



# HAZARD ALERT

## Two Workers in Two Separate Incidents Suffer Life Altering Injuries After Being Caught in Rubber Mills

**Incident #1** A mill operator began feeding continuous slab-off rubber into the bite of the in-running rolls of an empty cracker mill to start a 'band' on one of the mill rolls. The rubber did not form a 'band' after going through the bite and fell to the pan. When the operator tried to work the rubber upward towards the bite, his glove and hand became caught in the rubber and under the slab rubber that was being feed from a metal skid on the floor. The safety rope was pulled to stop the machine, but the injury resulted in the medical amputation of his left hand/wrist and a portion of his lower forearm. This mill did not have pressure-sensitive body bars and the emergency stopping distance was poor.

**Incident #2** Another mill operator was feeding rubber from an overhead slab conveyer into the bite of an empty 2x2 rubber mill to start a 'band' when he became caught similar to the incident above. Both of the operator's hands were caught when he attempted to free himself. He ultimately freed himself by pulling away from the machine causing the de-gloving of both hands. This resulted in the medical amputation of both hands/wrists and a portion of his lower forearms. The front pressure-sensitive body bar was cut in half and the switch had been removed years before the incident.

### **Recommendations to Prevent Recurrence:**

- Pressure-sensitive body bars shall be installed front/back of each rubber mill having a 46-inch roll height or over and shall operate readily by pressure of the mill operator's body. The bars shall be installed approximately 40-inches vertically above the working level and 20-inches horizontally from the crown face of the roll - see OSHA's §1910.216 and ANSI B.28.1.
- The pressure needed for these pressure-sensitive body bars must be equal to 40-pounds or as specified by the manufacturer of the approved safety control.
- Pressure-sensitive body bars must be the preferred method for mill safety controls. They must be used in combination with a safety trip wire cable or wire centered-cord or a safety trip rod.
- Pressure-sensitive body bars must not be cut in half, have the safety switches removed because of nuisance trips or otherwise modified.
- A safety trip wire cable or wire-centered cord must also be installed in the front and back of each mill and located within 2-inches above a vertical plane tangent to the front and rear rolls. The cables shall not be more than 72-inches above the level on where the operator stands and shall operate readily on contact §1910.216.
- §1910.216 requires mill rolls shall be stopped within a distance, as measured in inches of surface travel, not greater than 1½ percent of the peripheral no-load surface speeds of the respective rolls as determined in feet per minute. ANSI B.28.1 calls for weekly checks.
- Appropriate hand protection (and sizes) must be provided based on the performance characteristics relative to the tasks to be performed and conditions present.
- Sufficient staffing levels and effective training must be provided and maintained.
- A slow start-up speed and moveable guard bars should be considered at rubber mills. This guard bar is hinged at both sides of the mill frame so that it will raise should the operator get caught between the bar and mill roll - see ANSI B28.1.

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The information provided in this alert is based on preliminary data only and does not represent final determinations pertaining to the nature of the incident or conclusions regarding the cause of this event.