

4123:1-3-20 Steel erection.

(A) Reserved.

(B) Reserved.

(C) Flooring requirements.

(1) Permanent flooring - skeleton steel construction in tiered buildings.

- (a) The permanent floors shall be installed as the erection of structural members progresses, and there shall be no more than eight stories between the erection floor and the uppermost permanent floor, except where the structural integrity is maintained as a result of the design.
- (b) At no time shall there be more than four floors or forty-eight feet of unfinished bolting or welding above the foundation or uppermost permanently secured floor.

(2) Temporary flooring - skeleton steel construction in tiered buildings.

- (a) The derrick or erection floor shall be solidly planked or decked over its entire surface except for access openings. Planking or decking of equivalent strength shall be of proper thickness to carry the working load. Planking shall be no less than two inches thick, full size undressed, and shall be laid tight and secured to prevent movement.
- (b) On buildings or structures not adaptable to temporary floors, and where scaffolds are not used, each employee exposed to a potential fall distance exceeding two stories or thirty feet shall have a personal fall arrest system or safety nets shall be installed and maintained. The nets shall be hung with sufficient clearance to prevent contacts with the surface or structures below.

(c) Floor periphery - safety railing.

A safety railing of one-quarter-inch wire rope or equal shall be installed, approximately forty-two inches high, around the periphery of all temporary-planked or temporary-metal-decked floors of tier buildings and other multi-floored structures during structural steel assembly.

(d) Where skeleton steel erection is being done, a tightly planked and substantial floor shall be maintained within two stories or thirty feet, whichever is less.

- (e) When gathering and stacking temporary floor planks from the last panel, the employees assigned to such work shall be protected by safety belts or harness with safety lines attached to the structure.

(3) Flooring - other construction.

- (a) In the erection of a building having double wood floor construction, the rough flooring shall be completed as the building progresses, including the tier below the one on which floor joists are being installed.
- (b) For single wood floor or other flooring systems, the floor immediately below the story where the floor joists are being installed shall be kept planked or decked over.

(D) Structural steel assembly.

- (1) During the final placing of solid web structural members, the load shall not be released from the hoisting line until the members are secured with no less than two bolts, or the equivalent, at each connection, and drawn up wrench tight.
- (2) Open web steel joists shall not be placed on any structural steel framework unless such framework is securely bolted or welded.
- (3) In steel framing, where bar joists are utilized, and columns are not framed in at least two directions with structural steel members, bar joists shall be field-bolted at columns to provide lateral stability during construction.
- (4) Where longspan joists or trusses, sixty feet or longer, are used, a row or rows of bolted bridging shall be installed to provide lateral stability during construction prior to slacking of hoisting line.
- (5) No load shall be placed on open web steel joists until they are permanently anchored.
- (6) Tag lines shall be used for controlling loads.

(E) Bolting, riveting, fitting-up and plumbing-up.

(1) General requirements.

- (a) Containers shall be provided for storing or carrying rivets, bolts, and drift pins, and secured against accidental displacement when aloft.
- (b) Before any adjustments or repairs are made on pneumatic hand tools, the pressure in hose lines shall be released and the tool shall be disconnected from the power source.

(c) Air hose couplings shall be linked together at each joint by a chain or other device or method to reduce whipping in the event of accidental disconnect.

(2) Bolting.

(a) When bolts or drift pins are being knocked out, means shall be provided to keep them from falling.

(b) Impact wrenches shall be provided with a locking device for retaining the socket.

(3) Riveting.

(a) When rivet heads are knocked off, or backed out, means shall be provided to keep them from falling.

(b) A safety wire shall be properly installed on the snap and on the handle of the pneumatic riveting hammer. The wire size shall be no less than "No. 9 (B&S Gauge)", leaving the handle and annealed "No. 14" on the snap or equivalent.

(4) Plumbing-up.

(a) Connections of the equipment used in plumbing-up shall be properly secured.

(b) Plumbing-up guys related equipment shall be placed so that employees can get at the connection points.

(5) Planking shall be of proper thickness and width to carry the intended working load and shall provide a factor of safety of no less than four.

(6) Metal decking of sufficient strength shall be laid tight and secured to prevent movement.

(7) Planks shall overlap the bearing on each end by no less than twelve inches.

(8) Wire mesh, exterior plywood, or equivalent, shall be used around columns where planks do not fit tightly.

(9) Provisions shall be made to secure temporary flooring against displacement.

(10) All unused openings in floors, temporary or permanent, shall be completely planked over or guarded.

(11) Employees shall be provided with safety belts or harness and lifelines, securely fastened to a permanent part of the structure, when they are working on float scaffolds.

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