Latest References for Anchors

Occupational Health and Safety Regulations 1996

Part 3 Division 5 – Prevention of Falls at Workplaces

3.50 Anchorage and fall injury prevention systems to be capable of withstanding forces caused by fall

An employer, main contractor, self-employed person or the person having control of the workplace must ensure that an anchorage or a fall injury prevention system at a workplace is designed, manufactured, constructed, selected, or installed so as to be capable of withstanding the force applied to it as a result of a person's fall at the workplace.

3.53 Inspection of anchorages

A person who, at a workplace, is an employer, the main contractor, a self-employed person or the person having control of the workplace must ensure —

a) that an anchorage at the workplace is inspected by a competent person and —
    i) in the case of an anchorage that is **permanently fixed and in regular use, inspected at intervals not greater than 6 months**; and
    ii) in the case of an anchorage that is **permanently fixed but not in regular use, inspected before it is used;**
    and
b) where, in the opinion of the competent person, an anchorage is worn or the load bearing capacity of the anchorage may be impaired —
    i) that the anchorage is not used while it is in that condition; and
    ii) while the anchorage is in that condition, that it is tagged to indicate that it is not to be used;
    and
c) that an anchorage that has been repaired is not used unless it has been inspected by a competent person who is of the opinion that the anchorage can be used again.

AS/NZS 5532:2013 – Manufacturing requirements for single-point anchor device used for harness-based work at height

5.2 – Test Requirements – Fixed Anchors

When tested in accordance with the static strength procedure in Clause 6.3.1.1, fixed anchor devices and the test structure to which they are attached shall sustain a force equal to their rated capacity for a period of not less than 3 minutes. The anchor device should show no signs of fracture. Bending without signs of fracture is permissible.
When tested in accordance with the dynamic test procedure in Clause 6.3.2.2, fixed anchor devices shall not release the drop mass. The drop mass shall remain suspended for 3 minutes after the drop test. The anchor device should show no signs of fracture. Bending without signs of fracture is permissible. The anchor shall not release the load.

These tests shall be conducted in line with the opening through which the connector is inserted and, except as follows, repeated for each orthogonal direction in which an arrest force could be applied (see Figure 8). Anchors and supporting structures with axes of symmetry need not be tested in opposing directions. New anchor devices and test structures may be used for each test if the manufacturer so desires.

Latest References for Anchors

AS/NZS 1891:2009 - Industrial fall-arrest systems and devices

Part 4: Selection, use and maintenance

3.1.2 Single point anchorages suitable for direct connection of personal fall-arrest equipment

g) Where used, drilled-in anchorages such as friction and glued-in anchorages shall be placed so that the shear load is at least twice the tension load. For collared eye- bolts this translates to a pull at an angle not exceeding 20° to the surface in which the bolt is installed.

Every friction and glued-in anchorage shall be proof loaded to 50% of the design ultimate strength specified in Table 3.1 in accordance with manufacturer's instructions after installation and prior to its initial use. The proof load shall be applied as an axial pull-out force. Proof loading to 50% of design load shall also be carried out as part of subsequent periodic inspections.

3.2.5 Signs at anchorage points

Signs in accordance with Clause 2.2.9 shall be provided for each anchorage point which will be in place for a period longer than one month. The sign shall show the following information:

a) Name of installer and installation date, or if an existing structure has been certified, the name of the certifier and the certification date.
b) The highest purpose category in Table 3.1 for which the anchorage is suitable.
c) The ultimate strength rating if less than 15kN. In this case words to the effect that the anchorage is not to be used for fall-arrest shall be added to the sign.
d) The maximum number of people (not more than two) who are permitted to be connected to the anchorage at any one time.

If an anchorage point is to be used only for a period of less than one month and is not therefore labelled, it shall be removed as soon as it is no longer required.

At permanent installations the information shall be shown either on a sign located at each anchorage point or alternatively, on a plan prominently displayed at the entry to the area.

9.3.3 Anchorages

Anchorages shall be visually inspected for signs of deterioration which might make them unserviceable, together with any other requirements contained in manufacturers' instructions.

The parent structure shall also be visually inspected for modifications or deterioration which might lead to loss of anchorage strength.

Drilled-in anchorages such as friction or glued-in anchorages shall be proof tested in accordance with Clause 3.1.2(g) as part of each inspection.