

Floor Deck Installation

CSM steel composite floor deck panels and accessories shall be installed by qualified and experienced workers. Floor deck and accessories shall be placed in accordance with approved erection drawings. Maintaining rib alignment across the structure is very important to achieve continuous concrete ribs across abutting sheet ends. A snap chalk line shall be used at reasonable intervals to assure proper alignment and accurate coverage of deck panels.

Position the first sheet as noted on the erection drawings with the upstanding leg the leading or open edge. When one row is placed, begin another, making alignment adjustments as necessary. Do not use unfastened deck as a working platform or storage area.

All sheets are furnished with square ends and full width. Partial width sheets as well as skew cuts shall be field cut by the deck erector to fit field conditions. All accessories, i.e. pour stops, side closures and end closures are manufactured in standard stock lengths. Cutting and fitting of accessories when furnished is by the deck erector. Openings not shown on the erection drawings such as those required for stack, conduits, plumbing, vents, etc. shall be cut (and reinforced if necessary) by the trades requiring the openings.

Integral hanger tabs are rolled in when required. The maximum loading per tab is 100 lb. The deck erector must flatten out all tabs that interfere with proper bearing of deck on supporting steel. Hanger tabs are spaced nominally 12" on center each way. Hanger tabs occur in a repetitive pattern that cannot be maintained across deck joints and cannot be located at predetermined locations. It is imperative that the load carried by the tabs is designed in such a way that the design load is not exceeded on any one tab.

Attachment

Floor deck sheets and accessories shall be attached as soon as possible and all sheets and accessories shall be attached at the end of each working day. Electric arc welding is the best and most economical method for attaching composite deck sheets to structural supports. Welder shall follow close to the placement crew.

All welds are to be made from the top of the deck down through the bottom flange of the ribs. Welds shall penetrate and attach all thickness of material to the structural supports. Care shall be exercised on the selection of the electrodes to provide positive attachment and to prevent high amperage blow holes.

Deck panels are to be fastened to all supports at 12" on center maximum with not less than 3/4" diameter arc spot welds. At deck butt joints, both sheets are to be fastened. Deck panels with spans greater than 5 feet shall have side laps and perimeter edges (at perimeter supports) fastened at mid-span or 36" intervals - whichever is smaller.

1-1/2" deep deck side laps are to be screw attached or welded.

2" and 3" deep deck side laps are to be button punched, welded or Gator Crimp (GTR).

End closures of the deck (if required) are to be fastened by tack welding or sheet metal screws at 36" centers maximum.

Side closures of the deck (if required) are to be fastened by 1" fillet welds at 12" centers maximum.

Pour stop accessories of the deck (if required) are to be fastened by 1" fillet welds at 12" centers maximum.

Site Storage

Deck not promptly erected shall be stored off the ground with one end elevated and protected from the elements with a tarpaulin or other weatherproof covering, ventilated to avoid condensation. Reference SDI Manual of Construction Site Storage and Protection.

Protective Coating

All steel to be used in CSM steel composite floor deck shall be galvanized or phosphatized top and prime painted bottom. The paint coating is considered only a primer and shall be considered an impermanent and provisional coating. Galvanized finish in G-60 or G-90 coating is desirable in high moisture atmospheric conditions.

CSM shall not be responsible for the cleaning of the underside of steel floor deck to ensure bond of the sprayed-on fireproofing. Adherence of fireproofing is dependent on many variables. The adhesion or adherence of fireproofing products is the responsibility of the fireproofing applicator and fireproofing manufacturer.

Construction Loading

Do not use unfastened deck as a work or storage platform. Caution must be used with construction loading so that deck capacity is not exceeded and the deck is not damaged. When placing concrete, care must be exercised so that the deck will not be subject to impact that exceeds the design capacity of the deck. Concrete shall be placed from a low level in a uniform manner over the supporting structure and spread toward the center of the deck span.

Do not use chloride admixtures or admixtures containing chloride salts in concrete poured on composite deck. Such additives have proven deleterious to steel and steel finish.