

# Understanding the Code

## Hardy Tie Back Device/Anchor

### California

#### California Code of Regulations Title 8 Section 3291. Special Design Considerations—Permeant Roof

##### f) Roof Tie-Backs.

- 1) Every building constructed 3 stories or 36 feet or more in height, shall have roof tie-backs or other permanent devices installed at the roof level for the purpose of securing or tying back suspended scaffold hooks or clamps and safety lines.

Exceptions:

1. Roof tie-backs are not required on buildings employing other acceptable means of permanently installed roof top maintenance systems specified in this Article or Article 6.
2. Roof tie-backs are not required on buildings constructed up to 4 stories or 48 feet in height when building maintenance can be accomplished using extension tools, ladders, approved ground equipment such as scaffolds, or aerial devices designed and used for positioning personnel.

These exceptions are left up to interpretation by the OSHA inspector. It is our understanding that tie-backs will be required on buildings higher than 3 stories and below 48 feet high if the use of **ladders, scaffolds, or other aerial devices** are not possible because of the building location and site conditions. All buildings higher than **48** feet will require a tie-back system.

- 2) Such devices should be spaced at approximately 12-foot intervals; however, the spacing shall depend primarily on the availability of roof structural framing members of sufficient strength to safely carry applied loads. Tie-backs may be installed in structural parapets that are of adequate strength to sustain applied loads, but, placement shall be as close to the roof level as practicable. Design criteria for tiebacks shall be as follows:
  - A. Roof tie-backs shall have at least a 2-inch inside diameter closed “eye.”
  - B. Tie-back assembly shall be hot-dip galvanized or afforded equivalent corrosion resistance.
  - C. Assembly and anchorage provisions adequate to sustain a 5000 pound load applied in any direction without **permanent deformation**.
  - D. Suspended scaffolds shall not be permitted unless roof tie-backs or equivalent anchorages are provided.

#### California Code of Regulations - Title 8 Section 3294

- 1) Structural supports, tie-downs, tie-in guides, anchoring devices and any affected parts of the building included in the installation shall be designed by or under the direction of a **professional engineer currently registered in the State of California and experienced in such designs**.

#### California Code of Regulations Title 8 Section 3296

- a) All completed building maintenance equipment installations shall be inspected and tested in the field before being placed in initial service to determine that all parts of the installation conform to applicable requirements of this article, and that all safety and operating equipment is functioning as required.
- b) (4)(B) Roof tie-backs shall be tested to no more than 50 percent of their rated capacity. For example, a roof tie-back with a rated capacity of 5000 pounds shall not be tested in excess of 2500 pounds.

### California Code of Regulations - Title 8 Section 3282

- 2) (g) (1) In every building where window cleaning operations are performed in such a manner that a person stands on the sill in order to clean the window or works from the inside where the window opening is of such size that it would be possible to fall through the open window to the outside, there shall be installed window cleaning safety anchors or other anchorages approved by the Division. (Title 24, Part 2, Section 2-8502(a).)
- 3) (2) Any window which when fully opened has a clear opening with the lesser dimension exceeding 18 inches, or any window in which the height to width relationship presents a hazard, shall be considered as presenting the hazard of falling through as specified in Section 3282(g)(1) above. (Title 24, Part 2, Section 2-8502(a)2.)
- 4) (3) In every building other than those described in Section 3282(g)(1), provisions shall be made for window cleaning by use of elevating platforms, rolling scaffolds, suspended scaffolds, boatswain's chairs, or ladders, as specified in these orders. (Title 24, Part 2, Section 2-8502(a)1.)
- 5) (h) **Lag screws** shall not be used in new or replacement installations. (Title 24, Part 2, Section 2-8502(b).)

**Federal OSHA** has standards for the United States but they are very vague.

- The building owner to inform employers, in writing, that the building owner has identified, tested, certified, and maintained each anchorage so it is capable of supporting at least 5,000 pounds, in any direction, for each worker attached. The information must be based on:
  - An annual inspection by a qualified person
  - Certification by a qualified person as necessary and at least every 10 years.