

DIVISION 5 - METALS

05000 - GENERAL

The design, materials, fabrication, finishing, connections and erection of metal components shall comply with applicable requirements of specific governing bodies. These bodies are the American Institute of Steel Construction, the American Welding Society, the Steel Joist Institute, the Steel Structures Painting Council, the Steel Deck Institute, the American Iron and Steel Institute (AISI), the Stainless Steel Institute, and other applicable referenced standards.

05100 - STRUCTURAL METAL AND FRAMING

1. Painting: The A/E shall specify the surface preparation, shop priming and field painting of structural steel.
2. Quality Control for Painting: The A/E shall specify testing of paint thickness for steel in a corrosive environment.

05200 - METAL JOISTS

The joist manufacturer shall be a member of the Steel Joist Institute.

05300 - METAL DECKING

1. The deck manufacturer shall furnish certification or other evidence of product compliance with the specifications.

2. Composite Floor Deck

2.1. Composite decks shall conform to requirements established by AISI and the Steel Deck Institute. Steel shall comply with ASTM A611, Grades C and D or ASTM A653 as the A/E specifies. The A/E shall specify, on the drawings and in the specifications, the deck type, gauge, grade of steel and the minimum galvanized coating/finish suitable for the environment of the structure. The minimum thickness of composite deck shall be 22 gauge.

2.2. The A/E shall specify galvanized all composite deck.

2.3. Composite cellular floor systems with active cells for power systems shall have Underwriters Laboratories, Inc. classification.

3. Non-Composite Form Deck

3.1. PROHIBITED: Using metal form deck as an integral permanent structural member where condensation or other conditions could cause structural corrosion.

3.2. Form deck steel shall conform to ASTM A653 or ASTM A611. The A/E shall specify, on the drawings and in the specifications, the deck type, gauge, grade of steel and the minimum galvanized coating/finish suitable for the environment of the structure. The minimum thickness of form deck shall be 26 gauge.

3.3. Form deck shall be galvanized.

4. Roof Deck: Steel shall comply with ASTM A611 for deck with painted finishes and ASTM A653 Type SS for galvanized deck, grade as the A/E specifies. The minimum thickness of roof deck shall be 20 gauge. The A/E shall specify the protective coating touch-up procedure to be used after installation.

5. Galvanizing: Galvanized floor deck, roof deck and form deck shall have a protective, non-corroding coating that conforms to ASTM A924 or ASTM A653. The A/E shall specify the coating. The A/E also shall specify the protective coating touch-up procedure to be used after installation.

05500 - METAL FABRICATIONS

1. Galvanizing: Miscellaneous steel items exposed to the weather, moisture or corrosive conditions shall be galvanized per ASTM A123, 2 ounces per square foot. The A/E shall specify if the galvanizing shall be done before or after fabrication.

2. Workmanship: The A/E shall specify finishing and cleaning of steel that is exposed to view. Exposed welds shall be continuous and ground smooth. Exposed joints shall be close fitting and, where possible, fastenings shall be concealed. The A/E shall specify joint finish appearance using the National Ornamental & Miscellaneous Metals Association voluntary joint guidelines.

3. Shop Priming: The A/E shall specify the surface preparation, shop priming and field painting of miscellaneous items.

End of Division 5 - Metals
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