SERVICE PROCEDURE
(TYPE L)

SWINGING-TYPE FIRE DOORS
(GSYX, GSYX7)

Manufacturer:	SEE ADDENDUM FOR MANUFACTURER LOCATIONS
Applicant:	2994312 (Party Site) Zhejiang Runcheng door industry Co Ltd Jinyanshan Gongyequ No. 3 Jinhua ZHEJIANG 321201 CN
Listee/Classified Company:	2994312 (Party Site) SAME AS APPLICANT

Use of the Mark

This Follow-Up Service Procedure authorizes the above Manufacturer(s) to use the marking specified by UL LLC, or any authorized licensee of UL LLC, including the UL Contracting Party, only on products when constructed, tested and found to be in compliance with the requirements of this Follow-Up Service Procedure and in accordance with the terms of the applicable service agreement with UL Contracting Party. The UL Contracting Party for Follow-Up Services is listed in the addendum to this Follow-Up Service Procedure ("UL Contracting Party"). UL Contracting Party and UL LLC are referred to jointly herein as "UL."

It is the responsibility of the Applicant, Manufacturer(s), and Listee/Classified Company to make sure that only the products meeting the aforementioned requirements bear the authorized Marks of UL LLC, or any authorized licensee of UL LLC.

Additional Responsibilities

Additional responsibilities, duties and requirements for the Applicant and Manufacturers are defined under Additional Resources at the following website: <https://www.ul.com/fus>. Manufacturers without Internet access may obtain the current version of these documents from their local UL customer service representative or UL field representative. For assistance, or to obtain a paper copy of these documents or the Follow-Up Service Terms referenced below, please contact UL's Customer Service at <https://www.ul.com/aboutul/locations/>, select a location and enter your request, or call the number listed for that location.

Acceptance of Follow-Up Services

The Applicant and the specified Manufacturer(s) and any Listee/Classified Company in this Follow-Up Service Procedure must agree to receive Follow-Up Services from UL Contracting Party. If your applicable service agreement is a Global Services Agreement ("GSA"), the Applicant, the specified Manufacturer(s), and any Listee/Classified Company will be bound to a Service Agreement for Follow-Up Services upon the earliest by any Subscriber of a) use of the prescribed UL Mark, b) acceptance of the factory inspection, or c) payment of the Follow-Up Service fees. The Service Agreement incorporates such GSA, this Follow-Up Service Procedure and the Follow-Up Service Terms which can be accessed by clicking the following link: <https://www.ul.com/resources/contracts/follow-up-service-terms>. In all other events, Follow-Up Services will be governed by and incorporate the terms of your applicable service agreement and this Follow-Up Service Procedure.

Use and Ownership of the Follow-Up Service Procedure

This Follow-Up Service Procedure, and any subsequent revisions, is the property of UL and is not transferable. This Follow-Up Service Procedure contains confidential information for use only by the Applicant, the specified Manufacturer(s), and representatives of UL and is not to be used for any other purpose. It is provided to the Subscribers with the understanding

that it is not to be copied, either wholly or in part unless specifically allowed, and that it will be returned to UL, upon request.

Definition of Terms

Capitalized terms used but not defined herein have the meanings set forth in the GSA and the applicable Service Terms or any other applicable UL service agreement.

No Third Party Liability

UL shall not incur any obligation or liability for any loss, expense or damages, including incidental, consequential or punitive damages arising out of or in connection with the use or reliance upon this Follow-Up Service Procedure to anyone other than the above Manufacturer(s) as provided in the agreement between UL LLC or an authorized licensee of UL LLC, including UL Contracting Party, and the Manufacturer(s).

Certification Body

UL LLC has signed below solely in its capacity as the certification body to indicate that this Follow-Up Service Procedure fulfills the requirements for certification documentation issued by the certification body. The certification body's accreditation status for the applicable certification scheme and identification of the accreditation body can be found at <https://www.ul.com/resources/accreditation>.

Deborah Jennings-Conner
VP Regulatory Services
UL LLC

LOCATION

2994312 (Party Site)
Zhejiang Runcheng door industry Co Ltd
Jinyanshan Gongyequ
No. 3
Jinhua ZHEJIANG 321201 CN

Factory ID: None

UL Contracting Party for above site is: UL GmbH

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<u>Models</u>	<u>Section</u>	<u>Report Date</u>
A Single Swinging, wood covered composite type fire door assemblies intended to provide protection in opening up to 1 hour fire rating in masonry construction.	1	2022-11-29

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

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

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.

ISSUED: 2020-09-02

STANDARDIZED APPENDIX PAGES
Subject 10B - GSYX, GSYX7, GSZC, GSZC7
Subject 10C - GSZN, GSZC, GSZC7

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Swinging-type Fire Doors (GSYX, GSYX7)
Swinging-type Fire Doors, Positive-pressure Tested (GSZN)
Finishers of Fire Doors (GSZC, GSZC7)

STANDARDIZED APPENDIX PAGES

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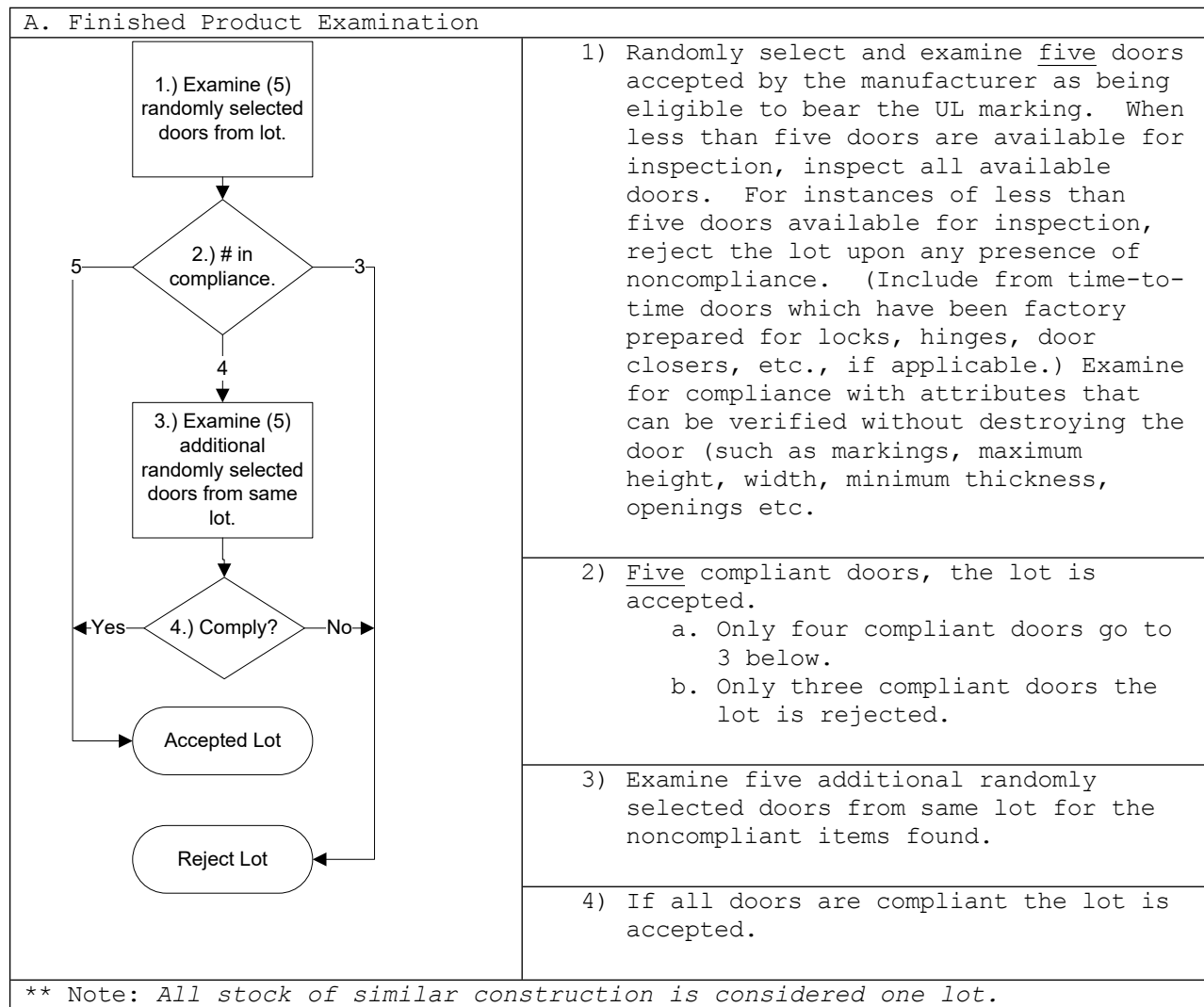
APPENDIX A - UL FIELD ENGINEER'S RESPONSIBILITIES AND INSTRUCTIONS FOR EXAMINATION OF THE PRODUCT

GENERAL

The Field Engineer's general responsibilities, as part of the Follow-Up Services Procedure, are as noted in the published document titled, "UL Mark Surveillance Requirements", and is available through UL's internet site www.ul.com/fus. Manufacturers that do not have Internet access may obtain the current version of these requirements from their local UL Customer Service Representative or UL Field Engineer.

PROCEDURE IN THE EVENT OF NONCONFORMANCE

When a product does not comply with the Follow-Up Service Procedure require that the manufacturer implement appropriate action as outlined in the "UL Variation Notice and Corrective Action Requirements" document.



Swinging-type Fire Doors (GSYX, GSYX7)
 Swinging-type Fire Doors, Positive-pressure Tested (GSZN)
 Finishers of Fire Doors (GSZC, GSZC7)

B. Raw Materials Audit

At each visit, examine stock of the following materials that are accepted and intended for use in UL-labeled product. Product should comply with the individual Procedure requirements defined in the descriptive section:

Wood Doors:

- Edge Banding Lumber
- Core Material/Insulation
- Glue/Adhesive
- Face Materials
- Other raw materials as specified by the Procedure

Steel Doors:

- Steel Thicknesses
- Glue/Adhesives
- Core Materials
- Insulation Materials
- Pre-Fabricated Hardware Reinforcements
- Other materials as specified by the Procedure

Ensure the manufacturer has the proper controls in place per Incoming Raw Material Control requirements are outlined in Appendix D.

C. Subassemblies Audit

1. At each visit, randomly select and examine ten samples of processed stiles and rails, ten stiffeners/reinforcements/bottom channel/latch channel/hinge channel and ten core assemblies accepted and intended for use in UL Classified production for compliance with the Procedure.
2. Accept or reject the subassemblies based on the following criteria.
 - If two or less of the ten samples with noncomplying results are noted, accept the lot.
 - If three or more of the ten samples are noncomplying, the lot involved is to be rejected. The manufacturer is to review the lot, rejecting or reworking the noncomplying units. This re-inspection may be done as the units are introduced into the next assembly stage. The UL Field Engineer need not witness the re-inspection.
 - If four or more of the ten noncomplying samples are found, hold as above so that the manufacturer can review the lot. Also inquire as to the number of processed doors bearing or intended to bear the UL Classification Marking which were made from the stock involved so that a determination of noncomplying finished doors can be made.

Swinging-type Fire Doors (GSYX, GSYX7)
Swinging-type Fire Doors, Positive-pressure Tested (GSZN)
Finishers of Fire Doors (GSZC, GSZC7)

INSTRUCTIONS FOR THE INSPECTION OF PRODUCTS FOR DOOR FINISHERS (MODIFIERS / DISTRIBUTORS)

The door finishing process involves taking completed doors and modifying them by adding Procedure described items such as lights (windows), exit hardware, louvers, and similar items. A door finisher may be part of a door manufacturer operation or may be a separate shop / facility. The finisher applies the final UL label to the product.

Finishers receive UL compliant doors that either has the UL Classification marking applied or a "further processing mark". A further processing mark is a split inspection mark indicating that a door complies with the UL requirements and is eligible for finishing operations and final UL labeling. Refer to Sec. Gen. and/or the individual sections of the Procedure for details concerning door identification.

INSTRUCTIONS FOR INSPECTIONS OF PRODUCTS AT DOOR FINISHERS

1. Verify that the door has the proper incoming "further processing mark" or UL Classification mark from the original door manufacturer.
2. Check that the modified door complies with the limitations for the basic construction and optional modifications and/or preparations as described in the UL Procedure.

UL LABELING INSTRUCTIONS FOR DOORS SUBJECT TO FINISHING OPERATIONS

- Doors that bear "further processing mark" that are modified per the Procedure description are to be labeled with the appropriate UL Classification marking supplied by the door finisher.
- Doors that bear the original door manufacturer's Classification Marking (as opposed to the "further processing mark") which are to be modified to include only preparations specified as "optional" in Sec. Gen. of the Procedure, do not require replacement of the original UL Classification Marking.
- Doors that bear the original manufacturer's UL Classification Marking and are to be modified to include optional alternate preparations specified as *"required at the factory"* in Section General, shall have the original Classification Marking removed, destroyed, and replaced with an appropriate UL Classification Mark supplied by the finisher.

Swinging-type Fire Doors (GSYX, GSYX7)
Swinging-type Fire Doors, Positive-pressure Tested (GSZN)
Finishers of Fire Doors (GSZC, GSZC7)

APPENDIX B - INSTRUCTIONS FOR FIELD ENGINEER'S SAMPLE SELECTION

FIELD ENGINEER:

Some fire door components, including core material, adhesive, insulation and gasketing covered by this Procedure require follow-up tests by UL, unless such component is currently under a UL certification program.

Once a year, unless otherwise specified in the Special Appendices, the Field Engineer shall obtain the samples as identified in Special Appendix C in the amounts as follows:

Sample Type	Minimum Sample Amount
Liquid (e.g. Adhesive)	3 fl. oz.
Solid (e.g. Gasketing)	1 sq. ft.

Each sample shall be packaged to protect the sample during shipment.

The Field Engineer is responsible for selecting the quantity of samples at the stated frequency for Follow-Up testing in accordance with the Sample Selection criteria noted above. Samples shall be identified and tagged with the applicable information using a Sample Tag and include the appropriate identification of the Follow-Up Service Procedure Volume and Section where the component is located. Unless otherwise stated, the Field Engineer shall inform the manufacturer that the samples are to be forwarded to the Test Office(s) as designated on the specific service profile.

The Field Engineer shall request the manufacturer to include and deliver the appropriate MSDS, Technical data sheets or other related documentation for each component with the collected samples.

At every regular inspection, the Field Engineer shall also verify that the manufacturer conducts the following checks:

1. Confirm the manufacturer and designation of the each component matches the Follow-Up Service Procedure.
2. Where applicable, confirm the UL certified component is current with its' established UL certification program.

Swinging-type Fire Doors (GSYX, GSYX7)
Swinging-type Fire Doors, Positive-pressure Tested (GSZN)
Finishers of Fire Doors (GSZC, GSZC7)

APPENDIX C - INSTRUCTIONS FOR FOLLOW-UP TESTS AT UL

UL ANALYTICAL LAB OR CONFORMITY ASSESSMENT SERVICES:

The following tests may be conducted on samples received from the UL Field Engineer.

1. Qualitative Infrared Analysis (IR) - An infrared spectrum of the material is obtained by means of a double beam, automatic recording, infrared spectrophotometer having a sodium chloride optical system. Samples used that require a spectrum identification are described within Special Appendix C:
2. Thermogravimetric Analysis (TGA) - A technique in which the mass of a substance is measured as a function of temperature or time while the substance is subjected to a controlled-temperature program in a specified atmosphere. Samples used that require a spectrum identification are described within Special Appendix C:

See Special Appendix C for further detail.

Swinging-type Fire Doors (GSYX, GSYX7)
Swinging-type Fire Doors, Positive-pressure Tested (GSZN)
Finishers of Fire Doors (GSZC, GSZC7)

APPENDIX D - MANUFACTURER'S RESPONSIBILITIES AND REQUIREMENTS FOR FACTORY TESTS

The Follow-Up Service Procedure covering the product is loaned to the manufacturer and constitutes the basis on which the product is judged for compliance with the applicable requirements.

MANUFACTURER' S RESPONSIBILITIES

GENERAL

The Manufacturer's general responsibilities, as part of the Follow-Up Services Procedure, are as noted in the published document titled, "UL Mark Surveillance Requirements", and is available through UL's internet site www.ul.com/fus. Manufacturers that do not have Internet access may obtain the current version of these requirements from their local UL Customer Service Representative or UL Field Engineer.

FIRE DOOR INDUSTRY TERMS and DEFINITIONS:

Astragals - A component or combination of components applied to a leaf of a door pair at their meeting edges, intended to retard the passage of smoke, gases or flame and also cover the meeting edge gap to minimize a resulting through opening during the fire and hose stream testing.

Composite Core - A generic term used to identify the engineered material that is inserted into the door cavity (e.g. honeycomb cardboard, polystyrene core).

Cross Band - Material used to hold the core of a wood door together. Also provides an even surface to the attachment of face veneers when the core has surface deviations.

Door Core - Material between the exterior faces of the door.

Door Finishers - Party responsible for preparing the door assembly for final use/installation. Finishers receive fire doors from the primary manufacturer. These fire doors have a unique marking signifying the door was manufactured in compliance with UL's Follow-Up Service requirements. The finisher may modify the fire door to satisfy site-specific requirements for items such as vision panels and hardware.

Door Manufacturers - note that a finisher may also be a manufacturer - Party responsible for producing the fire door per the UL Follow-Up Procedure.

Door Assembly - Group of components including, but not limited to, the fire door, fire door frame and fire door hardware.

Double Egress - door pair capable of swinging in either direction with one active/inactive door swinging into the plane of the door and wall, while the other active/inactive door swings away from the plane of the door and wall.

Egress - The action of building occupants exiting the building.

Exit Hardware - Hardware installed in a fire door that is capable of meeting the panic hardware and fire hardware requirements.

Gypsum Core - Gypsum base used as a core material in the door.

Intumescent - Material that expands when exposed to heat. Typically used to close a gap that is open during normal operation.

Swinging-type Fire Doors (GSYX, GSYX7)

Swinging-type Fire Doors, Positive-pressure Tested (GSZN)

Finishers of Fire Doors (GSZC, GSZC7)

Louvers - Door accessories that allow air flow during normal operation but do not allow flame. Installed in the lower part of the door assembly.

Mineral Core - A type of composite core consisting of wet and dry ingredients to form a slab either used as an infill for steel doors or as a base for the attachment of the remaining door components to be built upon for wood doors.(e.g. calcium silicate, gypsum.).

Mortise - Groove created in the door to allow for hardware (e.g. hinges, latches etc.)

Panic Hardware - Door hardware that has only met the security requirements of UL 305.

Particle Core - Pressed wood, consisting of wood shavings/scrap/sawdust, that are bound together using a resin material.

Positive Pressure Tested - Fire door component or assembly that was evaluated to UL10C.

Rails - Horizontal parts of wood panel door construction. Typically seen at the top and bottom of the door.

Fire Resistance Rating (20 minute, etc.) - Product that complies with the fire endurance and hose stream requirements of a fire door Standard (e.g. UL 10B or UL 10C). Unless stated otherwise, this rating was achieved by complying with the hose stream requirements of the fire door standard.

Staved Lumber Core - Wooden fire door consisting of a series of smaller core materials pressed and laminated to form the completed wood door.

Stiles - Vertical parts of wood panel door construction. Typically seen at the sides of the door.

Single Swing - Single leaf fire door within the fire door frame.

Transom Panel - A separate framed area above the fire door. Can vary in material type and composition.

Vision Panel - A portion of the fire door that houses a fire rated glazing.

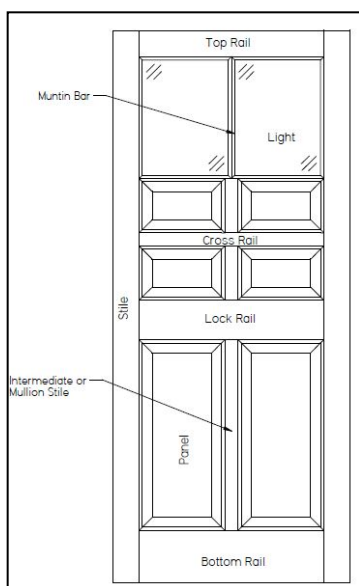


Figure 2 - Wood Door Construction

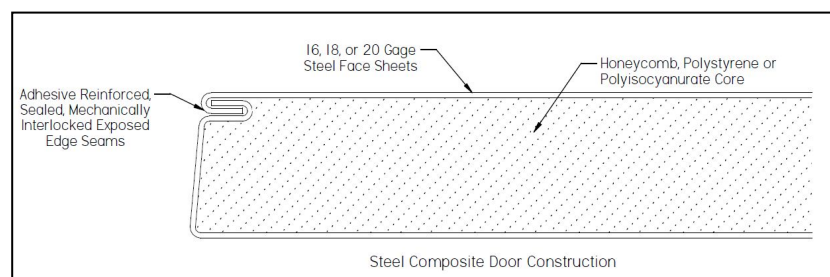


Figure 1 - Steel Composite Door

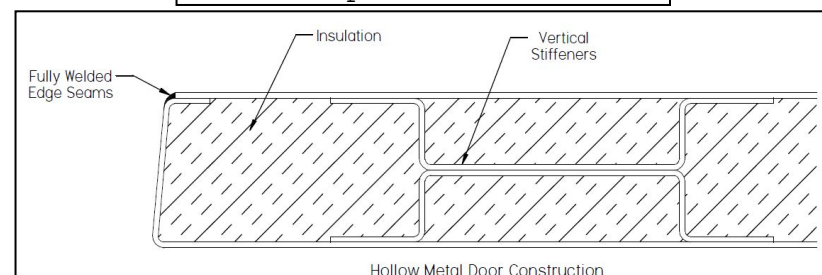


Figure 1 - Steel Stiffened Door Construction

Swinging-type Fire Doors (GSYX, GSYX7)
 Swinging-type Fire Doors, Positive-pressure Tested (GSZN)
 Finishers of Fire Doors (GSZC, GSZC7)

RAW MATERIAL CONTROLS FOR DOOR MANUFACTURERS

The following are critical materials and characteristics that are to be controlled on an incoming basis by the manufacturer:

INCOMING INSPECTION		
Material	Items to be checked or tests to be conducted on each incoming shipment	Minimum Record Requirements
Adhesive	Name of manufacturer and type designation.	Receiving record or invoices, etc. which show the manufacturer and type designation.
Stiles and Rails	Wood species.	Receiving record or invoices, etc. which show the species.
Staved Lumber Core	Wood species.	Receiving record or invoices, etc. which show the species.
<u>Note:</u> Acceptable wood species are given in the Description sections of this Procedure. In general, it may be assumed the minimum density requirements for stile, rail, and wood block core lumber will be met if the manufacturer uses any of these species of wood. However, should a lot or shipment of lumber be unidentified with respect to wood species, the manufacturer shall perform tests to determine the density and moisture content of the lumber. Moisture content may be determined by a resistance type moisture meter or by the oven dry method. If this course of action is followed, the manufacturer's records should include: lot size, date received, date tested, number of samples tested, results and action taken (accepted or rejected, culled, etc.).		
Wood Board Core	Thickness Particle and density.	Lot size, date received, date tested, number of samples tested, results, and action taken (accepted or rejected, culled, etc.).
<u>Note:</u> If the individual sections of this Procedure specify a particular particle board, with appropriate UL marking; the incoming tests need not be conducted if the material arrives marked as described.		
Hardboard face material	Thickness, density.	Same as above.
Plywood face	Thickness.	Same as above.
Laminated plastic face material	Thickness, UL Classification Marking, or other required markings on each face.	Receiving records or invoices, etc. which show manufacturer and type.
Steel or Stainless Steel Sheet	Thickness, Gauge.	Receiving Records, Mill Documents.
Foamed Plastic Cores	Density, Materials.	Material Records or Shipment Certificate, type and designation.

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INCOMING MATERIALS TESTS AND SAMPLE PLAN FOR DOOR MANUFACTURERS

Incoming materials testing: The following incoming material tests (density and thickness) are to be conducted per the sampling plan and test methods as specified in the following paragraphs.

Incoming Material Test Sampling Plan: Each of the tests is to be conducted on each shipment received using at least the following sampling plan. Samples are to be randomly selected.

SAMPLING PLAN			
Incoming lot size (core boards, faces or skins)	No. of Samples to be tested	Number of non-conformances (a.k.a. Acceptance Number)	Reject Number
Up to 500	5	0	1
500 to 10,000	10	0	1
10,000 or greater	20	1	2

Example: For a lot size of 500 to 10,000 the lot may be accepted if NONE of the samples exhibit non-conformance results. For a lot size of 10,000 or greater, the lot may be accepted if no more than one of the samples exhibits non-conformance results.

REQUIRED INCOMING MATERIALS TESTS

1. Thickness Test

- Apparatus: A scale graduated in 1/64 in. increments.
- Method: The thickness of each face and of each particle board or insulation core, face sheet, end channel, edge channel, reinforcement is to be measured at four places to the nearest 1/64 in. and the resulting average recorded.

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2. Density Test

- Apparatus: For weighing, a scale or balance graduated in at least 1 oz. increments if a sample with an area less than 7 ft² is used and a scale or balance graduated in at least 1/4 lb. increments if a sample with an area greater than 7 ft² is used. For dimensions, a ruler or scale graduated in 1/32 in. increments may be used.
- Method: The weight of each sample of core, insulation or face material is to be determined to the nearest ounce (if less than 7 ft²) or to the nearest 1/4 lb. (if greater than 7 ft²). The length, width, and thickness of each sample is to be measured to the nearest 1/32 in. The density is calculated using the following relationship.

$$\text{Density (lb. /ft}^3\text{)} = \frac{1728 \times \text{Weight (in pounds)}}{L \times W \times TH \text{ (all in inches)}}$$

\ Or

$$\text{Density (lb. /ft}^3\text{)} = \frac{3.8 \times \text{Weight (in grams)}}{L \times W \times TH \text{ (all in inches)}}$$

RESPONSIBILITIES OF DOOR FINISHERS (MODIFIERS / DISTRIBUTORS)

1. Ensure all doors to be modified and UL Labeled have a further processing mark or UL Classification Mark for the original door manufacturer.
2. Label doors correctly.
3. Validate compliance with FUS Procedure requirements.

GENERAL

PRODUCT COVERED:

Single Swinging, Wood covered composite type fire door assemblies intended to provide protection in opening up to 1 hour fire rating.

USE:

These fire doors are intended to be installed in masonry wallboard wall construction for use with UL Listed steel 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 intended to provide protection in opening up to 1 hr. fire rating in masonry 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:

All doors shall be a minimum 45 mm thick. The door assemblies are intended for openings as indicated in the table below:

Model Name	Opening Type	Minimum Size, mm		Maximum Size, mm		Hourly Rating, Hour
		Width	Height	Width	Height	
RC-FONS 04D	Single Swing	N/A	N/A	1200	2400	1

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	Label Code	Max Hourly Rating	Temperature Rise Rating
Single Swinging	10-3-1, 10-3-3, 10-3-5, 10-9-5, 10-9-6	1	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 reinforcements, as specified below, are provided.

Solid Wood Frame - The solid wood and use are specified in the table below. 80mm width solid wood combinate into surrounding frame and 60 mm width solid wood combinate into inside frame by nail gun, see Ill. 1. for detail.

Product Designation	Manufacturer	Wood Type	Thickness, mm	Density, kg/m ³
Frame	Heze Heyun Wood Industry Co., Ltd.	Solid Wood: Pine	23	550±45

CORE Materials- The cores and use are specified in the table below. Filled the core materials into the aforesaid frame.

Product Designation	Manufacturer	Core Type	Size	Thickness, mm	Density, kg/m ³
Core material	Wuyi Xinwang Fireproof Material Co., Ltd.	Mineral door core	490 mm length x 400 mm width	23	442±50

Covered layer boards- Two covered layer board are specified in the table below. Two covered layer boards were attached up the core materials on each side with specified adhesive, then laminated together.

Product Designation	Manufacturer	Application	Thickness, mm	Density, kg/m ³
Fireproof board (Glass magnesium Board)	Lanxi Meida Fireproof Material Co., Ltd.	Upon core materials	5	900±50
High density board	Zhejiang Yanmu Technology Co., Ltd.	Upon Fireproof board	6	800±20

ADHESIVE - The following adhesives are used for adhering the core materials to the cover layer boards:

Product Designation	Manufacturer	Application	Usage (kg/m ²)	Follow-up Reference
Inorganic polysilicon gel, Model WJ-2017	Wuyi Weijin Science & Technology Co., Ltd.	Attaching the core to covered layer boards	Max. 0.52kg/m ²	IR Spectrum found in Appendix

Lock Position Reinforcement- a solid wood measured as 330 mm length by 100 mm width was attached to the lock stile by nail gun as a reinforcement for latch.

All other construction refers to INDEX OF ILLUSTRATION.

Lamination Process: 3000kg pressure force, Room Temperature, Minimum 4 hours for each side.

GASKETING -

Edge Intumescent

Product Designation	Manufacturer	Application	Follow-up Reference
Model 20mm(W) x 4mm(T)	Wenzhou Yongtai Electric Co., Ltd.	Open groove on the lock stile, hinge stile and top rail, then insert the intumescent gasketing into it.	IR Spectrum found in Appendix

Doors require the use of intumescent materials to meet the requirements of UL 10C. All intumescent materials used shall be installed prior to shipment from the plant.

The door panels also may be provided with UL Classified 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.

Automatic Door Bottom Seals Gasket

Model YDB301 Automatic Door Bottom drop seals, supplied by WENZHOU YONGTAI ELECTRIC CO LTD or other UL Classified Category "J" Gaskets (GVYI) of the bottom type, which requires equal to or smaller cutout as shown on the Classified gasket machining template, shall be applied to the bottom of the door as shown on ILL.1.

LATCHES - The doors shall incorporate a UL Listed latch 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
Fire Exit Hardware - Rim Type and Mortise Type	Fire-exit Hardware - GXHX

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

Opening Type	Minimum Latch Throw, in.			Hourly Rating, Hour
	Single Point Latch	Fire Exit Hardware (Rim and Mortise)	Fire Exit Hardware (SVR and CVR)	
Single Swing	3/4	3/4	N/A	1

In addition, the doors may be provided with a UL Listed Auxiliary Lock (GWXT), Fire Door Coordinators (GVVR) 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:

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.

Only 114.3 mm (4-1/2 in.) or higher by 3.4 mm (0.134 in.) thick ball bearing hinges may be used for doors more than 44.5 mm (1-3/4 in.) thick.

DOOR CLOSERS:

The doors may be prepared for UL Listed surface mounted arm type door closers (GVEV) only.

INDEX OF ILLUSTRATIONS:

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Detail construction of fire door	1	2
Detail construction of fire door frame	1	3
Bill of materials and List of hardware	1	4

The following Page(s) are related to Illustration-1. The next supplement, if applicable, will be identified with a new Supplement Page Heading