

NRMCA Monthly Safety Initiative

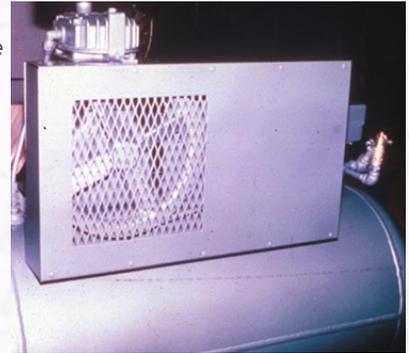
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Machine Guarding at Ready Mixed Concrete Plants

Machine Guarding Safety

In the ready mixed concrete industry, there seem to be as many hazards created by moving machine parts as there are types of machines. Machine guarding is essential for protecting plant personnel from preventable injuries. OSHA requires guarding for any machine where machine parts, functions, or processes may cause injury. The need for machine guarding may be found in numerous places around a ready mixed concrete plant. Some of these areas include maintenance shops, reclaimers, aggregate storage and transfer areas, conveyor belt areas, central dust collectors, and many others.



What to Know About Machine Guarding

When the operation of a machine or accidental contact with it could injure the operator or others in the vicinity, the hazards must be either controlled or eliminated. Dangerous moving parts in three basic areas require guarding: 1) the point of operations; 2) power transmission such as flywheels, pulleys, belts, chains, and gears; 3) other moving parts. A guard must meet the following minimum requirements: 1) must prevent hands, arms, and any other part of an employee's body from making contact with dangerous moving parts; 2) Employees should not be able to easily remove or tamper with the guard, and thus rendering it ineffective; 3) guards and safety devices should be made of durable material that will withstand the conditions of normal use; 4) they must be firmly secured to the machine; 5) a guard should ensure that no objects can fall into moving parts; 6) a guard defeats its own purpose if it creates a hazard such as a shear point, a jagged edge, or an unfinished surface that could cause a laceration; 7) guards should not impede an operator from performing the job quickly and comfortably that can't be overridden or disregarded; and 8) if possible, workers should be able to lubricate the machine without removing the guards.

Machine Guarding Safety Do's and Don'ts

- Think First when working around guards on machines at a ready mixed concrete plant
- Guards are always the first choice to control mechanical hazards, but when guards cannot be used, proper PPE should be utilized
- All concrete plant personnel should receive machine guard training
- Never remove or bypass a guard without performing proper lock-out/tag-out/tryout procedures
- On shop grinding wheels set tongue guard at > 1/4" and work rest at > 1/8"
- Pulleys, chains, sprockets, fans that are less than 7 feet from walking, working surfaces must be guarded
- Remember to use guards for material conveyor head and tail pulleys
- Use area guards where typical guarding is not practical, such as with belt take-up pulleys, and tensioners

Resources

NRMCA: [Control of Hazardous Energy](#) (Lockout/Tagout)

OSHA: [Machine Guarding](#)

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