§1658. Suspended Scaffolds -- General.

(a) Hoisting machines or winches that are a part of a suspended scaffold, and are used in raising or lowering that scaffold, shall be approved.

(b) All scaffolds shall be fastened or hung so as to avoid swaying from the building or structure. Window cleaners' anchors shall not be used for this purpose. Supporting cables shall be vertical for their entire length, unless otherwise designed by a currently registered civil engineer in California. The baskets of single-unit, power-driven suspended scaffolds shall not be swayed nor shall support cables be fixed to intermediate points to change the original paths of travel.

(c) Design. All scaffold members, including related parts and rigging, shall be of adequate strength to support intended loads to which they will be subjected, without exceeding stresses established by factors of safety specified in these Orders; or if no safety factors are given, those generally accepted by the engineering profession.

(d) Ladders shall not be used as scaffold platforms, even if a horizontal working surface has been placed over the rungs. Other Orders in this Article call for the use of stage ladders, planking, or specially designed platforms for such service.

(e) Supporting Ropes. Ropes supporting scaffolds shall have a factor of safety of at least 6. They shall be inspected on each job before being used to determine if they are unsafe because of damage, wear, chemical action or similar defects. The use of repaired wire rope as suspension rope is prohibited.

(f) Manila, or other fiber or synthetic ropes shall not be used to support scaffolds upon which workers are using welding or burning equipment of any type, sandblasting equipment, or any chemical substance which may damage the rope by chemical action if splashed or spilled on the rope. Wire rope is required for the above uses. Further, the wire shall be protected against burning or a welding arc to a height of 8 feet above the platform with a rubber hose or equivalent protection.

(g) Inspection. Suspended scaffolds that are in service shall be inspected by a qualified person daily and tested as frequently as is necessary in order to provide proper maintenance. Special attention shall be given to ropes and other rigging.

(h) Suspended scaffolds shall be hung so as to avoid overlap or possible interference with movement from a scaffold above or below.

(i) When suspended scaffolds are supported by a second wire rope, employees shall fasten their lanyards to the work platform trolley line or droplines hanging from secure overhead anchorages between each pair of hangers or falls. One line shall be provided for each employee. It shall be a continuous rope in good condition and free of imperfections, serious wear, or fraying.

(j) Outrigger beams used as supports for suspended scaffold shall be tied back or secured in place and placed in saddles or otherwise positively secured against the possibility of turning or twisting. The attachments on these beams for support of suspended loads shall consist of

well-anchored L-hooks fitted with 1/2 inch shackle bolts, or equivalent. See Plate B-24, Appendix.

(1) The outrigger beams and supporting system shall be capable of safely sustaining 4 times the rated load of the platform or hoist whichever is greater.

(2) When a counterweight system is used, the counterweights shall consist of solid materials such as steel or concrete (See Plate B-39, Appendix) and the tiebacks shall be at least equivalent in strength to the suspension ropes and anchored securely.

(k) Unless otherwise designed by a currently registered civil engineer in California, each suspended stage or plank-type platform shall be supported at two or more places by rigging that receives its load from only that one platform. Thus, two or more suspended scaffolds, suspended stage, or plank type platforms shall not be combined into one by bridging the distance between them with planks or similar connecting platforms.

(l) Metal hangers for suspended scaffolds shall be made of mild steel or equivalent material, capable of sustaining 4 times the maximum rated load.

(m) Except where overhead protection is required and which would result in a greater hazard, employees working in single or two-point suspended scaffolds, shall be required to use safety belts and lanyards attached to independently anchored droplines.

(n) Where the use of independently anchored drop line is not possible, alternate safety measures shall be used.

(o) Railing. All scaffolds or staging referred to in this Article suspended more than 7 1/2 feet from the ground or floor below shall have a standard guardrail of 2-inch by 4-inch of selected structural grade lumber, free of knots or defects, not less than finished size of 1 7/8 inches by 3 1/2 inches, or of other equally rigid materials of equivalent strength. This railing shall be not less than 36 inches nor more than 42 inches above the platform with midrails attached at half the distance from the platform floor to the top rail. All wood members shall not contain any splices that fail to provide full strength and rigidity to the wood member. When railing is longer than 10 feet between stirrups, it shall have a vertical support near the midpoint of the span.

(p) Unattended Scaffold. When a suspended scaffold is left unattended in an elevated position, it shall be securely lashed to the building and be cleared of all tools, buckets, or other moveable materials.

(q) When employees on the scaffolds are exposed to the hazards of falling objects, overhead protection not more than 9 feet above the platform shall be installed.

(r) Hooks used as a part of rigging for scaffold support shall be closed or "moused" (See Plate C-4, Appendix).

(s) Where a single outrigger beam is used, the steel shackles or clevises with which the wire ropes are attached to the outrigger beams shall be placed directly over the hoisting machines.

(t) The free end of the suspension wire ropes shall be equipped with proper size thimbles and secured by splicing or other equivalent means. Where applicable, the running ends shall be securely attached to the hoisting machines and at least four turns of wire rope shall at all times remain on the drum.

(u) Multi-level platforms and suspended scaffolds with overhead protection shall be equipped with additional independent lines equivalent in strength to the suspension ropes to support the units if the primary suspension system fails. These additional independent lines shall be tied to a structural member other than the primary suspension member, capable of supporting the resulting suspended load imposed. (See Plate B-42, Appendix.)

(v) Gasoline-powered equipment and hoists shall not be located on suspension scaffolds.

(w) Devices whose sole function is to provide emergency escape and rescue shall not be used as working platforms. This provision does not preclude the use of systems which are designed to function both as suspension scaffolds and emergency systems.

<General Materials (GM) - References, Annotations, or Tables>

Note: Authority cited: Section 142.3, Labor Code. Reference: Sections 142.3 and 7152, Labor Code.

HISTORY

1. Editorial correction in subsection (i) (Register 70, No. 48).

2. Amendment of subsection (a) and (b) and new subsection (k) filed 11-14-75; effective thirtieth day thereafter (Register 75, No. 46).

3. Amendment of subsection (c) filed 3-19-79; effective thirtieth day thereafter (Register 79, No. 12).

4. Amendment filed 7-24-87; operative 8-23-87 (Register 87, No. 33).

5. Amendment of subsection (e) and new subsections (v) and (w) filed 4-6-2001; operative 5-6-2001 (Register 2001, No. 14).

6. Change without regulatory effect amending subsection (p) filed 11-19-2008 pursuant to section 100, title 1, California Code of Regulations (Register 2008, No. 47).