

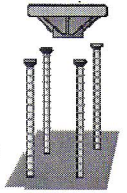


Job Name: _____ Job Site Location: _____

Date: _____ Start Time: _____ Finish Time: _____ Foreman/Supervisor: _____

Topic 443: Working with Rebar

Introduction: Almost all heavy commercial concrete work will specify steel reinforcing in the form of rebar. Working with rebar presents several hazards to personnel involved such as fall hazards, impalement hazards, lacerations, and abrasions. Following are safety guidelines for working with rebar:

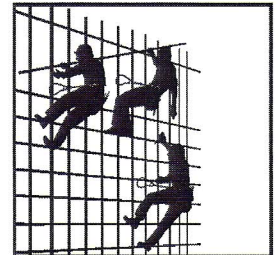


Employers must ensure that all personnel working with concrete, concrete forms, and rebar are trained to recognize potential hazards of their work and to eliminate, control, or minimize those hazards.

Fall protection – Fall protection when tying rebar at elevated heights is one of the predominate issues of concern when working with rebar. Fall protection is a concept that describes systems, procedures, equipment, and rules intended to protect workers from fall hazards. OSHA’s CFR 1926 Subpart M specifies requirements for fall protection for virtually all of the construction industry, and requires workers on the face of formwork or reinforcing steel to use fall protection if they are six feet or more above a lower level (or the ground). Employers and workers can choose from personal fall-arrest systems, safety nets, or positioning-device systems as their choice for fall protection systems.

Positioning-device systems are the most appropriate type of personal fall-protection for working on and placing rebar. A positioning-device system enables one person to work on a vertical surface with both hands free and it limits free-fall distance to two feet or less. The major components of a positioning-device system and their requirements are:

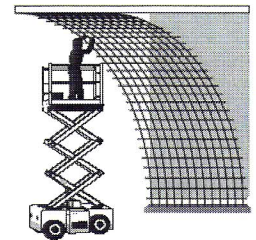
- * **Body support** - A body belt must limit the maximum arrest force on a worker to 900 pounds and can’t be used for any purpose other than personal fall protection. A body harness must limit the maximum arrest force to 1,800 pounds and must be used only for fall protection.
- * **Connectors and connecting assemblies** - Connecting assemblies must have a minimum tensile strength of 5,000 pounds. Snaphooks and D-rings must be proof-tested to a minimum tensile load of 3,600 pounds without cracking, deforming, or breaking. They must be made of drop-forged steel or equivalent materials, the finish must be corrosion-resistant, and the surfaces smooth.
- * **Anchorage connector** - The dimensions of snaphooks must be compatible with the members to which they are connected or the snaphooks must be of the double-locking type to prevent roll out.
- * **Anchorage** - Positioning-device systems must be secured to an anchorage that can support at least twice the potential impact load of a worker’s fall or 3,000 pounds, whichever is greater.



Climbing rebar – Workers are permitted to free-climb concrete forms and rebar to reach work areas. The maximum free-climbing height is 24 feet. The horizontal bars must be spaced not less than six inches, or more than 16 inches on center. When rebar spacing is more than 16 inches on center, use a ladder or lift to reach work areas. Upon reaching a work area, you must use a personal fall-arrest system, safety net, or positioning-device system for fall protection.

- * **Check the rebar’s rigidity** before climbing it. If it’s not rigid, brace it to meet the required 3,000-pound anchor load requirement.
- * **Avoid climbing overhanging rebar** or forms. This type of climbing increases your risk of falling and overexerting your muscles and joints.

Capping rebar - Whenever you work above rebar that protrudes from the floor, cover the rebar with protective caps that will prevent you from being impaled if you fall. Cap rebar protruding horizontally to prevent scrapes, cuts, or eye injuries.



Handling rebar

- * Cut rebar will always have sharp chisel ends which can cause lacerations and puncture wounds. Rebar often has scale, rust, or burs which can cause abrasions or lacerations. Wear proper personal protective equipment such as heavy leather gloves when working with rebar.
- * When manually bending rebar, make sure you have a firm footing, and a firm grip on the bar. Do not place your entire weight on the bar being bent to prevent falling if the bar should slip or break.
- * Use mechanical hoists or lifts to handle heavy bundles of rebar.
- * When carrying full lengths of rebar, lift the load forward of center, letting the trailing end drag, if necessary, to prevent the front end from whipping and possibly catching on the ground, coworkers, or other objects.

Conclusion: On large projects involving rebar, employers should consider the use of scissor lifts or scaffolds as a means to ensure the safety of workers without the use of positioning devices or having workers climb rebar without fall protection.

Work Site Review

Work-Site Hazards and Safety Suggestions: _____

Personnel Safety Violations: _____

Employee Signatures:

(My signature attests and verifies my understanding of and agreement to comply with, all company safety policies and regulations, and that I have not suffered, experienced, or sustained any recent job-related injury or illness.)

These guidelines do not supercede local, state, or federal regulations and must not be construed as a substitute for, or legal interpretation of, any OSHA regulations.