SECTION 08 1113

HOLLOW METAL DOORS AND FRAMES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Hollow steel doors and frames.

B. Related Sections:
   1. Division 01: Administrative, procedural, and temporary work requirements.
   2. Section 08 7100 - Door Hardware.
   3. Section 08 8000 - Glazing.

1.2 REFERENCES

A. American National Standards Institute (ANSI)
   1. A250.8 - Recommended Specifications for Standard Steel Doors and Frames.
   2. A250.11 - Recommended Erection Instructions for Steel Frames.

B. ASTM International (ASTM):
   1. A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy Coated (Galvannealed) by the Hot-Dip Process.
   2. A924 - Standard Specification for General Requirements for Steel Sheet, Metallic-Coated by the Hot-Dip Process.
   3. A1008/A1008M - Standard Specification for Steel, Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy and High-Strength Low-Alloy with Improved Formability.
   4. E413 - Classification for Rating Sound Insulation.

C. National Fire Protection Association (NFPA) 80 - Standard for Fire Doors and Fire Windows.

D. Underwriters Laboratories (UL):
   1. 10B - Standard for Fire Tests of Door Assemblies.
   2. 10C - Standard for Positive Pressure Fire Tests of Door Assemblies.

1.3 SUBMITTALS

A. Submittals for Review:
   1. Shop Drawings: Show locations, elevations, dimensions, model designations, fire ratings, preparation for hardware, and anchoring details.
   2. Product Data: Show elevations, dimensions, gages of metal, hardware reinforcing gages and locations, and anchor types.

B. Quality Control Submittals:

1.4 QUALITY ASSURANCE

A. Doors: ANSI A250.8.
   1. Grade: II - Heavy Duty.
   2. Model: 1 - Full Flush.
   3. Exterior doors: Minimum R value of 12.0.

B. Frames: ANSI A250.8, Grade II - Heavy Duty.

C. Fire Door and Frame Construction: Conform to UL 10B.

D. Installed Fire Rated Door and Frame Assemblies: Conform to NFPA 80.

1.5 DELIVERY, STORAGE AND HANDLING

A. Ship door frames with removable angle spreader; do not remove until frame is installed.

B. Store doors upright in protected, dry area, off ground or floor, with at least 1/4 inch space between individual units.

C. Do not cover with non vented coverings that create excessive humidity.

D. Remove wet coverings immediately.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturers:
1. Amweld Building Products LLC. (www.amweld.com)
2. Ceco Door Products. (www.cecodoor.com)
3. Curries Company. (www.curries.com)
4. Kewanee Corp. (www.kewaneecorp.com)
5. Pioneer Industries, Inc. (www.pioneerindustries.com)
6. Steelcraft. (www.steelcraft.com)
7. Or equal

2.2 MATERIALS

A. Galvanized Steel Sheet:
1. ASTM A653/A653M, hot dipped, Structural Quality, Class G90 galvanized.

B. Door Core: Foamed-in-place polyurethane insulation.

C. Batt Insulation: Mineral wool type.

2.3 ACCESSORIES

A. Glass, Glazing Sealers, and Accessories: Specified in Section 08 8000.

B. Primer: Zinc rich type.

2.4 FABRICATION

A. Fabricate doors and frames in accordance with ANSI A250.8.

B. Fabricate doors and frames from galvanized steel sheet.

C. Doors:
1. Fabricate from minimum 18 gage face sheets,
2. Doors shall be 1 ¾” thick.
3. Close top, bottom and edges of doors with steel channels, minimum 16 gage, except doors 142b, 143b and 144b shall meet Ceco “Stormpro” or equal recommendations. Channels shall extend full width of doors, spot welded to both faces, with top channel flush and bottom channel recessed.
4. Fill voids between vertical steel stiffeners with batt insulation, except doors 142B, 143B and 144B shall have Polyurethane Honeycomb.

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D. Frames:
   1. Fabricate from minimum 16 gage sheets.
   2. Frames shall be 5 ¾” wide unless noted.
   3. Close corner joints tight with trim faces mitered, continuously welded, and ground smooth.
   4. Anchors:
      a. Provide one anchor at each jamb for each 30 inches of door height. Anchors shall be as recommended for storm doors for doors 142B, 143B and 144B.
      b. Anchors shall be welded to frames and designed to provide positive fastenings to adjacent construction.
      c. Provide one floor anchor welded to each jamb.
   5. Terminate stops 6 inches above finished floor. Cut bottom edge of stop at 45 degree angle and close.
   6. Where frames will be filled with concrete or grout, install silencers in frames before erection.
   7. Mullions for paired doors: Fixed type, of same profiles as jambs.

E. Accurately form to required sizes and profiles.

F. Grind and dress exposed welds to form smooth, flush surfaces.

G. Do not use metallic filler to conceal manufacturing defects.

H. Fabricate with internal reinforcement for hardware specified in Section 08 7100; weld in place.

I. Glazing Stops:
   1. Manufacturer's standard, screw on type with mitered corners.
   2. Form stops from minimum 20 gage steel; pre-fit for field glazing.
   3. Locate screws within 1 inch of ends of stops and maximum 8 inches on center.
   4. Install glazing stops on secure side of frames.

J. Louvers:
   1. Manufacturer's standard, inverted "Y" blade type.
   2. Frames: Minimum 20 gage steel.
   3. Blades: Minimum 24 gage steel.
   4. Weld blades to frame with one molding integral with louver.
   5. Install loose molding on secure side of door.

2.5 FINISHES

A. Dress tool marks and surface imperfections to smooth surfaces.

B. Chemically treat and clean.

C. Touch up damaged metallic coatings.

D. Apply manufacturer's standard primer paint.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install doors and frames in accordance with ANSI A250.11.

B. Set plumb and level.

C. Secure to adjacent construction using fastener type best suited to application.

D. Install glass as specified in Section 08 8000.

E. Install hardware in accordance with Section 08 7100.

3.2 ADJUSTING

A. Touch up minor scratches and abrasions in primer paint to match factory finish.

END OF SECTION

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