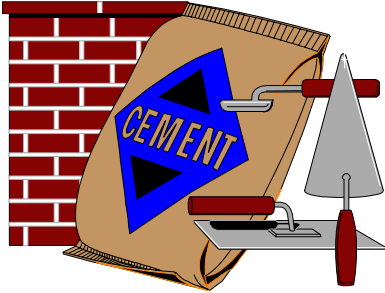


Concrete Dangers



Working around concrete and masonry is not for the faint of heart. It's for experienced, well-trained and skilled workers. Working on forms and tilt-up slabs present dangers beyond comprehension. Look down, look up, look sideways, look backwards, look every which way.

Are you familiar with buzzwords associated with concrete construction? Try these on for size:

- **Bull Float**—A tool used to spread out and smooth concrete.
- **Form Work**—The total system of support for freshly placed or partially cured concrete, including the mold or sheeting that is in contact with the concrete.
- **Lift Slab**—A method of concrete construction in which floor and roof slabs are cast on or at ground level and, using jacks, lifted into position.
- **Limited Access Zone**—An area alongside a masonry wall, which is under construction, and which is clearly demarcated to limit access by employees.
- **Pre-cast Concrete**—Concrete members (walks, panels, slabs, columns and beams) which have been formed, cast, and cured prior to final placement in a structure.
- **Shore**—A supporting member that resists a compressive force imposed by a load.
- **Jacking Operation**—The task of lifting a slab during the construction of a building/ structure where the lift/slab process is being used.

Knowing a little bit about the unusual nature of some phases of concrete construction is a “heads-up” notice that forming, lifting, tilting, moving, raising and lowering tons and tons of concrete is a major phase of construction that involves massive amounts of coordination by the numerous trades involved.

Here is a lengthy list of hazards associated with concrete/masonry work:

- Curing Compounds: Respiratory Problems
- Concrete: Caustic burns to eyes and skin
- Butane: Fires/Explosions
- Fire Watch: Flames Require Constant Watching
- Form Work: Fall Hazards/Ladders
- Footers: Working with Steep Side Walls
- Dismantling Forms: Exposed Nails
- Tilt-Up: Crane Hazards/Rigging
- Cranes: Defective Slings, Center of Gravity
- Fork Lifts: Lifting Capacity
- Load Chart: Crane Capacity
- Vibratory Compactors: GFI System
- Electric Saws: Defective Power Cords
- Rebar: Impalement
- Troughing: Exposed Rebar Ends
- Concrete Pumper Truck: Overhead Loads/Whiplash
- Flagging: Flaggers Exposed to Traffic

- Eye Wash Station: Requires Quantities of Water
- GFI System: All Power Tools/Cords Grounded
- Tower Cranes: Overhead Loads/Signaling
- Outriggers: Unstable Cranes/Lifts
- Material Hoists: No Riders/ Load Capacities
- Leading Edge Work: Only Experience Workers/Authorized
- Full-Body Harness: Inspect PPE Daily
- Concrete Buckets: Defective Slings/Hardware

On almost every jobsite, where there are exposed rebar ends, there is the ongoing possibility of “impairment.” Where there is a work station over or in the vicinity of upright rebar, every single rebar must be “capped” or “troughed.” Caps used to prevent impairment must have a steel shank inside the rebar otherwise the rebar will punch a hole through the head of the cap.

It is mandatory, repeat, mandatory, that proper capping and troughing be an ongoing responsibility of the concrete contractor. Note, too, that horizontal rebar ends are a fall/ tripping hazard, but can also cause deep gashes in workers’ feet, ankles, shins and legs. Cap these rebar consistently throughout the jobsite.

Let’s also take a close look at another major category of hazards associated with concrete construction, namely “requirements for equipment and tools”:

- | | |
|-----------------------------|------------------|
| Bulk Cement Storage | Concrete Mixers |
| Power Concrete Trowels | Concrete Buggies |
| Concrete Pumping Stations | Concrete Buckets |
| Bull Floats | Masonry Saws |
| Lock-Out/ Tag-Out Procedure | |

All of these hazard categories are described in detail in OSHA’s CFR 1926 Support Q-Concrete and Masonry Construction. If you’re going to spend a lot of time in concrete construction, you need to be intimately familiar with this OSHA standard. It’s extremely important.

A cubic yard of concrete weighs approximately 3,000 pounds. But it doesn’t take a full cubic yard to hurt you, maybe even kill you. Falling off one of those forms could do the job more quickly. Be Careful.