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Authority

The provisions of this Chapter 45 issued under act of June 2, 1913 (P. L. 396, No. 267) (71 P. S. § 1442); and act of May 18, 1937 (P. L. 654, No. 174) (43 P. S. §§ 25-1—25-15), unless otherwise noted.

Source

The provisions of this Chapter 45 adopted December 15, 1964; amended through August 1, 1968, unless otherwise noted.

GENERAL PROVISIONS

§ 45.1. Definitions.

The following words and terms, when used in this chapter, have the following meanings, unless the context clearly indicates otherwise:

Guard strip—A rigid bar, fastened to the frame of the machine at the feed point, which will allow the entrance of stock but which will not permit fingers to be drawn into the machine.

Point of operation—The point at which cutting, shaping or forming of the stock is accomplished and such shall include other points which may offer a hazard to the operator in inserting or manipulating the stock in the operation of the machine.

Push block—A short block of hardwood with both a handle similar to that of a hand plane and a shoulder at the rear end. This block is used for pushing short stock over revolving cutters.

Push stick—A narrow strip of wood, with a notch cut into one end, which is used to push short pieces of lumber through saws.

§ 45.2. Applicability.

(a) This chapter applies to all logging, sawmill, wood working, veneer and cooperage operations and sets forth rules to safeguard the lives, limbs and health of workers in these operations.

(b) This chapter applies to all installations unless otherwise specified as applying only to new or existing installations.

§ 45.3. Penalty.

Any person who violates this chapter or any regulations of the Department or who interferes with the Department or its duly authorized representative in the enforcement of these provisions or regulations shall be penalized under section 15 of act of May 18, 1937 (P. L. 654, No. 174) (43 P. S. § 25-15).

GENERAL REQUIREMENTS

§ 45.11. Mechanical power transmission and machine layout.

(a) *Transmission basements*. All mechanical power transmission equipment located in transmission basements shall either be guarded in accordance with Chapter 29, Subchapter B (relating to mechanical power transmission apparatus), or the basement shall be locked when the machinery is in motion and access had only upon application to the superintendent or foreman.

(b) *Set screws*. All set screws shall be flush or enclosed, regardless of the plan adopted to comply with subsection (a).

(c) *Adequate aisle space*. Machines shall be located so that each operator has sufficient space in which to handle the material with the least possible interfer-

ence with other workmen or machines. Aisles of sufficient width to permit the passing of trucks and workmen without crowding shall be maintained in all working places and stock rooms.

(d) *Foundation.* All machines, except portable types, shall be firmly secured to a substantial floor or foundation. If practicable heavy duty machines shall be located on the ground floor.

(e) *Lighting.* Where natural lighting is the main source of illumination, machines shall be arranged so as to conform, as far as possible, to the requirements of Chapter 27 (relating to lighting). All artificial illumination shall comply with the requirements of Chapter 27.

§ 45.12. Exhaust systems.

(a) *Exhaust system required.* Except in sawmills, any establishment containing five or more machines whose operations are attended by the creation of dust, shavings, chips or slivers shall be equipped with an exhaust system, either continuous or automatic in action, of sufficient strength and capacity to enable it to thoroughly remove refuse from the points of operation and immediate vicinities of machines and work places.

(b) *Hood requirements.* Except in sawmills, any woodworking machine whose operations are attended by the creation of dust, shavings, chips, slivers, and the like, shall be equipped with an exhaust hood or hoods located and adjusted so as to remove the maximum amount of refuse material from the point of operation and immediate vicinity. Multiple boring or multiple mortising machines need not be equipped with hoods. Where a hood is used to form part or all of the guard required on a given machine, it shall be of sufficient material and construction so as to meet fully all the demands of such dual capacity.

(c) *Exhaust pipes.* All exhaust pipes shall be of a construction and internal dimension as to minimize the possibility of clogging. They shall be readily accessible for cleaning.

(d) *Separations.* All exhaust pipes shall empty into settling or dust chambers which shall effectively prevent the escape of dust and refuse from reentering the workroom. Such settling or dust chambers shall be of fireproof construction and shall be so designed and operated so as to minimize the danger of dust explosions.

§ 45.13. Removal of refuse.

Provision shall be made for the daily removal of refuse from establishments which either produce refuse which cannot be handled by an exhaust system or which are exempt from exhaust system requirements.

§ 45.14. Floors.

(a) All floors shall be kept in good repair and shall be free from protruding nails or splinters, holes, unevenness and loose boards.

(b) Floors beneath machines which require hand pressure in a horizontal direction to feed stock to the cutters shall be provided with effective means to prevent the operator from slipping.

§ 45.15. Machine control and feed.

(a) Except in sawmills, a mechanical or electrical power control shall be provided at each machine which enables the operator to cut off the power or stop the feed without leaving his position at the point of operation.

(b) If practicable, push sticks shall be provided and shall be used for pushing short or narrow pieces through hand-fed saws. If practicable, push blocks shall be provided and shall be used for pushing short pieces over hand-fed revolving cutters. Push sticks or push blocks shall not be required on power-fed machines or where a succession of short or narrow pieces is being pushed through.

LOGGING OPERATIONS

§ 45.21. Axes, sledges, and wedges.

(a) Ax and sledge handles shall be of sound, dense hickory, ash, maple or material of equivalent strength. A stock of ax handles of assorted lengths shall be readily available for the use of fellers and choppers.

(b) Wedges of steel or hardwood shall be available for fellers and choppers.

(c) Wedges and hammer heads which show burrs extending more than 1/8 inch from the body of the tool shall not be used until they have been dressed either on an abrasive wheel or by forging.

§ 45.22. Felling rules.

(a) When a tree is ready to fall, the chopper or sawyer shall give audible warning to men working in the vicinity. This shall be done in every case, whether there is believed to be anyone in the vicinity or not. The chopper or sawyer shall be responsible for insuring that all persons are clear from both the falling tree and any branches broken off by the tree in falling.

(b) Felling crews shall work at a distance from each other or from bucking crews of not less than 125% of the average height of timber being cut.

(c) Choppers and fellers shall be warned to watch for kickbacks of the butt, particularly when felling trees in a high wind.

(d) A felled tree, balanced across a knoll, rock, log, or the like, shall have the light end propped before being cut into saw logs.

(e) All members of woods crews shall be warned to exercise care in the use of fire and especially to extinguish matches, cigarettes, cigar stubs and pipe ashes, before throwing them away.

§ 45.23. Hauling teams.

Log wheels, sleds or wagons used for hauling shall be constructed of sound, straight-grained wood and shall show a factor of safety of six, under maximum dead weight loading.

§ 45.24. Dry chutes.

(a) The logs used in the chute shall be carefully joined at the ends, and the face of the logs shall be trimmed smooth.

(b) Unless the chute members are embedded in the ground, cross skids shall be provided at intervals not to exceed 16 feet.

(c) Equipment used in pulling logs in chutes shall comply with this chapter.

§ 45.25. Loading equipment.

(a) Cables used in loading shall be of a strength so as to show a factor of safety of at least four, under a load which will stall the engine.

(b) Loading hooks shall be constructed so as to show no appreciable distortion under load.

(c) The pins and fastenings of all sheaves shall have a strength capable of withstanding the force that would be imposed upon them by tension in the loading line equal to its rated breaking strength.

(d) Loading engines shall be provided with friction brakes capable of stalling the engine.

(e) Before starting to load cars, loaders shall examine all car brakes to be sure that they are set and all car stakes and bunks to be sure that they are securely fastened.

§ 45.26. Explosives and inflammable materials.

All explosives and inflammable materials shall be stored, transported and used in accordance with regulations issued by the Department.

SAWMILLS**§ 45.31. Machine layout and clearances.**

Machinery shall be arranged so that there is ample room to handle the longest stock cut by any machine without interfering with operators of other machines.

§ 45.32. Floor openings.

(a) All floor openings, except those located under machines or in the carriage runway, shall comply with Chapter 47, Subchapter G (relating to railings, toeboards, open-sided floors, platforms, and runways). Floor openings used for refuse removal may be provided with wooden covers which shall always be in

place when the openings are not in use. The wooden covers may be supported by posts in a raised position above the flood openings they protect.

(b) If located at or about floor level, the troughs in which the working strands of a conveyor operate shall be provided with toeboards 6 inches in height. If the depth of the trough is over 18 inches or the width is over 2 feet, regardless of depth, it shall, in addition, be provided with a standard railing.

(c) When the working strand of a conveyor crosses at or about the floor level in passageways, the trough in which it works shall be bridged the full width of the passageway.

§ 45.33. Floors and stairways.

(a) The floors in mills, basements, and other buildings used in connection shall be kept in good repair and, as far as practicable, free from oil, grease and debris.

(b) Stair treads shall be replaced or repaired, when the surface or nosing shows wear to the extent of 40% or more of the tread thickness. The treads shall be fastened rigidly in place and shall have no noticeable unevenness.

§ 45.34. Dumping.

(a) When conditions require that an unloading line be attached to logs or cars, or passed under the logs, the equipment shall be such that it is unnecessary for any person to be on the pond side of the cars after either of the end chains or chocks are released.

(b) Unless some form of power unloader is used, a rollway or skid timber shall be provided; the upper end of the rollway or skid shall be not more than 6 inches below the level of the car platform.

§ 45.35. Log pond.

(a) The banks of the log pond in the vicinity of the log haul shall be reinforced to prevent caving in and shall be provided with a nonslip surface of cleats, or corrugated or rough abrasive material.

(b) Pike poles used in pond operations shall be equipped with handles of dense ash, hickory, maple, beech or wood of equivalent strength, preferably made from split stock.

(c) Except in the case of artificial ponds five feet or less in depth, each long landing shall be provided with a cork ring-type life preserver with not less than 50 feet of 1/4 inch line attached to it.

§ 45.36. Log hauls.

(a) Each log haul shall be lined with sheet iron, or skid rails shall be installed.

(b) Each log haul shall have at least one runway of sufficient width to enable a person to stand clear of logs in the chute. The runway shall be provided, on at least one side, with a standard railing.

§ 45.37. Log decks.

(a) Log decks shall be provided with adequate checks or other means to prevent logs from rolling down the deck on to the carriage or its runway, unless under control.

(b) Connecting pins for deck kickers shall be made of steel and shall be secured with cotter pins or lock nuts.

§ 45.38. Niggers.

All niggers shall operate in metal guides.

§ 45.39. Carriages.

(a) *Antislip protection.* The stand of the log setters shall be provided with a nonslip surface of cleats or corrugated or rough abrasive material.

(b) *Control lock.* Means shall be provided for securely locking the carriage control lever of the sawyer when not in use, except in the case of portable sawmills which have springs to bring the lever to neutral position.

(c) *Emergency stop valve.* If a twin or other steam engine is used exclusively for driving the carriage, a stop valve shall be placed in the main steam pipe as close to the engine as conditions permit. This valve shall be of a quick-closing type and so weighted, or otherwise actuated, that it closes automatically when released by the sawyer. Means of releasing the valve shall be provided within easy reach and control of the sawyer.

(d) *Steam-operated niggers.* Where a log deck is equipped with a steam-operated nigger which turns the log upward and toward the knees, the latter shall be equipped with goosenecks or extension heads.

(e) *Sheave guards.* If the carriage is rope driven, the sheaves shall be guarded with a box of heavy timber beveled down to the floor, except in the case of portable mills. Sheaves of cables operating rope-fed set works shall also be guarded in a similar manner.

(f) *Buffer.* There shall be provided in each end of the carriage run at least one substantial buffer stop capable of bringing the carriage to a full stop from its maximum speed without dangerous retardation. This requirement shall not apply to portable mills, if a clearance equal to the length of the carriage is maintained between the end of the carriage run and the nearest fixed object in line with the carriage run.

(g) *Carriage run.* A standard railing shall be provided opposite any door which opens into a passageway at the rear or side of a saw carriage. The railing shall be at least 18 inches from the rear of the carriage. A warning sign shall be posted on the inside of the door.

(h) *Wheel guards.* Substantial guards of metal or hardwood shall be provided in front of each wheel; the guards shall extend to within 1/4 inch of the rails.

§ 45.40. Band mill.

(a) *Saw catcher.* Each band shall be provided with a saw catcher or rest of substantial construction.

(b) *Enclosure.* All portions of band mills shall be completely enclosed in accordance with specifications of this subchapter except the working portion of the saw blade.

(c) *Cracks in saw.* Any band saw found to have a crack whose depth is greater than 1/2 inch for each 6 inches of width of the saw shall be discontinued from service and discarded, unless the width is subsequently reduced so as to eliminate the crack, or unless the cracked section is replaced.

(d) *Wheel inspections.* All band mill wheels shall be inspected at least once a month. All hubs, spokes, rims, bolts and rivets shall be hammer tested and thoroughly examined.

(e) *Wheel cracks.* No band mill wheel having a crack on the rim or spoke shall be retained in service.

§ 45.41. Circular mill.

(a) *Double circular mill.* This type of mill shall be as follows:

(1) The upper saw of each double circular mill shall be provided with a hood or guard.

(2) On all double circular mills, the horizontal distance from the side of the saw to the nearest post of the husk or frame shall be at least 1 inch greater than the clear vertical distance between the collars of the top and bottom saws.

(3) Either a screen of wire cloth, or other suitable device, shall be installed on double circular saw mills to protect the sawyer from flying particles, or the sawyer shall be provided with a fine mesh wire face mask.

(b) *Single circular saw.* The saw of each single circular mill shall be provided with a hood or guard, if the logs are cut with the bottom half of the saw.

(c) *Safety guides.* All circular saw mills shall be equipped with safety guides which may be adjusted without the use of a wrench or other handtool.

(d) *Spreader.* All circular saw mills shall be equipped with an effective spreader (splitter). In the case of circular sawmills used for edging lumber, this spreader (splitter) shall be solid and stationary and shall extend at least 20 inches above the head blocks.

(e) *Speed limit.* Brackets or edging supports shall be provided between the saw and the side of the husk.

(f) *Rock saw.* The peripheral speed of circular head saws shall not exceed 10,000 feet per minute.

(g) *Saw cracks.* No circular mill saw shall be used when it is found to have developed a crack, the depth of which exceeds that indicated in the following table:

<i>Maximum Depth of Crack (in inches)</i>	<i>Saw Diameter (in inches)</i>
.5	12
1	24
1.5	36
2	48
2.5	60

§ 45.42. Rock saw.

- (a) Where rock saws are provided, the upper portion of the saw shall be guarded.
- (b) Unless clearly impracticable, each rock saw shall be provided with an exhaust hood.

§ 45.43. Stand of sawyer.

- (a) *Shield.* The stand of the sawyer shall be protected by a shield at least four feet in height, consisting of iron or steel not less than 1/4 inch thick, or planks 2 inches or more in thickness, or a concrete wall 8 inches or more in thickness.
- (b) *Emergency stop.* Means shall be provided on portable mills so that the sawyer may, in emergency, stop the mill without leaving his stand.

§ 45.44. Live rolls.

Spiked live rolls shall not be used except in log conveyors.

§ 45.45. Edger.

- (a) *Housing or screen.* All saws shall be guarded by a housing of wire mesh not less than No. 8 U.S. gauge, or wood not less than 1 1/2 inches in thickness, or by a screen hung between the saws and the operator. The screen shall be 2-inch-planking or wire not less than No. 12 U. S. gauge with a mesh such that a ball 1/2 inch in diameter will not pass.
- (b) *Feed rolls.* Unless the feed rolls are made in independent sections of not over 6 inches in length or are hung so as to form a toggle, or are equipped with approved safety rolls, finger guards or dog guards shall be provided in addition to the feed rolls.
- (c) *Pressure feed roll.* If the first pressure feed roll is located within 30 inches of the front of the edger, guard bars or strips shall be provided in front of the roll.
- (d) *End frames.* Unless otherwise protected, openings in the end frames of each edger shall be enclosed with sheet metal, wood or wire mesh, the enclosure to be hinged or other provision made to permit oiling and inspection.

(e) *Spreader*. Bench or single saw edgers shall be equipped with a spreader (splitter) and a saw guard.

§ 45.46. Gang saws.

If the operator stands within 30 inches of the feed rolls, a guard strip of metal shall be provided in front of the rolls; the guard shall be attached to the roller frame.

§ 45.47. Resaws.

(a) Band and circular resaws shall be guarded in accordance with the specifications covering band and circular mills.

(b) If the operator stands within 30 inches of the feed rolls, the rolls shall be provided with guard strips fastened to the roll carriers.

§ 45.48. Trim saws.

(a) Pneumatic overhead trim saws and undercutting trim saws shall be guarded with a barricade of planking two inches or more in thickness bolted to 4 by 4 inch posts. The barricade may either be suspended from the roof by chains or cables, or may be bolted to the frame of the machine. This guard shall be placed not more than 12 inches from the trim table, unless large timber requires a greater distance.

(b) A barricade, similar in construction to that required in subsection (a), shall be provided in the rear of each overhead trim saw. The guard shall be constructed so as to afford complete protection to anyone working or passing the trimmer.

(c) The end saws on all overhead trimmers shall be fenced off or otherwise guarded from contact.

(d) In front of each overhead trim saw, not less than 24 inches from the front edge of the saw and not more than 12 inches above the trim table, there shall be installed a bar or rod connected with the driving mechanism of the conveyor so that the striking of the bar or rod by any body of material automatically stops the conveyor and prevents the passage of the body into the saws. A rope which may be reached by a man going into the saws shall be accepted, in lieu of a bar or rod, if a clearance of more than 12 inches is desired.

Cross References

This section cited in 34 Pa. Code § 45.51 (relating to slasher).

§ 45.49. Jump or bed trimmers.

(a) A substantial guard of two-inch-planking or heavy wire mesh shall be placed in front of the saws.

(b) The under part of the saw table shall be enclosed, with suitable hinged doors provided to give access to various parts for lubrication and adjustment. A screen in front shall also be accepted.

(c) When jump saws are operated by one or more foot treadles, a safety block shall be placed under the treadle or treadles while repairs or adjustments are being made. If the saws are controlled by hand levers, a yoke shall be provided to lock all levers when repairs or adjustments are being made.

(d) An iron stirrup shall be fastened to the floor, over the treadle, leaving just sufficient room for the operator to insert his foot above the treadle.

(e) All end saws shall be fenced off or otherwise guarded from contact.

§ 45.50. Swing cutoff saw.

All swing cutoff saws in sawmills shall have the upper portion of the disk enclosed in a rigid guard which shall extend down to a plane level with the lowest edge of the collar.

§ 45.51. Slasher.

All slashers shall be guarded in the manner specified in § 45.48 (relating to trim saws).

§ 45.52. Transfer table.

The vertical face of all transfer tables shall be guarded with sheet metal, heavy mesh or wood housing, unless protected by live roll tables or machine frame, or unless provided with buffers in the roll case.

§ 45.53. Conveyors.

(a) *Conveyors for slashers.* The conveyor taking material to the slasher saws shall be equipped with a clutch, tight and loose pulley, or other automatic power-disconnecting device. Means shall be provided for operating this device from the platform of the sorter.

(b) *Chain hauls.* In case of chain hauls, the return run of the chain in the basement shall be supported over passageways so that, in the event of breaking, it does not fall on anyone.

(c) *Return run.* If the return run of conveyors operates within seven feet of the floor, there shall be provided a shallow trough of sufficient strength to carry the weight resulting from a broken chain. If over 7 feet from the floor, a means shall be provided to catch and support the ends of the chains, in the event of a break over passageways or runways.

§ 45.54. Hog mills.

The chute feeding the hog mill shall be inclined, or a baffle shall be provided, to prevent material from being thrown from the mill.

§ 45.55. Stove wood saws.

A substantial barrier of wood not less than 1 1/2 inches in thickness, or sheet iron not less than 1/8 inch in thickness, shall be provided over the saws. This

guard shall come within 6 inches of the saw table. A baffle, constructed of 2-inch-hardwood, shall be accepted in lieu of the guard if more than 6 inches clearance is required.

§ 45.56. Lath machines.

- (a) Each lath machine shall be provided with a device to prevent kickbacks.
- (b) If the operator stands within 30 inches of the feed rolls, a guard strip of metal shall be provided in front of the rolls; such guard shall be attached to the roller frame.

§ 45.57. Lath bundle trimmers.

The saws on the lath trimmer shall be guarded on the ends, top and rear with a substantial housing of wood or metal.

§ 45.58. Shingle mills.

- (a) The front or cutting face of knife-type shingle jointers shall be completely enclosed, with the exception of a narrow slot through which the shingles may be fed against the knives.
- (b) The saw used in shingle mills shall be guarded with a hardwood or heavy metal strip. If practicable, the saw shall be completely enclosed, except the operating edge.
- (c) Shingle bolts for vertical shingle mills shall be piled not more than two high.
- (d) Shingle clip saws shall be entirely enclosed, except for the operating edge.

§ 45.59. Heavy bolters.

Each heavy bolter shall be equipped with a stationary spreader (splitter). The saw shall be guarded on the top with a hardwood or metal strip. When the bolter is equipped with a short travel carriage, the bolter shall meet the requirements for the circular mill.

§ 45.60. Rossers.

- (a) The rotating heads on rossers shall be entirely enclosed, except for the operating face.
- (b) A suspended guard of expanded metal or wire mesh, such that a ball 1/4 inch in diameter will not pass, shall be hung in front of each rosser head.

§ 45.61. Green planers.

All planer heads shall be entirely enclosed, except for a space large enough to permit the insertion of stock.

§ 45.62. Sawfiling machinery.

(a) *Grinding wheel hoods.* All grinding wheels shall be guarded in accordance with regulations for polishing and grinding machinery issued by the Department.

(b) *Goggles.* All filing room employes shall be provided with and required to use goggles in accordance with Chapter 39, Subchapter C (relating to head and eye protection), or approved eye shields shall be attached to grinding or filing machines.

DRY KILNS**§ 45.71. Kiln design and layout.**

(a) *Grades.* Grades within the kiln that permit loaded cars to attain a momentum of 150 feet per minute is prohibited. In no case shall the grade exceed 15 inches per 100 horizontal feet.

(b) *Door fastenings.* All doors shall be provided with a method of keeping them open while the kiln is being loaded. Counterweighted vertical-lifting doors shall be prohibited, unless all counterweight cables are fire-resistant and the counterweights are boxed or guided.

(c) *Operating pits.* Where operating pits are provided, they shall be ventilated, drained, and lighted. They shall not be less than 6 feet in depth and 3 feet in width. All valves, dampers, damper rods, traps and other operating devices shall be located in the operating pit. The roof of this pit, including ventilating openings and manholes, shall be constructed so as to prevent injury to the operator; it shall be provided with gratings, doors, and guards. It shall not be necessary to enter the kiln proper for any operating regulation.

(d) *Steam line insulation.* All steam mains, located in or adjacent to this operating pit, shall be covered with asbestos or other heat-insulating material.

(e) *Ventilation.* When the kiln doors are protected by a roof or a building used for loading, unloading, or storage, suitable ventilating windows or other openings, shall be provided directly above the doors to allow escape of steam and moisture.

§ 45.72. Exits.

All double-end kilns shall be provided with at least one exit door at each end. This door shall be easily opened from inside the kiln and shall be not less than 4 feet in height. This door shall not be required on chain-controlled vertical-rolling steel doors, or canvas rolling doors, or any other type of door which may be operated from inside the kiln by one person.

§ 45.73. Ladders.

When it is necessary to go on the roof to operate ventilators or other equipment, a permanent ladder, attached rigidly to the kiln wall at the rear or side, shall be provided for each kiln to permit easy and safe access to the roof. The ladder shall be constructed in accordance with Chapter 21 (relating to ladders).

§ 45.74. Operating rules.

(a) *Chocks.* Each kiln shall be provided with chocks 2 by 4 inches by 1 foot longer than rail gauge. Holding trucks by patten clamp stops or by wrapping and locking a chain around the rail shall also be accepted. If openings between lumber trucks standing on kiln tracks are used as thoroughfares, the cars on the upgrade shall be well chocked.

(b) *Operators.* Operators shall be warned against inhaling air from a kiln in operation.

(c) *Blocking loose doors.* If doors become disengaged from carriers and hangers, they shall be blocked up to prevent falling. Rehanging shall be accomplished as soon as possible.

WOODWORKING MACHINERY**§ 45.81. Circular saws.**

(a) *Gang ripper.* Each circular gang ripper shall have the saws enclosed by an approved hood, substantially secured to the framework of the machine. Such hood shall conform, as far as possible, to the requirements specified for circular rip saw hoods.

(b) *Spreader.* Each circular rip saw, except those provided with a roller or wheel back of the saw, shall be provided with a spreader.

(c) *Kickback device.* Each circular rip saw, except those provided with a roller or wheel back of the saw, shall be provided with an approved kickback device to prevent material from being thrown back on the operator. A kickback device is not required on saws where the stock is drawn back over the table after a cut, or where the riding of the kickback device may mar a finished surface.

(d) *Circular resaws.* Each circular resaw shall be guarded by an approved hood or shield of metal above the saw. The hood or shield shall be designed so as to guard against danger from flying splinters or broken saw teeth. Each circular resaw, except self-feed saws with a roller or wheel at the back of the saw, shall be provided with a spreader.

§ 45.82. Exceptions and special applications.

(a) *Miscellaneous operations.* Circular table saws used for rabbetting, plowing, grooving and dado operations exclusively shall not be required to have spreaders attached. All saws used for these operations, except the self-feed vari-

ety, shall be guarded by hoods in accordance with § 45.125 (relating to circular crosscut saws). Guards supported from the top or side shall be accepted on saws of this character.

(b) *Combination saws.* Combination rip and crosscut table saws (revolving double arbor saws) shall be fully guarded in accordance with § 45.125 or § 45.126 (relating to circular crosscut saws; and circular ripsaws), except that a guard supported from the top or side shall be accepted. Nothing in this provision shall be construed to permit the operation of the ripsaw without a spreader, except when actually performing rabbetting, plowing, grooving, or dado operations. On completion of such operations, the spreader shall be immediately replaced. Single disk combination rip and crosscut saws shall be guarded in accordance with § 45.126.

(c) *Tilting table saws.* Tilting table saws shall be guarded in accordance with § 45.125 or § 45.126, except that guards supported from the top and side shall be accepted on ripsaws used occasionally for rabbetting, plowing, grooving, or dado operations. Nothing in this subsection shall be construed to permit the omission of the spreader, except when actually performing rabbetting, plowing, grooving or dado operations. On completion of such operations, the spreader shall be immediately replaced. Tilting table combination laws shall be guarded in accordance with subsection (b).

(d) *Cutoff saws.* Traveling cutoff table saws shall have the hood supported from the saw carriage. Single cutoff table saws and double or multiple cutoff table saws in fixed position shall be guarded in accordance with § 45.125. Hoods supported from the top shall be accepted. Traveling double or multiple cutoff table saws shall have the hood supported from the saw carriages. Both single and double or multiple cutoff table saws shall not be required to have automatic hoods, if carriage feed or some adaption of the carriage feed principle is used, if each saw is equipped with a hood, secured to the carriage, which completely covers the saw when not in use and when the carriage is in the loading position, or if the entire machine is fenced in at back and sides to a height level with the tops of the saws. Form feed shall be construed as an adaption of the carriage feed principle.

(e) *Swing cutoff saws.* Swing cutoff saws shall be provided with the following devices:

- (1) Each swing cutoff saw shall be provided with an approved rigid metal hood arranged so that the part of the saw above the table shall be covered down to a plane level with the lowest edge of the collar. This hood shall be constructed so as to afford the operator a view of the cutting edge of the saw at the point of contact with the stock. The hood shall be designed so as to protect the operator from flying splinters and broken saw teeth.

(2) Each swing cutoff saw shall be provided with an effective device to return the saw automatically to the back of the table when released at any point of its travel. The device shall not depend for its proper functioning upon any rope, cord or spring.

(3) Each swing cutoff saw shall be provided with limit chains or other positive stops to prevent the saw from swinging beyond the front and back edges of the table.

(4) A latch may be provided to catch and retain the saw at the rear of the table, but nothing in this subsection shall be construed to render the latch the sole means of retaining the saw at the rear of the table.

(f) *Inverted swing cutoff saws.* Inverted swing cutoff saw or jump saw shall be guarded by an approved fixed hood, extending over the complete line of travel of the saw, not more than three inches above the top of the largest saw used on the machine. The hood shall be supported at the rear. In lieu of a hood, an automatic guard secured to the frame or arbor and operated by the travel of the saw shall be accepted.

(g) *Rear and under guarding.* The portion of all circular saws which is beneath and behind the saw table shall be effectively guarded by the exhaust hood or some other device.

Cross References

This section cited in 34 Pa. Code § 45.111 (relating to saws).

§ 45.83. Speed of circular saws.

The following table sets forth the recommended and maximum speed in revolutions per minute for various sizes of circular saws working in soft wood. The maximum allowable speed, given in the third column of the table, shall not be exceeded, except in the case of saws, directly coupled to motors, which have been properly tensioned by the manufacturer to operate safely at a higher speed. The saws shall be marked by the manufacturer with the maximum revolutions per minute for which they are tensioned.

<i>Diameter of Saw (in inches)</i>	<i>Revolutions Per Minute</i>	
	<i>Recommended for Soft Wood</i>	<i>Maximum Speed</i>
8	4500	5400
10	3600	4320
12	3000	3600
14	2570	3085
16	2250	2700
18	2000	2400
20	1800	2160

<i>Diameter of Saw (in inches)</i>	<i>Revolutions Per Minute</i>	
	<i>Recommended for Soft Wood</i>	<i>Maximum Speed</i>
22	1635	1965
24	1500	1800
26	1385	1660
28	1285	1540
30	1200	1440
32	1125	1350
34	1060	1270
36	1000	1200
40	900	1080
44	820	980
48	750	900
54	665	800
60	600	720

§ 45.84. Spreader.

Unless specifically excepted, all ripsaws shall be provided with a spreader constructed of saw steel. The spreader shall be fastened securely at the rear of the saw in true alignment with the saw blade. The spreader shall be slightly thinner than the saw kerf and slightly thicker than the saw disk.

§ 45.85. Feed rolls.

(a) All feed rolls shall be completely enclosed by a guard constructed of heavy material, preferably metal, adjustable to the size of stock being cut and firmly secured to the frame of the machine.

(b) Sectional feed rolls, on which more than one piece of stock is fed at one time, shall be provided for planers. If solid feed rolls are used on planers, matchers or moulders, a sectional finger device shall be used to prevent kickbacks.

§ 45.86. Counterweights.

When a counterweight is used in connection with a swing cutoff saw or other machine, one of the following or equivalent means shall be used to prevent the counterweight from dropping:

- (1) The counterweight shall be bolted to the bar by means of a bolt passing through both bar and counterweight.
- (2) A bolt shall be put through the extreme end of the counterweight bar.
- (3) If the counterweight does not encircle the bar, a safety chain shall be attached to it. All bolts supporting the bar and weight shall be supplied with cotter pins and the ends turned over. All suspended counterweights shall be

suspended only by a chain or wire cable of sufficient strength. Wherever they might fall and cause injury, suspended counterweights shall travel in a pipe or other suitable enclosure.

Cross References

This section cited in 34 Pa. Code § 45.90 (relating to boring and mortising machines); 34 Pa. Code § 45.111 (relating to saws); and 34 Pa. Code § 45.114 (relating to stave croziers).

§ 45.87. Band saws and band resaws.

All portions of the saw blade shall be enclosed or guarded, except the working side of the blade between the guide and the table. The guard shall be self-adjusting. Band saw wheels shall be completely encased. Each gang ripper of band or straight saw type shall have the cutting edges of the saws guarded by a hood or screen; the guard shall be substantially secured to the framework of the machine.

§ 45.88. Jointers or buzz planers.

(a) Hand-feed jointers or buzz planers with horizontal head shall have an approved automatic guard over the cutting head both in front of and in back of the guide.

(b) A jointer or buzz planer with a horizontal head shall be equipped with a cylindrical cutting head, the throat of which shall not exceed 3/8 inch in depth or 1/2 inch in width.

(c) A jointer or buzz planer with a vertical head shall be guarded by an exhaust hood, or other approved device, which shall completely enclose the revolving head, except for a slot sufficiently wide to permit the application of material.

§ 45.89. Tenoning machines.

(a) *Guards.* Tenoning machines shall have all cutting heads, saws, if used, and all exposed moving parts carefully guarded. In the case of cutting heads and saws, the guard shall be solid metal.

(b) *Single end hand-feed tenoners.* Single end hand-feed tenoners shall have a piece of sheet iron placed so that the hands of the operator do not slip off the lever handle into the tool. The guard shall be fastened to the lever.

(c) *Double end tenoners.* Feed chains and sprockets of all double end tenoning machines shall be completely enclosed, except that portion of chain used for conveying stock. At rear ends of frames, over which the feed conveyors run, sprockets and chains shall be guarded at the sides by plates projecting beyond the periphery of sprockets and ends of lugs. The rear end of the frame, over which the feed conveyors run, shall be extended so that the material may be guided to a point within easy reach of the person removing stock at the rear of the tenoner.

(d) *Spoke tenoners.* All spoke tenoners shall be adequately guarded to prevent hazard from falling ends of spokes.

§ 45.90. Boring and mortising machines.

(a) Either bit chucks with no projecting set screws shall be used, or all projecting set screws shall be covered.

(b) If a counterweight is used, it shall be secured in accordance with § 45.86 (relating to counterweights).

(c) Universal joints on spindles or boring machines shall be enclosed.

(d) An iron stirrup shall be fastened to the floor, over the treadle, leaving only sufficient room for the foot of the operator between the treadle and the stirrup and extending beyond the side edges of the treadle.

(e) All pneumatic wood boring machines shall be guarded in accordance with Chapter 43, Subchapter B (relating to compressed air apparatus).

§ 45.91. Wood shapers.

(a) The cutting head of each wood shaper, hand-feed panel raiser, or other similar machine not automatically fed, shall be guarded with a cage or pulley guard of other approved device, designed so as to keep the hands of the operator away from the cutting edge. In no case shall a warning device of leather or other material attached to the spindle be acceptable. Cylindrical heads shall be used, if the nature of the work permits. The diameter of circular shaper guards shall be not less than the greatest diameter of the cutter. Guards shall not be required on operations involving form feed.

(b) All double spindle shapers shall either be provided with a spindle starting and stopping device for each spindle, or provision shall be made to insure that only one spindle shall operate at any one time.

§ 45.92. Planing, molding, sticking, and matching machines.

Planing, molding, sticking and matching machines shall have all cutting heads, and saws if used, covered by an approved solid metal guard.

§ 45.93. Profile, swing-head and back-knife lathes.

Profile, swing-head and back-knife lathes shall have all cutting heads covered by a solid metal guard.

Cross References

This section cited in 34 Pa. Code § 45.117 (relating to pail and barrel lathes).

§ 45.94. Sanding machines.

(a) *Drum sanding machines.* Drum sanding machines shall have a guard arranged so as to completely enclose the revolving drum, except the portion required for the application of the material to be finished. Guards with hinges to

facilitate the insertion of sandpaper shall be accepted. The exhaust hood may form part or all of this guard. When so used, the hood shall be of sufficient strength to effectively serve the purpose of a guard.

(b) *Disc sanding machines.* Disc sanding machines shall be guarded so as to completely enclose the revolving disc, except the portion of the working side as may be necessary for the application of material to be finished. If a table is used, the working side of the disc, below the table, shall be guarded.

(c) *Belt sanding machines.* Belt sanding machines shall have both pulleys enclosed to guard points where the belt runs on to the pulleys. The edges of the unused run of belt shall be enclosed.

VENEER MACHINERY

§ 45.101. Steam vats and soaking pits.

(a) *Walkways.* Large steam vats and soaking pits, divided into sections, shall be provided with substantial walkways between each section. Each walkway shall be provided with standard railings, removable if necessary. If the size of stock permits, vat sections shall be restricted to a length of 8 feet or less.

(b) *Ventilation.* Steaming vats and soaking pits shall be located in buildings or special sheds equipped with ventilating systems which provide the following conditions:

(1) During the months of November, December, January, February, March, April and May of each year, the temperature shall be maintained between 40° F and 95° F. During this period, when the weather is clear and the outside temperature is 40°F or more, the building or shed shall be kept free from steam to a height of 6 feet from the floor. The ventilating system employed to clear steam shall be maintained in operation during less favorable weather conditions.

(2) During the months of June, July, August, September and October of each year, the building or shed shall be kept free from steam to a height of 6 feet from the floor. The systems which are used to produce these conditions may consist of ventilating fans, heating coils, hoods with flues attached over vats and pits, introduction of hot air or other natural ventilating devices.

§ 45.102. Log handling equipment.

(a) Log trolleys or cranes shall be used, unless the stock is small enough to be handled by one man without assistance.

(b) All gears, sprockets and other dangerous parts shall be enclosed with standard guards in accordance with the requirements of Chapter 29 (relating to mechanical apparatus—miscellaneous).

§ 45.103. Drag saws.

Drag saws shall be located so as to provide at least 4 feet clearance for passage when the saw is at the extreme end of its stroke. If such clearance is not obtainable, the saw and its driving mechanism shall be enclosed by a standard railing.

§ 45.104. Veneer cutters and wringers.

(a) *Cutters and slicers.* Veneer slicers and rotary veneer cutters shall have all revolving and other moving knives guarded.

(b) *Veneer clippers.* Each veneer clipper shall have either automatic feed or shall be provided with a guard which will make it impossible to place any portion of the hand under the knife while feeding stock. If practicable, the guard shall be the vertical finger type. All sprockets on chain or slat belt conveyors shall be enclosed. Each veneer clipper shall be equipped with conveyors or traveling tables to remove stock when clipped. If such tables or conveyors are not installed, the rear of each clipper shall be guarded either by a screen, or vertical finger guard which shall make it impossible for any portion of the hand to be placed under the knife while removing clipped stock.

(c) *Veneer wringers.* The entry side of each veneer wringer shall be enclosed, so as to provide sufficient space to insert stock but not enough to permit any portion of the hand to enter the rolls.

(d) *Operating levers and treadles.* Operating levers and treadles on all veneer machinery shall be located and protected so that they cannot be shifted or tripped accidentally. They shall be constructed so as to require the simultaneous independent operation of two levers or other tripping devices.

COOPERAGE MACHINERY**§ 45.111. Saws.**

(a) *Heading bolters.* Heading bolters shall enclose the saw. Log carriers shall be provided with a device which return the carrier automatically, when released at any point in its travel, to a position in front of the saw. The device shall not depend for its proper functioning on any rope, cord, or spring. If a counterweight is used, it shall be secured in accordance with § 45.86 (relating to counterweights). A limit chain or other positive stop shall be provided to prevent the carrier from swinging too far back.

(b) *Swing cutoff saws.* All swing cutoff saws shall be guarded in accordance with § 45.82(e) (relating to exceptions and special applications).

(c) *Equalizers.* The saws shall be encased by bolt, stave, and heading equalizers, except that portion immediately adjacent to the feeding device.

(d) *Barrel stave saws.* On barrel stave saws, the saw and the revolving part to which the saw blade is bolted shall be enclosed, except for that part of the saw immediately adjacent to the feeding device.

(e) *Heading saws and the like.* On heading saws, variable-feed rip saws, flat stave saws, head rounders, and the like, the saws shall be enclosed. If a sprocket feed device is used, it shall be enclosed to prevent the fingers of the operator from getting between the feed sprocket and the stock. All counterweights used to actuate feed devices shall operate in a stationary casing.

(f) *Saw guard provisions.* In so far as the nature of the equipment and the operation performed will permit, all enclosures for saws necessitated by this section shall conform to the specifications for saw guards in this chapter.

§ 45.112. Stave and heading planers.

(a) All cutting heads and knives of single and double planers shall be effectively guarded. The exhaust hood may form part or all of the guard.

(b) All feed rolls shall be completely enclosed, except such portions as may be necessary to admit the stock. Sectional feed rolls shall be provided, if practicable. When solid feed rolls are used, a sectional finger device shall be used to prevent kickbacks.

§ 45.113. Stave and heading jointers.

(a) Each stave or heading jointer shall have the head guarded completely by the exhaust hood or other approved device, except that portion where the stock is applied.

(b) Footpower stave jointing machines shall have the knife effectively guarded to prevent the fingers of the operator from coming in contact.

§ 45.114. Stave croziers.

(a) Each stave crozier shall have the head guarded completely by the exhaust hood or other approved device except that portion which actually embeds itself in the stock.

(b) Each stave crozier shall have all feed chains and sprockets completely enclosed.

(c) If a counterweight is used, it shall be secured in accordance with the requirements of § 45.86 (relating to counterweights).

§ 45.115. Barrel sanders.

All sanding equipment shall be guarded in accordance with this chapter.

§ 45.116. Power windlass.

All counterweights used in connection with a power windlass shall operate in stationary casings. Control levers shall be located within easy reach of the operator, when standing in the usual operating position.

§ 45.117. Pail and barrel lathes.

The provisions of § 45.93 (relating to profile, swing-head and back-knife lathes) shall govern the guarding of pail and barrel lathes.

SPECIAL REQUIREMENTS FOR NEW INSTALLATIONS**§ 45.118. Machine layout and clearances in sawmills.**

(a) Either clear thoroughfare shall be provided on the side of the mill from the headsaws to the tramway, or an overhead runway equipped with standard handrails and toeboards. A horizontal clearance of at least three feet shall be allowed between any fixed object not required in the mill and any part of the traveling mechanism.

(b) If persons are required to cross the live rolls, a bridge shall be provided over the rolls. The bridge shall be equipped with standard handrails and toeboards.

§ 45.119. Log haul.

The log haul shall be constructed so as to show a factor of safety of ten when loaded with the heaviest log handled.

§ 45.120. Carriage.

(a) *Construction.* The saw carrier shall be iron, steel, or heavy timber. If timber is used, it shall be mortised or dovetailed and through-bolted. The entire running board shall be decked.

(b) *Clearance.*

(1) The rear edge of the carriage shall be at least 18 inches from the wall or wall timbers, if there is no passageway between them. If there is a passageway, at least 36 inches between the rear edge of the carriage and the wall or wall timbers shall be provided.

(2) No roof trusses or timbers shall be located within 6 feet 6 inches of the upper surface of the platform of the log setter on any carriage.

§ 45.121. Band mills.

(a) All band saw wheels shall have a minimum rim thickness of 5/8 inch, except the portion within 1 inch from the front edge.

(b) Unless the provisions of subsections (c)—(e) are met, no band mill shall be run at a speed in excess of that indicated in the following table:

<i>Size of Mill (in feet)</i>	<i>Speed (in feet per minute)</i>
8	10,000
6	9,000
Under 6	6,000

(c) Band mills shall be designed and constructed with a factor of safety of ten for the intended speed.

(d) Band mills shall be cast so as to be as free as possible from shrinkage strain and shall be balanced statically, as well as dynamically when running at rated speed.

(e) The intended maximum speed of band mills shall be stamped in figures not less than 1/4 inch in height on a brass plate securely fastened to the frame of the machine so as to be easily legible from the stand of the sawyer.

§ 45.122. Live rolls.

The space between live rolls shall be entirely filled either with planking 2 inches or more in thickness if of hemlock, or 1 1/2 inches if of hardwood, or with metal sheets or plates so supported that they are not displaced visibly by a load of 150 pounds applied at any point. If bolts are used to fasten the planks, the heads should be set in countersunk holes. Sheet metal or plates should not be less than 1/4 inch in thickness.

Cross References

This section cited in 34 Pa. Code § 45.143 (relating to live rolls).

§ 45.123. Lath bolters and machines.

A hood of sheet metal not less than 1/8 inch in thickness, or cast iron not less than 3/16 inch in thickness, shall be provided over the saws of each lath bolter and lath mill machine. This hood shall be hinged so that it may be turned back to permit changing the saws.

§ 45.124. Dry kilns.

(a) A walkway of open or lattice construction (not to impede circulation) shall be provided on at least one side or in the center of end-piling kilns and on two sides of cross-piling kilns. Walkways may be omitted from box kilns or kilns open at one end only. This walkway may be made of iron pipes one inch or more in diameter, resting on steel cross-beams or perforated or expanded metal (at least 50% open). Two by four inch timbers on edge, spaced 2 inches apart, may be used if necessary. Metal construction is preferable.

(b) Tracks in the kiln shall be located so as to afford a clearance of at least 18 inches between a loaded car and the wall of the kiln where walkways are provided.

Cross References

This section cited in 34 Pa. Code § 45.82 (relating to exceptions and special applications) and 34 Pa. Code § 45.146 (relating to hoods for woodworking machinery).

§ 45.125. Circular crosscut saws.

Each circular crosscut table saw shall be guarded by an approved hood which shall cover the saw at all times at least to the depth of the teeth. The hood shall adjust itself automatically to the thickness of, and shall remain in contact with, the material being cut, unless finished surfaces of stock may be marred by contact with the guard, in which case the guard may be raised slightly to avoid contact. The hood shall be designed so as to protect the operator from flying splinters and broken saw teeth.

Cross References

This section cited in 34 Pa. Code § 45.82 (relating to exceptions and special applications); and 34 Pa. Code § 45.146 (relating to hoods for woodworking machinery).

§ 45.126. Circular ripsaws.

Each circular ripsaw shall be guarded by an approved hood which shall cover the saw at all times at least to the depth of the teeth. This hood shall be attached to a spreader fastened at the rear of the saw. The hood, except for self-feed ripsaws, shall adjust itself automatically to the thickness of, and shall remain in contact with, the material being cut, unless finished surfaces of stock may be marred by contact with the guard, in which case the guard may be raised slightly to avoid contact. The hood shall be designed to protect the operator from flying splinters and broken saw teeth. The hood for self-fed ripsaws shall be supported from the machine frame but need not rest upon the table nor upon the material being cut. Hoods for self-feed ripsaws shall extend not more than 1/2 inch above a plane passing through the bottom of the feed rolls.

Cross References

This section cited in 34 Pa. Code § 45.82 (relating to exceptions and special applications); and 34 Pa. Code § 45.146 (relating to hoods for woodworking machinery).

§ 45.127. Speed of band saw wheels.

No band saw wheel shall be run at a speed in excess of that which allows a factor of safety of ten in all parts of the wheel. The frame of each machine shall be marked by the manufacturer in letters, not less than 1/4 inch in height, showing this maximum allowable speed. Band saw wheels shall be designed, manufactured and mounted so that they run true at the maximum allowable speed, without excessive vibration.

§ 45.128. Tenoning machines.

If sheet metal is used for guards on cutting heads, saws and exposed moving parts, it shall be not less than 1/8 inch (approximately 11 gauge) in thickness. If cast metal guards are used, the thickness shall be not less than 3/16 inch for cast iron and 5/8 inch for aluminum. The hood of the exhaust system may form part

or all of the guard. When so used, the hood shall be constructed of metal of a thickness not less than that specified in this section.

Cross References

This section cited in 34 Pa. Code § 45.147 (relating to tenoning machines).

§ 45.129. Guarding devices for cutting heads.

(a) Subsection (b) applies to cutting head guards used on planing, molding, sticking, and matching machines and profile, swing-head and back-knife lathes.

(b) If such guard is constructed of sheet metal, the material used shall be not less than 1/8 inch, or approximately No. 11 gauge, in thickness. If cast metal is used, the thickness shall be not less than 3/16 inch for cast iron and 5/8 inch for aluminum. The hood of the exhaust system may form part or all of the guard. When so used, the hood shall be constructed of metal of a thickness not less than the above specifications.

Cross References

This section cited in 34 Pa. Code § 45.148 (relating to guarding devices for cutting heads).

§ 45.130. Veneer machinery.

The sides of all steam vats and soaking pits shall extend to a height not less than 36 inches above the floor, working platform or ground level.

SPECIAL REQUIREMENTS FOR EXISTING INSTALLATIONS

§ 45.141. Bridge provisions in saw mills.

Steps leading up and down from the live roll tables shall be accepted in existing installations.

§ 45.142. Carriage clearances.

If truss knees come within 6 1/2 feet of the carriage platform, the space between the knees shall be boarded over for at least the length of the carriage travel and to a height of 6 1/2 feet. If clearance between the rear of the carriage and frame timbers is less than 18 inches, the frame timbers shall be boarded flush.

§ 45.143. Live rolls.

As repairs and changes are made, existing installations shall comply with § 45.122 (relating to live rolls).

§ 45.144. Lath bolters and machines.

Existing installations with wood guards shall be accepted.

§ 45.145. Clearances in dry kilns.

In existing kiln installations, the tracks shall be located so as to afford a clearance of at least 18 inches between a loaded car and the wall of the kiln where walkways are provided.

§ 45.146. Hoods for woodworking machinery.

If, in the judgement of the Department, existing circular crosscut or circular rip saw installations are not affording protection, either from faulty design or lack of use, they shall be replaced with guards as required in §§ 45.125 and 45.126 (relating to circular crosscut saws; circular rip saws); repair or replacement of existing installations shall be in accordance with such sections.

§ 45.147. Tenoning machines.

If, in the judgement of the Department, existing tenoning machine installations are not affording protection, either from lack of use or faulty design, or other cause, they shall be replaced with guards as required in § 45.128 (relating to tenoning machines); repair or replacement of existing installations shall be in accordance with that section.

§ 45.148. Guarding devices for cutting heads.

(a) Subsection (b) applies to planing, molding, sticking and matching machines and profile, swing-head and back-knife lathes.

(b) If, in the judgement of the Department, existing installations are not affording protection, either from lack of use, faulty design or other cause, they shall be replaced with guards as required in § 45.129 (relating to guarding devices for cutting heads); repair or replacement of existing installations shall be in accordance with that section.

§ 45.149. Veneer machinery.

(a) Existing installations which do not meet the requirements of subsection (b) shall have steam vats and soaking pits provided with solid covers. In addition, the floor around each pit or vat shall be of nonslip construction with a cleated, corrugated, or rough abrasive surface which retains its nonslip characteristics under all conditions of moisture.

(b) The sides of all steam vats and soaking pits shall extend to a height not less than 36 inches above the floor, working platform or ground level.

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