

(b) Guards shall be securely in place while machinery is being operated, except when testing or making adjustments which cannot be performed without removal of the guard.

**§ 57.14113 Inclined conveyors: backstops or brakes.**

Backstops or brakes shall be installed on drive units of inclined conveyors to prevent the conveyors from running in reverse, creating a hazard to persons.

**§ 57.14114 Air valves for pneumatic equipment.**

A manual master quick-close type air valve shall be installed on all pneumatic-powered equipment if there is a hazard of uncontrolled movement when the air supply is activated. The valve shall be closed except when the equipment is being operated.

[53 FR 32528, Aug. 25, 1988; 53 FR 44588, Nov. 4, 1988]

**§ 57.14115 Stationary grinding machines.**

Stationary grinding machines, other than special bit grinders, shall be equipped with—

- (a) Peripheral hoods capable of withstanding the force of a bursting wheel and enclosing not less than 270°—of the periphery of the wheel;
- (b) Adjustable tool rests set so that the distance between the grinding surface of the wheel and the tool rest is not greater than ¼ inch; and
- (c) A safety washer on each side of the wheel.

[53 FR 32528, Aug. 25, 1988; 53 FR 44588, Nov. 4, 1988]

**§ 57.14116 Hand-held power tools.**

- (a) Power drills, disc sanders, grinders and circular and chain saws, when used in the hand-held mode shall be operated with controls which require constant hand or finger pressure.
- (b) Circular saws and chain saws shall not be equipped with devices which lock-on the operating controls.

**§ 57.14130 Roll-over protective structures (ROPS) and seat belts for surface equipment.**

(a) *Equipment included.* Roll-over protective structures (ROPS) and seat belts shall be installed on—

- (1) Crawler tractors and crawler loaders;
- (2) Graders;
- (3) Wheel loaders and wheel tractors;
- (4) The tractor portion of semi-mounted scrapers, dumpers, water wagons, bottom-dump wagons, rear-dump wagons, and towed fifth wheel attachments;
- (5) Skid-steer loaders; and
- (6) Agricultural tractors.

(b) *ROPS construction.* ROPS shall meet the requirements of the following Society of Automotive Engineers (SAE) publications, as applicable, which are incorporated by reference:

(1) SAE J1040, "Performance Criteria for Roll-Over Protective Structures (ROPS) for Construction, Earthmoving, Forestry, and Mining Machines," 1986; or

(2) SAE J1194, "Roll-Over Protective Structures (ROPS) for Wheeled Agricultural Tractors", 1983.

(c) *ROPS labeling.* ROPS shall have a label permanently affixed to the structure identifying—

- (1) The manufacturer's name and address;
- (2) The ROPS model number; and
- (3) The make and model number of the equipment for which the ROPS is designed.

(d) *ROPS installation.* ROPS shall be installed on the equipment in accordance with the recommendations of the ROPS manufacturer.

(e) *ROPS maintenance.* (1) ROPS shall be maintained in a condition that meets the performance requirements applicable to the equipment. If the ROPS is subjected to a roll-over or abnormal structural loading, the equipment manufacturer or a registered professional engineer with knowledge and experience in ROPS design shall recertify that the ROPS meets the applicable performance requirements before it is returned to service.

(2) Alterations or repairs on ROPS shall be performed only with approval from the ROPS manufacturer or under