

**SECTION 08 11 13  
HOLLOW METAL DOORS AND FRAMES**

**PART 1 - GENERAL**

**1.1 DESCRIPTION**

- A. This section specifies steel doors, steel frames and related components.
- B. Terms relating to steel doors and frames as defined in ANSI A123.1 and as specified.

**1.2 RELATED WORK**

- A. Door Hardware: Section 08 71 00, DOOR HARDWARE.

**1.3 TESTING**

An independent testing laboratory shall perform testing.

**1.4 SHIPMENT**

- A. Prior to shipment label each door and frame to show location, size, door swing and other pertinent information.
- B. Fasten temporary steel spreaders across the bottom of each door frame.

**1.5 STORAGE AND HANDLING**

- A. Store doors and frames at the site under cover.
- B. Protect from rust and damage during storage and erection until completion.

**1.6 APPLICABLE PUBLICATIONS**

- A. Publications listed below form a part of this specification to the extent referenced. Publications are referenced in the text by the basic designation only.
- B. Door and Hardware Institute (DHI):  
A115 Series.....Steel Door and Frame Preparation for Hardware,  
Series A115.1 through A115.17 (Dates Vary)
- C. Steel Door Institute (SDI):  
A250.8-03.....Standard Steel Doors and Frames
- D. American Society for Testing and Materials (ASTM):  
A568/568-M-07.....Steel, Sheet, Carbon, and High-Strength, Low-  
alloy, Hot-Rolled and Cold-Rolled  
A1008-08.....Steel, sheet, Cold-Rolled, Carbon, Structural,  
High Strength Low Alloy and High Strength Low  
Alloy with Improved Formability  
D1621-04.....Compressive Properties of Rigid Cellular  
Plastics
- E. The National Association Architectural Metal Manufacturers (NAAMM):

Metal Finishes Manual (1988 Edition)

- F. Intertek Testing Services (ITS):  
Certifications Listings...Latest Edition

## **PART 2 - PRODUCTS**

### **2.1 MATERIALS**

- A. Stainless Steel: ASTM A167, Type 302 or 304; finish, NAAMM Number 4.
- B. Sheet Steel: ASTM A1008, cold-rolled for panels (face sheets) of doors.
- C. Anchors, Fastenings and Accessories: Fastenings anchors, clips connecting members and sleeves from zinc coated steel.
- D. Prime Paint: Paint that meets or exceeds the requirements of A250.8.

### **2.2 FABRICATION GENERAL**

- A. GENERAL:
  - 1. Follow SDI A250.8 for fabrication of standard steel doors, except as specified otherwise. Doors to receive hardware specified in Section 08 71 00, DOOR HARDWARE. Tolerances as per SDI A250.8. Thickness, 44 mm (1-3/4 inches), unless otherwise shown.
  - 2. When vertical steel stiffeners are used for core construction, fill spaces between stiffeners with mineral fiber insulation.
- B. Standard Duty Doors: SDI A250.8, Level 1, Model 2 of size and design shown. Use for interior locations only. Do not use for stairwell doors, security doors and detention doors.

### **2.3 METAL FRAMES**

- A. General:
  - 1. SDI A250.8, 1.3 mm (0.053 inch) thick sheet steel, types and styles as shown or scheduled.
  - 2. Knocked-down frames are not acceptable.
- B. Reinforcement and Covers:
  - 1. SDI A250.8 for, minimum thickness of steel reinforcement welded to back of frames.
  - 2. Provide mortar guards securely fastened to back of hardware reinforcements except on lead-lined frames.
- C. Frame Anchors:
  - 1. Floor anchors:
    - a. Where floor fills occur, provide extension type floor anchors to compensate for depth of fill.
    - b. At bottom of jamb use 1.3 mm (0.053 inch) thick steel clip angles welded to jamb and drilled to receive two 6 mm (1/4 inch) floor bolts.

2. Jamb anchors:
  - a. Locate anchors on jambs near top and bottom of each frame, and at intermediate points not over 600 mm (24 inches) apart.
  - b. Form jamb anchors of not less than 1 mm (0.042 inch) thick steel unless otherwise specified.
  - c. Anchors set in masonry: Use adjustable anchors designed for friction fit against the frame and for extension into the masonry not less than 250 mm (10 inches). Use one of following type:
    - 1) Wire loop type of 5 mm (3/16 inch) diameter wire.
    - 2) T-shape or strap and stirrup type of corrugated or perforated sheet steel.

#### **2.4 SHOP PAINTING**

SDI A250.8.

### **PART 3 - EXECUTION**

#### **3.1 INSTALLATION**

- A. Plumb, align and brace frames securely until permanent anchors are set.
  1. Use triangular bracing near each corner on both sides of frames with temporary wood spreaders at midpoint.
  2. Use wood spreaders at bottom of frame if the shipping spreader is removed.
  3. Protect frame from accidental abuse.
  4. Where construction will permit concealment, leave the shipping spreaders in place after installation, otherwise remove the spreaders after the frames are set and anchored.
  5. Remove wood spreaders and braces only after the walls are built and jamb anchors are secured.
- B. Floor Anchors:
  1. Anchor the bottom of door frames to floor with two 6 mm (1/4 inch) diameter expansion bolts.
  2. Power actuated drive pins may be used to secure frame anchors to concrete floors.
- C. Jamb Anchors:
  1. Anchors in masonry walls: Embed anchors in mortar. Fill space between frame and masonry wall with grout or mortar as walls are built.
  2. Coat frame back with a bituminous coating prior to lining of grout filling in masonry walls.

**3.2 INSTALLATION OF DOORS AND APPLICATION OF HARDWARE**

Install doors and hardware as specified in Section 08 11 13, HOLLOW METAL DOORS AND FRAMES and Section 08 71 00, DOOR HARDWARE.

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