

*International Association of*  
**BRIDGE, STRUCTURAL, ORNAMENTAL AND REINFORCING IRON WORKERS**

WALTER W. WISE  
GENERAL PRESIDENT  
202 383-4810

*Affiliated with AFL-CIO*



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WASHINGTON, D.C. 20006

September 11, 2013

**RECEIVED**

**SEP 11 2013**

**OCCUPATIONAL SAFETY AND HEALTH  
STANDARDS BOARD**

Ms. Marley Hart, Executive Officer  
Occupational Safety and Health Standards Board  
2520 Venture Oaks Way, Suite 350  
Sacramento, CA 95833

RE: Industry Coalition Petition to Adopt New Title 8, Section 1712 Safety  
Standards for Reinforcing Steel and Post-Tensioning Activities

Dear Ms. Hart:

I am writing on behalf of an industry coalition of labor and management organizations to urge the California Occupational Safety and Health Administration Standards Board (OSHSB) to adopt new Title 8, Section 1712 Safety Standards pertaining to reinforcing steel and post-tensioning activities. This petition requests the OSHSB to adopt the specific safety standards contained in the ANSI/ASSE A10.9 - 2013 Safety Requirements for Concrete and Masonry Work that was approved on February 28, 2013. This petition also requests the OSHSB to pursue a vertical Title 8, Section 1712 Safety Standard that incorporates these safety standards.

As General President of the International Association of Bridge, Structural, Ornamental and Reinforcing Iron Workers, I have commissioned petitions to be filed with several states that operate under the provisions of a State Approved OSHA Plan. Since 2010, I have met with federal OSHA officials, local union representatives, signatory contractors and industry associations regarding fatalities and incident trends that continue to exist in the reinforcing steel and post-tensioning industry.

Joe Standley, President of the District Council of Iron Workers of the State of California and Vicinity, strongly supports this petition to improve safety performance for reinforcing ironworkers in the State of California. Mr. Standley has convened reinforcing steel stakeholder meetings in Northern and Southern California to obtain labor and management consensus for this petition and the proposed amendments to the Title 8, Section 1712 Safety Standards.

The Industry Coalition of Reinforcing Steel Stakeholders supporting this petition consists of experts from labor, management and organizations engaged in reinforcing steel installation and post-tensioning operations throughout the country. It is the position of the Coalition of Reinforcing Steel Stakeholders that the OSHSB should adopt the ANSI/ASSE A10.9 - 2013 Safety Requirements for Concrete and Masonry Work to address fatality and incident trends.



Following is an overview and rationale for the adoption of new safety standards and amendments to the California Title 8, Section 1712 Standard.

Industry Coalition Rationale for Adoption of the ANSI/ASSE A10.9 Safety Requirements for Concrete and Masonry Work

1. The current Title 8, Section 1712 – The current Title 8, Section 1712 “Reinforcing Steel and Other Similar Projections” Safety Standard is antiquated and contains limited references pertaining to reinforcing steel activities and does not contain any references to post-tensioning operations. Section 1712 does not address numerous workplace hazards associated with the reinforcing steel and post-tensioning activities.
2. Fatality and incident trends - Incident trends in the reinforcing steel and post-tensioning industry indicate a direct correlation between incident causation factors and lack of specific regulations.
3. Projections of increased usage - The usage of steel reinforced and post-tensioned poured in-place concrete is expected to double by 2015 from its 1990 level and may comprise a majority of commercial and industrial construction.
4. Post-tensioning exposures and standards - Serious incidents and fatalities have occurred during the use of post-tensioning equipment. The increasing use of post-tension cables in poured in-place concrete structures presents workplace hazards to workers engaged in this process as well as other trade workers on the project. New safety standards pertaining to training and the use of post-tensioning equipment are needed to help prevent workplace hazards and reoccurring incidents during post-tensioning operations.
5. Federal OSHA regulatory initiative – The Agency’s action to pursue new safety standards was prompted by a series of meetings with OSHA officials and support from the Industry Coalition of Reinforcing Steel Stakeholders. Additionally, members of the OSHA Advisory Committee on Construction Safety and Health (ACCSH) voted unanimously for the Agency to pursue new safety standards that address hazards during reinforcing steel and post-tensioning activities.

As a result, reinforced concrete is one of the 2013 regulatory initiatives of federal OSHA. In 2012, The Office of Management and Budget (OMB) approved the Agency to pursue reinforced concrete safety standards and authorized the Agency to promulgate a Request for Information (RFI) from industry stakeholders. In July of 2012, the Agency received numerous support letters from labor and management stakeholders urging the Agency to adopt new reinforcing steel and post-tensioning safety standards.

6. Revised ANSI/ASSE A10.9 - 2013 Safety Requirements for Concrete and Masonry Work - The revised ANSI/ASSE A10.9 - 2013 Safety Requirements for Concrete and Masonry Work represents a national consensus safety standard developed by the cooperative efforts of construction industry experts and organizations throughout the United States. This standard contains new reinforcing steel and post-tensioning safety standards that are designed to prevent workplace injuries.



Examination of Fatalities, Incident Trends and Causation Factors

1. Site conditions related to equipment and material handling incidents – Many Ironworkers have sustained material handling and ergonomic injuries due to inadequate and unacceptable jobsite conditions. Reinforcing ironworkers and contractors are not provided with the same safety provisions for site conditions as steel erection contractors and ironworkers under the Cal/OSHA 1710 Erection of Structures Standard, or the revised ANSI/ASSE A10.9 - 2013 Safety Requirements for Concrete and Masonry Work that was approved on February 28, 2013.
2. Structural Collapse of Vertical Formwork and Decks – Fatalities and disabling injuries continue to occur due to the lack of specific requirements for the appropriate parties to evaluate the structural integrity of structures. The current Title 8, Section 1712 Safety Standards does not designate the appropriate parties to ensure that formwork is adequately supported prior to access by reinforcing steel ironworkers or other trade workers. Our ironworkers and contractors are not the appropriate party to evaluate the structural integrity of formwork installed by the general contractor or other subcontractors on the jobsite. This is a duty best performed by the controlling contractor or their authorized representative.
3. Structural Collapse of Vertical and Horizontal Columns – Fatalities and disabling injuries continue to occur due to the lack of specific guying and bracing requirements for vertical and horizontal columns. The Title 8, Section 1712 Standard contains only two references to maintaining stability and does not address horizontal columns.
4. Responsibilities for maintaining impalement covers - Many serious incidents and legal issues involve the use, inspection and responsibility to maintain dowel impalement covers during reinforcing steel activities. Although the current Title 8, Section 1712 Standard contains more safety provisions than federal OSHA standards, it does not adequately address responsibilities of appropriate parties to maintain protective covers during the construction process.
5. Hoisting and rigging of reinforcing steel assemblies – Inadequate hoisting and rigging procedures have been identified as contributing causation factors in many incidents. Specific safety standards pertaining to hoist and rigging reinforcing steel assemblies such as columns, curtain walls, etc. are needed to prevent serious incidents. Such assemblies are constructed with tie-wire and require special attention when hoisting into final position.
6. Requirements for written notifications – The lack of communication and approval to commence reinforcing steel activities has contributed to serious incident trends. The current Title 8, Section 1712 Standard does not include any written notifications prior to the commencement of reinforcing steel activities. The Title 8, 1710 Erection of Structures Standards provides important written notifications that have proven to prevent fatalities and serious injuries during the steel erection process. It is the position of the Industry Coalition of Reinforcing Steel Stakeholders that written notifications are necessary for certain reinforcing steel activities to prevent fatalities and serious injuries.



7. Requirements for special training – The lack of specific training has been identified as a primary causation factor in many reinforcing steel incidents. The current Title 8, Section 1712 Standard does not contain any training requirements pertaining to reinforcing steel and post-tensioning activities.

Following is the Coalition of Industry Stakeholders and organizations that are urging the support of the OSHSB to adopt the reinforcing steel and post-tensioning safety standards contained in the ANSI/ASSE A10.9 - 2013 Safety Requirements for Concrete and Masonry Work. I have assigned Steve Rank, Executive Director of Safety and Health, to provide you with supporting documentation for this petition.

I recognize and appreciate the many accomplishments of the California Division of Occupational Safety and Health, and the Occupational Safety and Health Standards Board to promulgate safety standards to protect California workers. I look forward to your response on the status of this petition.

With best wishes and kindest personal regards, I am

Sincerely yours,

*Walter W. W. W.*  
GENERAL PRESIDENT

WWW/jh

Attachment

CC: General Secretary Dean  
General Treasurer McHugh  
General Vice President Standley



**Industry Coalition of Stakeholders**

International Association of Bridge, Structural, Ornamental and Reinforcing Iron Workers,  
Walter W. Wise, General President

District Council of Iron Workers of the State of California and Vicinity, Joe Standley, President

California State Building & Construction Trades Council, Robbie Hunter, President

Ironworker Management Progressive Action Cooperative Trust, Kevin Hilton, CEO

Concrete Reinforcing Steel Institute, Robert J. Risser, Jr., President and CEO

Post Tensioning Institute, Theodore L. Neff, Executive Director

National Association of Reinforcing Steel Contractors, Fred Coddling, Executive Director

Western Steel Council, Michael E. Newington

Department of Reinforcing Ironworkers Advisory Committee, Steve Parker, Director

The Center for Construction Research and Training, Pete Stafford, Executive Director

**Hart, Marley@DIR**

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**From:** Rank, Steve <srank@iwintl.org>  
**Sent:** Wednesday, September 11, 2013 2:38 PM  
**To:** Hart, Marley@DIR  
**Cc:** Len welsh (lenwelsh@gmail.com)  
**Subject:** Proposed amendments to Title 8, Section 1712  
**Attachments:** Proposed Regulatory Amendments to Title 8, Section 1712.docx

Marley:

Thank you for your time to meet with us today, it was good to see you again. Attached is proposed text and amendments to the Title 8, Section 1712 for your review and inclusion with the petition letter from General President Wise of the Ironworkers International Union. As discussed, the petition is requesting the OSHSB to the proposed amendments in the form of a revised, vertical 1712 standard.

The petition letter also requests the OSHSB to adopt by reference only the reinforcing steel and post-tensioning safety standards contained in the ANSI/ASSE A10.9-2013 Safety Requirements for Concrete and Masonry Work. These standards are contained in sections 4.1.4, 4.6, 4.7, 4.8, 4.10, 5, 8.3-8.4.6, 9-9.1.5, 10, 10.3, 10.3.2, 10.3.3, 10.3.4, 10.3.5, 10.3.6, 10.3.7, 10.3.8, 10.3.9, 10.6.

Thank you again for your time and I look forward to seeing you next week in Oakland.

Steve

**Steven L. Rank**  
**Executive Director of Safety and Health**  
**Iron Workers International**  
**1750 New York Avenue NW**  
**Washington, D.C. 20006**  
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# **Proposed Regulatory Amendments to Title 8, Section 1712 - Reinforcing Steel and Other Similar Projections**

## **I. Site Access and layout.** The controlling contractor shall ensure that the following is provided and maintained:

- (1) Adequate access roads into and through the site for the safe delivery and movement of derricks, cranes, trucks, other necessary equipment, and the material to be erected and means and methods for pedestrian and vehicular control. Exception: this requirement does not apply to roads outside of the construction site.
- (2) A firm, properly graded, drained area, readily accessible to the work with adequate space for the safe storage of "reinforcing and post-tensioning" materials and the safe operation of the "reinforcing contractors" equipment.
- (3) Adequate exterior platform for landing materials on the floors of multi-tiered buildings.
- (4) Adequate benching and/or shoring prior to the commencement of reinforcing operations in excavations and/or trenches.

## **II. Written Notifications Prior to Commencement of Reinforcing Steel Activities**

Approval to begin reinforcing steel installation. Before authorizing the commencement of reinforcing steel activities, the controlling contractor shall ensure that the reinforcing steel contractor on the project is provided with the following written notifications.

- (1) Formwork and falsework have been inspected by a competent person of the controlling contractor prior to, during, and immediately after the installation of reinforcing steel and placement of the concrete.
- (2) The structural stability of vertical formwork, elevated decks, and other working/walking surfaces are adequately braced, guyed, or supported to allow safe access of reinforcing employees, materials, and equipment.
- (3) The benching and/or shoring for excavations has been inspected by a competent person of the controlling contractor.

## **III. Stability Requirements for Vertical and Horizontal Columns, Walls, and Other Reinforcing Assemblies**

Structural stability of vertical and horizontal reinforcing steel assemblies shall be maintained at all times.

- (1) Vertical and horizontal columns, caissons, walls, drilled piers, top mats, and other reinforcing steel assemblies shall be guyed, braced, or supported to prevent structural collapse.
- (2) Guying, bracing, or supports shall be installed under the direction of a competent person.
- (3) Guying, bracing, or supports shall be removed only with the approval of a competent person.

- (4) The controlling contractor shall bar other construction processes below or near the erection of reinforcement assemblies until they are adequately supported and/or secured to prevent structural collapse.
- (5) Prefabricated walls, caissons, drilled piers, and other modular reinforcing steel assemblies that are free-standing shall be guyed, braced, or supported under the direction of a competent person.
- (6) Systems for guying, bracing, or supports shall be designed by a qualified person of the controlling contractor, and removed only with the approval of a competent person.

#### **IV. Requirements for Impalement Protection and Custody of Impalement Covers**

- (1) Employees shall not be permitted to work above or around unprotected reinforcing bar or other hazardous projections protruding from vertical or horizontal surfaces that create an impalement hazard.
- (2) Impalement covers shall include covers, troughs, or other devices that have been engineered by a qualified person to prevent impalement.
- (3) When impalement covers are provided by the reinforcing steel contractor, they shall remain in the area where reinforcing activities has been completed, to be used by other trades, only if the controlling contractor or its authorized representative:
  - a) Has directed the reinforcing steel contractor to leave the impalement covers in place; and
  - b) Has inspected and accepted control and responsibility of the impalement covers prior to authorizing persons other than reinforcing steel employees to work in the area.

#### **V. Requirements for Hoisting and Rigging Reinforcement Assemblies**

- (1) A qualified rigger (a rigger who is also a qualified person) shall inspect the rigging prior to each shift in accordance with § 1926.251.
- (2) Routes for suspended loads shall be pre-planned to ensure that no employee is required to work directly below a suspended load except for:
  - a) Employees engaged in the placing or initial connection of the reinforcement assemblies; or
  - b) Employees necessary for the hooking or unhooking of the load.
- (3) When working under suspended loads, the following criteria shall be met:
  - a) Materials being hoisted shall be rigged to prevent unintentional displacement;
  - b) Hooks with self-closing safety latches or their equivalent shall be used to prevent components from slipping out of the hook; and
- (4) All loads shall be rigged by a qualified rigger.

- (5) All lifting devices below the hook such as spreader bars used for hoisting pre-assembled cages, walls, columns, beams and other structures shall be designed and fabricated under the direction of a qualified person in accordance with the ASME B 30.20 requirements.”
- (6) The controlling contractor shall bar all activities under or near hoisting operations including unloading and staging areas for reinforcement assemblies.

## **VI. Requirements for Post Tensioning Activities**

- (1) No stressing operations shall commence prior to the controlling contractor providing written documentation to the company performing the stressing operation that the minimum specified initial concrete compressive strength has been achieved.
- (2) No one shall be permitted to stand behind, in line with or directly above the stressing equipment or the full length of the tendon(s), including the fixed end anchorage.
- (3) Signs and barriers shall be erected to limit access into the stressing area only to personnel engaged in stressing or de-tensioning operations.
- (4) The controlling contractor shall bar other construction processes from working in barricaded areas during stressing operations.
- (5) The controlling contractor shall ensure that an adequate safe work platform of a minimum of (3) feet (this can include an extension of formwork) including handrails, or equivalent, is provided for stressing tendons, cutting tendon tails, and grouting. All work platforms shall be clear of any materials not related to the work process.
- (6) Stressing equipment shall be secured during operation to prevent accidental displacement.
- (7) Prior to stressing, stressing equipment must have current stressing equipment calibrations per contract specifications available on-site. A competent person shall verify adequacy of stressing equipment calibrations and inspect the stressing equipment for visible signs of defects immediately before stressing and periodically during the stressing operations. The use of stressing equipment shall conform to the manufactures recommendations.
- (8) During stressing operations methods shall be employed to insure that supporting shoring does not fall due to cambering of concrete during stressing operations. Dead loads and construction loads (including those due to stressing) shall be considered in the design of the forms and shoring.

## **VII. Fall Protection Requirements**

- 1) Employees shall not be permitted to place or tie reinforcing steel in walls, piers, columns, and other reinforcement assemblies, more than 6 feet above an adjacent surface, unless a personal fall protection systems is used in accordance with Subpart M requirements. Exception: Point to point horizontal or vertical travel on reinforcing steel up to 24 feet above the surface below providing there are no impalement hazards.
- 2) Unprotected sides and edges. Employees engaged in reinforcing steel operations

shall not be permitted to access elevated decks or walkways until the controlling contractor has installed perimeter and interior guardrails systems, or covers.

### **VIII. Requirements for Formwork and Falsework Stability**

- 1) The controlling contractor shall ensure that formwork is inspected by a competent person prior to, during, and immediately after the installation of reinforcing steel and placement of the concrete. A competent person performing these inspections shall have been approved, in writing, by an engineer. A written report of the inspections shall be required. Reinforcing steel and concrete shall not be placed until the report on the erected formwork indicates approval for placement.
- 2) Prior to the commencement of jacking and grading of bridge decks, the controlling contractor shall prohibit employee access to bridge decks during jacking and grading operations.

### **IX. Training Requirements**

- 1) The employer shall ensure that each employee who performs reinforcing steel and post-tensioning activities has been provided training in the following areas:
  - a) The nature of the hazards associated with reinforcing steel and post-tensioning activities; and
  - b) The proper procedures and equipment to perform reinforcing steel and post-tensioning activities and;
  - c) Employees involved in reinforcing bar and post-tensioning operations shall be certified by a qualified evaluator (third-party). *“Qualified evaluator (third party) means an entity that, due to its independence and expertise, has demonstrated that it is competent in accurately assessing whether individuals meet the training requirements in this subpart.”*