SECTION 08 3483

ELEVATOR SMOKE CONTAINMENT SYSTEM

PART 1 - GENERAL

1. RELATED DOCUMENTS

   A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

2. SUMMARY

   A. Section Includes: smoke containment screen and control system designed to provide a tight fitting, smoke- and draft-control assembly.

   B. Products Supplied But Not Installed Under This Section:
      1. End-of-line diode (3.9V, 2W). Installed at smoke detector to monitor the circuit.

3. REFERENCES

   A. ASTM A240/240M – Standard Specification for Heat Resisting Chromium and Chromium-Nickel Stainless Steel Plate, Sheet and Strip for Pressure Vessels.

   B. ICC Evaluation Service ES AC77 – Acceptance Criteria for Smoke-Containment Systems Used with Fire-Resistive Doors and Frames.

   C. Evaluation Service report in compliance with ICC AC-77

   D. NFPA Codes and Standards:
      1. 70 – National Electrical Code.
      2. 105 – Recommended Practice for the Installation of Smoke-Control Door Assemblies.
      3. 72– National Fire Alarm Code

   E. International Building Code
      1. 2003
      2. 2006
      3. 2009
      4. 2012
      5. 2015

   F. UL Standards:
      1. 268 – Smoke Detectors for Fire Protective Signaling Systems.
      2. 864 – Control Units for Fire Protective Signaling Systems.
      3. 1784 – Air Leakage Tests for Door Assemblies.

4. SUBMITTALS

A. Reference Section 01 3300–Submittal Procedures ; submit following items:
   1. Product Data.
   2. Shop Drawings: Include door width and height, jamb width, jamb and head projection, screen width, mounting height, and housing width. Show and identify related work performed under other sections of the specifications.
   3. Quality Assurance/Control Submittals:
      a. Qualifications:
         1) Proof of manufacturer qualifications.
         2) Proof of Installer qualifications.
      b. Certifications: Copy of specified items.
      c. Manufacturer's installation instructions and testing procedures

5. CLOSEOUT SUBMITTALS

A. Comply Section 01 7700–Closeout Submittals; submit following items:
   1. Operation and Maintenance Manual
   2. Manufacturer's Warranty

6. QUALITY ASSURANCE

A. Overall Standards:
   1. Manufacturer shall maintain a quality control program for follow up service in accordance with ICC-ES Acceptance Criteria 77.

B. Qualifications:
   1. Manufacturer Qualifications: Minimum seven years' experience in producing smoke containment systems of the type specified.
   2. Installer Qualifications: Factory trained by manufacturer.

C. Certifications and Required Test Reports:
   1. Manufacturer's ICC-ES AC77 Evaluation Service report or Intertek Code Compliance Research Report showing compliance with:
      a. ICC-ES AC77, including:
         1) Approved opening force
         2) Cyclic force
         3) Expansion characteristics
      b. UL Standard 1784
   2. ASTM E84 Test Report
   3. ASTM 136 Test Report
   4. NFPA 105
   5. UL 864 Listed
   6. IAS (IAS is a trademark of International Accreditation Service) Accredited Testing Laboratory Labels for UL Standard 1784
   7. IAS (IAS is a trademark of International Accreditation Service) Accredited Testing Laboratory Labels for UL Standard 864
   8. California Department of Forestry and Fire Protection and Office of the State Fire Marshal Listing.
   9. OSHPD Anchorage Pre-Approval No. OPA-2855-10

D. Pre-Installation Meeting:

1. Schedule and convene a pre-installation meeting prior to commencement of field operations with representatives of the following in attendance: Owner, Architect, General Contractor, smoke containment system sub-contractor, painting sub-contractor, and electrical sub-contractor.
2. Review substrate conditions, requirements of related work, installation instructions, storage and handling procedures, and protection measures.
3. Keep minutes of meeting including responsibilities of various parties and deviations from specifications and installation instructions.

7. DELIVERY, STORAGE, AND HANDLING

A. Reference Section 01 6600–Product Storage and Handling Requirements.

B. Follow manufacturer's instructions.

8. WARRANTY

A. Provide manufacturer's standard one-year warranty.

B. Maintenance and Testing:
1. Perform minimum semi-annual maintenance and testing on each smoke containment system as required by the manufacturer's warranty, code agency evaluation reports, and as required by local authority having jurisdiction.
2. Provide test documentation.

2.PRODUCTS

2.1. MANUFACTURER

A. Basis of Design: Model -ASA, GP SD60GS Elevator Smoke Containment System

B. Manufacturer :
1. ASA, GP
2. BLE
3. Total Door

C. Label each smoke containment system with following information:
1. Manufacturer's name.
2. Maximum leakage rating at specified pressure and temperature conditions.
3. Intertek or UL Labeled per UL 1784

2.2. PERFORMANCE REQUIREMENTS

A. Air Leakage: Not to exceed 3 cubic feet per minute (0.001416 m^3/s) per square foot of door opening at 0.1 in (25 Pa) water pressure differential at ambient temperature and 400 degrees F (204 degrees C) tested per IBC 2006, 2009, and 2012.

2.3. COMPONENTS

A. Screen:
1. Film: Minimum 1 mil (0.025 mm) thick transparent polymer coating encapsulating an opaque glass-fiber fabric in a Panama weaves.

B. Housing: 18 gauge primed, or powder coated (optional ferritic stainless steel) cold rolled galvanized steel container with dust cover and door with concealed fasteners. Housings are custom in length. No junction box required.
   1. Housing bottom may be exposed and flush with adjacent ceiling or recessed above ceiling system and concealed.

C. Auxiliary Rails:
   1. Material: Galvanized structural steel, any stainless steel per ASTM A 240/240M.
   2. Size: 3-7/8 inches (100 mm) wide; min. 1-7/8 inches (50 mm) deep, depth as required to project beyond face of doorframe, as shown in Shop Drawings.
   3. When field applied painting is required, it shall match color of the frame unless otherwise specified. Field applied paint must be heat resistant to 300 degrees Fahrenheit and be spray applied, maximum 5 mils thick including primer.

D. Rewind Motor: NFPA 70, 24v DC.

E. Release Mechanism: Comply with UL Standard No. 864.

F. Screen Rewind Switch: Include switch to rewind screen into housing. Can be on side guide or membrane switch on textile.

3.EXECUTION

3.1. EXAMINATION

A. Examine substrates upon which work will be installed.
   1. Verify related work performed under other sections is complete and in accordance with Shop Drawings.
   2. Verify wall surfaces and doorframes are acceptable for installation of smoke containment system components.
   3. Verify existing field painted door frames to be used for screen adherence have been repainted in accordance with smoke containment system manufacturer's instructions or they have the original factory paint.

B. Coordinate with responsible entity to perform corrective work on unsatisfactory substrates.

C. Commencement of work by installer is acceptance of substrate.

3.2. INSTALLATION

A. Install smoke containment system components in accordance with manufacturer's installation instructions.

B. INSTALLER : U.S. Smoke & fire Corp

888.917.8777 Ext 102 wwww.ussmokeandfire.com

3.3. FIELD QUALITY CONTROL

A. Field Test: Follow manufacturer's cycle test procedures.
   1. Notify Owner's Representative, local Fire Marshal, alarm sub-contractor and [sub-contractor] [service company] minimum one week in advance of scheduled testing.
   2. Complete maintenance service record.

3.4. DEMONSTRATION

A. Demonstrate required testing and maintenance procedures to Owner's Representative.

B. Maintenance and Testing:
   1. Perform minimum semi-annual maintenance and testing on each smoke containment system as required by the manufacturer's warranty, code agency evaluation reports, and as required by local authority having jurisdiction.
   2. Retain permanent record of tests.

C. Future Painting: Paint doorframe and/or auxiliary rails in accordance with Operation and Maintenance Manual.

3.5 ANNUAL REQUIRED PREVENTIVE MAINTENANCE REQUIREMENT

A. This is a high-performance system that requires annual adjustment, maintenance and preventative maintenance service. Engage U.S. Care factory certified technician to maintain system once per annum per manufacturers operation and maintenance manual for the preventative maintenance service. Any system that does not undergo the required preventative maintenance over a twelve-month period shall void the testing laboratory label on the assembly.

B. Neither contractor nor end user shall attempt any service of the system. Such action shall void the testing laboratory label on the assembly. A U.S. Care factory certified technician must do all maintenance.

END OF SECTION 08 3483