

State of California  
Department of Industrial Relations  
Occupational Safety and Health Standards Board

Petition File No. 589

Board Staff Evaluation  
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September 13, 2021



State of California  
Gavin Newsom, Governor

## **INTRODUCTION**

Petition File No. 589 (Petition) was received from Ronald High (Petitioner), of Ronald High Elevator Advocate, on March 15, 2021. The Petition requests the Occupational Safety and Health Standards Board (Board) amend title 8, article 14, regarding construction hoists.

## **REQUESTED ACTION**

The Petitioner points out that article 14 conforms to ANSI/ASSE A10.4-1973 “Safety Requirements for Personnel Hoists” and requests that the article be updated with the requirements of ANSI/ASSE A10.4-2016 “Safety Requirements for Personnel Hoists and Employee Elevators on Construction and Demolition Sites”.

## **PETITIONER’S ASSERTIONS**

The Petitioner asserts:

- ANSI/ASSE A10.4-2016 “Safety Requirements for Personnel Hoists and Employee Elevators on Construction and Demolition Sites” has many “pertinent amendments concerning equipment, responsibilities, and safety.”
- The 2016 version is beneficial in defining negligence by the “General Constructor, the [Manufacturer], and/or the Individuals involved.”

## **DIVISION OF OCCUPATIONAL SAFETY AND HEALTH (DIVISION) REPORT**

The Division’s evaluation, dated September 9, 2021, agrees with the Petitioner in that many of the potential safety improvements in the ANSI/ASSE A10.4-2016 standard identified by the Petitioner are improvements to employee safety. The Division recommends that an advisory committee be convened to discuss requiring those items.

The evaluation also discusses some of the suggested improvements that the Division finds unnecessary or less protective of employee safety than existing requirements. Finally, the Division is silent on the remainder of the 2016 standard and whether or not it should be used generally to update article 14.

## **STAFF EVALUATION**

Board staff contacted the Petitioner and representatives from the Division to discuss the Petition. Additionally, Board staff conducted a review of pertinent regulations and consensus standards related to article 14.

## Relevant Standards

### ***Federal Standards***

Federal OSHA regulations concerning hoists and elevators are found in 29 CFR 1926.552 “Material hoists, personnel hoists, and elevators.” Of particular relevance to the present subject is 1926.552(c)(16):

*1926.552(c)(16)*

*All personnel hoists used by employees shall be constructed of materials and components which meet the specifications for materials, construction, safety devices, assembly, and structural integrity as stated in the American National Standard A10.4-1963, Safety Requirements for Workmen's Hoists. The requirements of this paragraph (c)(16) do not apply to cantilever type personnel hoists.*

### ***California Standards***

Section 1604 “Personnel Hoists” reads in its entirety:

*§1604. Personnel Hoists.*

*Sections 1604.1 through 1604.30 are taken, with revisions necessary to conform to State codification numbering requirements and existing laws, from ANSI 10.4-1973 American National Standard Safety Requirements for Personnel Hoists.*

### ***Consensus Standards***

The American National Standards Institute (ANSI) and the American Society of Safety Engineers<sup>1</sup> (ASSE) publish ANSI/ASSE A10.4-2016 “Safety Requirements for Personnel Hoists and Employees Elevators on Construction and Demolition Sites”, the latest version of the standard. The scope of ANSI/ASSE A10.4-2016 provides:

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<sup>1</sup> In June, 2018, the American Society of Safety Engineers (ASSE) changed its name to the American Society of Safety Professionals (ASSP). Because the 2016 update to ANSI/ASSE A10.4 uses the acronym “ASSE” in its title, staff elects to refer to the organization by the old name to avoid confusion by switching to “ASSP” for the present evaluation.

*This standard applies to the design, construction, installation, operation, inspection, testing, maintenance, alterations and repair of hoists and elevators that (1) are not an integral part of buildings, (2) are installed inside or outside buildings or structures during construction, alteration, demolition or operations and (3) are used to raise and lower workers and other personnel connected with or related to the structure. These personnel hoists and employee elevators may also be used for transporting materials under specific circumstances defined in this standard.*

## **Staff Analysis**

According to the Petitioner, the following sections from ANSI/ASSE A10.4-2016 are examples of the many potential safety improvements over the 1973 version, which are not currently promulgated in article 14:

5.1.1 – requires fall arrest/protection

5.5.1.1 – requires specific qualifications for hoist personnel

5.6.3 – requires overhead protection

15.2 – requires counterweighting

17.1 – requires car enclosure of fire-retardant material

17.8 – requires car top guard railing

17.10 – requires car top lighting

19.5 – allows for ascending car/counterweight protection

19.10.2 – provides a more restrictive rack-and-pinion safety stopping distance table

20.9 – requires enclosed governors to oblige a replacement schedule

21.5 – allows overload detection devices

22.10 – drive coupling restrictions

22.11 – chain drives are prohibited

25.5 – requires installation of suspension-rope equalizers

26.4 – requirements are stated for periodic inspections and tests of all installations

26.5 – requires re-inspection scheduling

26.6 – requires specific manufacturer's device testing

27.3 – requirements for replacements of certified devices or components

30.3 – defines user responsibilities

While the current Petition requests an update to the entirety of article 14 as it relates to the recommendations found in ANSI/ASSE A10.4-2016, Petition 574 (Michael J. Vlaming, Executive Director of Construction Elevator Contractors Association, received December 26, 2018) requested a change to section 1604.5(d)(2) within article 14, regarding the required spacing of tie-ins for construction personnel hoists, based on the same consensus standard. In denying the petition, the Board declared that successive editions “of the code [do] not necessarily provide greater protections than the superseded code.”

In an email discussion with the Division Elevator Unit (EU), the EU explained that they have not had issues enforcing the current requirements in article 14, nor are they aware of accident trends suggesting that the current requirements are deficient.

The EU said that some of the 2016 changes listed by the Petitioner are addressed by other sections in title 8 (e.g. fall protection, car top railings, and protection from overhead falling objects), while others are arguably not as protective (e.g. overload detection devices in lieu of platform size restrictions). Additionally, the EU mentioned that the industry has sought access to some of the 2016 updates, including the building connection intervals (i.e. tie-ins as mentioned in Petition 574 above), not having to provide a dedicated operator, and the freedom to use operational controls that do not require the application of constant pressure by the operator.

Although the ANSI/ASSE A10.4-1973 does not include the elements listed by the Petitioner, they are not necessarily prohibited by the standard, and equipment manufactured today is built in accordance with the latest applicable standards. However, even though the EU is not aware of any urgent matters that need addressing by a review and potential update to article 14 from the 1973 standard, it is reasonable to assume that significant safety improvements in construction hoist best practices and technologies have occurred in the more than 40 years since the 1973 version was used as a foundation for the article.

For example, subsection (c)(1) of section 1604.12 “Location and Guarding of Counterweights” reflects the language of section 12.3.1 of ANSI/ASSE A10.4-1973, which allows hoists located outside of a structure to omit enclosures where there is no floor or scaffold adjacent to the counterweight passageway:

*1604.12(c) Enclosure of Counterweight by the Hoisting Enclosure.*

*(1) Hoists Located Outside of Structure.*

*For hoists located outside of structures, the enclosures, except those at the lowest landing, may be omitted on the sides where there is no floor or scaffold **adjacent** to the counterweight way. (Emphasis added).*

Section 12.3.1 of ANSI/ASSE A10.4-2016, however, provides clarification on what is considered “adjacent” as follows:

### *12.3.1 Hoists Located Outside of Structures.*

*For hoists located outside of structures, the enclosures, except those at the lowest landing, may be omitted on the sides where there is no floor, scaffold, stairway or platform **within 30 inches (76.2cm) adjacent** to the counterweight-way. (Emphasis added).*

The additional consensus information to clarify the intent of the standard can prove useful in both compliance and enforcement of the regulation.

ANSI/ASSE A10.4-2016 also recommends additional safety requirements for workers involved in the erection and dismantling of the construction hoist. Section 5.5.1 “Installation, Jumping Alterations, Maintenance, Testing or Removal” recommends that all work be performed under the supervision of a competent person. Section 5.5.1.1 further recommends specific training topics for hoist personnel and those working on the equipment covered by the standard. Both recommendations were deemed necessary to be placed into the standard after consideration by a committee of stakeholders.

While much of the ANSI/ASSE A10.4-2016 standard is similar to the language of the 1973 version, there are both key and subtle differences as pointed out by the Petitioner and in the discussion above. The ANSI/ASSE A10.4 development committee has regularly updated the construction hoist standard with best practices and consensus recommendations, yet no comprehensive update to article 14 has occurred since the 1973 edition was adopted into title 8. Consequently, Board staff concurs with the Petitioner that a review of the article is warranted to ensure that necessary safety improvements in construction hoist best practices and technologies are recognized in article 14.

## **STAFF RECOMMENDATION**

Consistent with the foregoing discussion, Board staff recommends that Petition File No. 589 be **GRANTED** to the extent that the Board direct staff to convene an advisory committee to undertake a review of article 14 as it relates to ANSI/ASSE A10.4-2016 (or newer edition when available) and propose for public comment any items Board staff deems necessary for update. The Petitioner should be extended an invitation to participate in the AC deliberations.