Chapter 296-301 WAC
Safety Standards for Textile Industry
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Chapter 296-301 WAC
SAFETY STANDARDS FOR THE TEXTILE INDUSTRY

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WAC 296-301-010 Textiles-Application requirements.

(1) Application. The requirements of this chapter for textile safety apply to the design, installation, processes, operation, and maintenance of textile machinery, equipment, and other plant facilities in all plants engaged in the manufacture and processing of textiles, except those processes used exclusively in the manufacture of synthetic fibers.

(2) These standards shall be augmented by the Washington state general safety and health standards, and any other regulations of general application which are or will be made applicable to all industries.

(3) The provisions of this chapter shall prevail in the event of conflict with or duplication of, provisions contained in chapter 296-24 WAC, the general safety and health standards, chapter 296-62 WAC, the general occupational health standards, and chapter 296-800 WAC, the safety and health core rule book.

(4) WAC 296-24-012 and 296-800-360 shall apply where applicable to this industry.

[Statutory Authority: RCW 49.17.010, .040, .050. 01-11-038 (Order 99-36), § 296-301-010, filed 05/09/01, effective 09/01/01
Order 74-19, § 296-301-010, filed 5/6/74.]

WAC 296-301-015 Definitions applicable to this chapter.

(1) **"Belt shifter"** means a device for mechanically shifting a belt from one pulley to another.

(2) "**Belt shifter lock"** means a device for positively locking the belt shifter in position while the machine is stopped and the belt is idling on the loose pulleys.

(3) **"Calendar"** means a machine consisting of a set of heavy rollers mounted on vertical side frames and arranged to pass cloth between them. Calendars may have two to ten rollers, or bowls, some of which can be heated.

(4) **"Embossing calender"** means a calender with two or more rolls, one of which is engraved for producing figured effects of various kinds on a fabric.

(5) "**Cans (drying)"** means hollow cylindrical drums mounted in a frame so they can rotate. They are heated with steam and are used to dry fabrics or yarn as it passes around the perimeter of the can.

(6) **"Carbonizing"** means the removing of vegetable matter such as burns, straws, etc., from wool by treatment with acid, followed by heat. The undesired matter is reduced to a carbon-like form which may be removed by dusting or shaking.

(7) **"Card"** machine means a machine consisting of cylinders of various sizes-and in certain cases flats-covered with card clothing and set in relation to each other so that fibers in staple form may be separated into individual relationship. The speed of the cylinders and their direction of rotation varies. The finished product is delivered as a sliver. Cards of different types are: The revolving flat card, the roller-and-clearer card, etc.

(8) **"Card clothing"** means the material with which many of the surfaces of a card are covered; e.g., the cylinder, doffer, etc. It consists of a thick foundation material, usually made of textile fabrics, through which are pressed many fine, closely spaced, specially bent wires.

(9) **"Comber"** means a machine for combing fibers of cotton, wool, etc. The essential parts are a device for feeding forward a fringe of fibers at regular intervals and an arrangement of combs or pins which, at the right time, pass through the fringe. All tangled fibers, short fibers, and neps are removed and the long fibers are laid parallel.

WAC 206-301-015 (Cont.)

(10) **"Combing machinery"** means a general classification, including combers, sliver lap machines, ribbon lap machines, and gill boxes, but excluding cards.

(11) **"Cutter (rotary staple)"** means a machine consisting of one or more rotary blades used for the purpose of cutting textile fibers into staple lengths.

(12) **"Exposed to contact"** means that the location of an object, material, nip point, or point of operation is such that a person is liable to come in contact with it in his normal course of employment.

(13) **"Garnett machine"** means any of a number of types of machines for opening hard twisted waste of wool, cotton, silk, etc. Essentially, such machines consist of a lickerin; one or more cylinders, each having a complement worker and stripper rolls; and a fancy roll and doffer. The action of such machines is somewhat like that of a wool card, but it is much more severe in that the various rolls are covered with garnett wire instead of card clothing.

(14) **"Gill box"** means a machine used in the worsted system of manufacturing yarns. Its function is to arrange the fibers in parallel order. Essentially, it consists of a pair of feed rolls and a series of followers where the followers move at a faster surface speed and perform a combing action.

(15) **"Interlock"** means a device that operates to prevent the operation of machine while the cover or door of the machine is open or unlocked, and which will also hold the cover or door closed and locked while the machine is in motion.

(16) **"Jig (dye)"** means a machine for dyeing piece goods. The cloth, at full width, passes from a roller through the dye liquor in an open vat and is then wound on another roller. The operation is repeated until the desired shade is obtained.

(17) **"Kier"** means a large metal vat, usually a pressure type, in which fabrics may be boiled out, bleached, etc.

(18) **"Lapper (ribbon)"** means a machine used to prepare laps for feeding a cotton comb; its purpose is to provide a uniform lap in which the fibers have been straightened as much as possible.

(19) **"Lapper (sliver)"** means a machine in which a number of parallel card slivers are drafted slightly, laid side by side in a compact sheet, and wound into a cylindrical package.

(20) **"Loom"** means a machine for effecting the interlacing of two series of yarns crossing one another at right angles. The warp yarns are wound on a warp beam and pass through heddles and reed. The filling is shot across in a shuttle and settled in place by reed and lay, and the fabric is wound on a cloth beam.

(21) **"Starch mangle"** means a mangle that is used specifically for starching cotton goods. It commonly consists of two large rolls and a shallow open vat with several immersion rolls. The vat contains the starch solution.

(22) **"Water mangle"** means a calender having two or more rolls used for squeezing water from fabrics before drying. Water mangles also may be used in other ways during the finishing of various fabrics.

(23) **"Mule"** means a type of spinning frame having a head stock and a carriage as its two main sections. The head stock is stationary. The carriage is movable and it carries the spindles which draft and spin the roving into the yarn. The carriage extends over the whole width of the machine and moves slowly toward and away from the head stock during the spinning operation.

WAC 206-301-015 (Cont.)

(24) **"Nip"** means the point of contact between two in-running rolls.

(25) **"Openers and pickers"** means a general classification which includes breaker pickers, intermediate pickers, finisher pickers, single process pickers, multiple process pickers, willow machines, card and picker waste cleaners, thread extractors, shredding machines, roving waste openers, shoddy pickers, bale breakers, feeders, vertical openers, lattice cleaners, horizontal cleaners, and any similar machinery equipped with either cylinders, screen section, calender section, rolls, or beaters used for the preparation of stock for further processing.

(26) **"Paddler"** means equipment consisting of a trough for a solution and two or more squeeze rolls between which cloth passes after being passed through a mordant or dye bath.

(27) **"Point of operation"** means that part of the machine where the work of cutting, shearing, squeezing, drawing, or manipulating the stock in any other way is done.

(28) **"Roller printing machine"** means a machine consisting of a large central cylinder, or pressure bowl, around the lower part of the perimeter of which is placed a series of engraved color rollers (each having a color trough), a furnisher roller, doctor blades, etc. The machine is used for printing fabrics.

(29) **"Continuous bleaching ranges"** means ranges of several types and may be made for cloth in rope or open-width form. The goods, after wetting out, pass through a squeeze roll into a saturator containing a solution of caustic soda and then to an enclosed J-box. A V-shaped arrangement is attached to the front part of the J-box for uniform and rapid saturation of the cloth with steam before it is packed down in the J-box. The cloth, in a single strand rope form, passes over a guide roll down the first arm of the "V" and up the second. Steam is injected into the "V" at the upper end of the second arm so that the cloth is rapidly saturated with steam at this point. The J-box capacity is such that cloth will remain hot for a sufficient time to complete the scouring action. It then passes a series of washers with a squeeze roll in between. The cloth then passes through a second set of saturator, J-box, and washer, where it is treated with the peroxide solution. By slight modification of the form of the unit, the same process can be applied to open-width cloth.

(30) **"Mercerizing range"** generally means a 3-bowl mangle, a tenter frame, and a number of boxes for washing and scouring. The whole setup is in a straight line and all parts operate continuously. The combination is used to saturate the cloth with sodium hydroxide, stretch it while saturated, and washing out most of the caustic before releasing tension.

(31) **"Sanforizing machine"** means a machine consisting of a large steam-heated cylinder, an endless, thick, woolen felt blanket which is in close contact with the cylinder for most of its perimeter, and an electrically heated shoe which presses the cloth against the blanket while the latter is in a stretched condition as it curves around feed-in roll.

(32) **"Shearing machine"** means a machine used in shearing cloth. Cutting action is provided by a number of steel blades spirally mounted on a roller. The roller rotates in close contact with a fixed ledger blade. There may be from one to six such rollers on a machine.

(33) **"Singeing machine"** means a machine used particularly with cotton, comprised of a heated roller, plate, or an open gas flame. The material is rapidly passed over the roller or the plate or through the open gas flame to remove fuzz or hairiness on yarn or cloth by burning.

(34) **"Slasher"** means a machine used for applying a size mixture to warp yarns. Essentially, it consists of a stand for holding section beams, a size box, one or more cylindrical dryers or an enclosed hot air dryer, and a beaming end for finding the yarn on the loom beams.

WAC 206-301-015 (Cont.)

(35) **"Industrial organic solvent"** means any organic volatile liquid or compound, or any combination of these substances which are used to dissolve or suspend a nonvolatile or slightly volatile substance for industrial utilization. It shall also apply to such substances when used as detergents or cleansing agents. It shall not apply to petroleum products when such products are used as fuel.

(36) **"Tenter frame"** means a machine for drying cloth under tension. It essentially consists of a pair of endless traveling chains fitted with clips of fine pins and carried on tracks. The cloth is firmly held at the selvages by the two chains which diverge as they move forward so that the cloth is brought to the desired width.

(37) **"Warper"** means any machine for preparing and arranging the yarns intended for the warp of a fabric, specifically, a beam warper.

[Order 74-19, § 296-301-015, filed 5/6/74.]

WAC 296-301-020 General safety requirements.

(1) Means of stopping machines. Every textile machine shall be provided with individual mechanical or electrical means for stopping such machines. On machines driven by belts and shafting a locking-type shifter or an equivalent positive device shall be used. On operations where injury to the operator might result if motors were to restart after power failures, provision shall be made to prevent machines from automatically restarting upon restoration of power.

(2) Handles. Stopping and starting handles shall be designed to the proper length to prevent the worker's hand or fingers from striking against any revolving part, gear guard, or any other part of the machine.

(3) Machine guarding. An employer must ensure that power transmission parts are guarded according to the requirements of chapter 296-806 WAC, Machine safety.

(4) Housekeeping. Aisles and working spaces shall be kept in good order in accordance with requirements of WAC 296-24-735 through 296-24-73505 and WAC 296-800-220.

(5) Inspection and maintenance. All guards and other safety devices, including starting and stopping devices, shall be properly maintained.

(6) Lighting and illumination. Lighting and illumination shall conform to the safety and health core rule book, WAC 296-800-210.

(7) Identification of piping systems. Identification of piping systems shall conform to American National Standard A13.1-1956.

(8) Steam pipes. All pipes carrying steam or hot water for process or servicing machinery, when exposed to contact and located within seven feet of the floor or working platform shall be covered with a heat-insulating material, or guarded with equivalent protection.

[Statutory Authority: RCW 49.17.010, .040, .050, and .060. 04-14-028 (Order 01-12), § 296-301-020, filed 06/29/04, effective 01/01/05. Statutory Authority: RCW 49.17.010, .040, .050, and .060. 04-18-080 (Order 04-09), § 296-301-020, filed 08/31//04, effective 11/01/04. Statutory Authority: RCW 49.17.010, .040, .050. 01-11-038 (Order 99-36), § 296-301-020, filed 05/09/01, effective 09/01/01 Statutory Authority: RCW 49.17.010, .040, .050. 99-17-094 (Order 99-01), § 296-301-020, filed 08/17/99, effective 12/01/99. Statutory Authority: Chapter 49.17.010, 040, 050 RCW. 98-10-093, (Order 97-11), § 296-301-020, filed 05/04/98, effective 1/1/99. Order 74-19, § 296-301-020, filed 5/6/74.]

WAC 296-301-025 Openers and pickers.

(1) Beater guards. When any opening or picker machinery is equipped with a beater, such beater shall be provided with metal covers which will prevent contact with the beater. Such covers shall be provided with an interlock which will prevent the cover from being raised while the machine is in motion and prevent the operation of the machine while the cover is open.

(2) Cleanout holes. Cleanout holes within reaching distance of the fan or picker beater shall have their covers securely fastened and they shall not be opened while the machine is in motion.

(3) Feed rolls. The feed rolls on all opening and picking machinery shall be covered with a guard designed to prevent the operator from reaching the nip while the machinery is in operation.

(4) Removal of foreign ferrous material. All textile opener lines shall be equipped with magnetic separators, tramp iron separators, or other means for the removal of foreign ferrous material.

[Order 74-19, § 296-301-025, filed 5/6/74.]

WAC 296-301-030 Cotton cards.

(1) Enclosures. Cylinder and lickerins shall be equipped with guards and the doffers should be enclosed.

(2) Enclosure fastenings. The enclosures or covers shall be kept in place while the machine is in operation, except when stripping or grinding.

(3) Stripping rolls. On operations calling for flat strippings which are allowed to fall on the doffer cover, where such strippings are removed by hand, the doffer cover shall be kept closed and securely fastened to prevent the opening of the cover while the machine is in operation. When it becomes necessary to clean the cards while they are in motion, a long-handled brush or dust mop shall be used.

[Order 74-19, § 296-301-030, filed 5/6/74.]

WAC 296-301-035 Garnett machines.

(1) Lickerin. Garnett lickerins shall be enclosed.

(2) Fancy rolls. Garnett fancy rolls shall be enclosed by covers. These shall be installed in a way that keeps worker rolls reasonably accessible for removal or adjustment.

(3) Underside of machine. The underside of the garnett shall be guarded by a screen mesh or other form of enclosure to prevent access while machine is running.

[Order 74-19, § 296-301-035, filed 5/6/74.]

WAC 296-301-040 Spinning mules. A substantial fender of metal or hardwood shall be installed in front of the carriage wheels, the fender to extend to within one-fourth inch of the rail.

[Order 74-19, § 296-301-040, filed 5/6/74.]

WAC 296-301-045 Slashers-Scope and application. All sections of this chapter which include WAC 296-301-045 in the section number apply to slashers.

[Order 74-19, § 296-301-045, filed 5/6/74.]

WAC 296-301-04501 Cylinder dryers.

(1) Reducing valves, safety valves, and pressure gages. Reducing valves, safety valves, and pressure gages shall conform to the ASME Pressure Vessel Code, section VIII, Unfired Pressure Vessels, 1968.

(2) Vacuum relief valves. Vacuum relief valves shall conform to the ASME Code for Pressure Vessels, section VIII, Unfired Pressure Vessels, 1968.

(3) Lever control. When slashers are operated by control levers, these levers shall be connected to a horizontal bar or treadle located not more than 69 inches above the floor to control the operation from any point.

(4) Pushbutton control. Slashers operated by pushbutton control shall have stop and start buttons located at each end of the machine, and additional buttons located on both sides of the machine, at the size box and the delivery end. If calender rolls are used, additional buttons shall be provided at both sides of the machine at points near the nips, except when slashers are equipped with an enclosed dryer.

(5) Nip guards. All nip guards shall comply with the requirements of WAC 296-301-04503(4).

(6) Cylinder enclosure. When enclosures or hoods are used over cylinder drying rolls, such enclosures or hoods shall be provided with an exhaust system which will effectively prevent wet air and steam from escaping into the workroom.

(7) Expansion chambers. Slasher kettles and cookers shall be provided with expansion chambers in the covers, or drains, to prevent surging over. Steam-control valves shall be so located that they can be operated without exposing the worker to moving parts, hot surfaces, or steam.

[Order 74-19, § 296-301-04501, filed 5/6/74.]

WAC 296-301-04503 Enclosed hot air dryers.

(1) Lever control. When slashers are operated by control levers, these levers shall be connected to a horizontal bar or treadle located not more than 69 inches above the floor to control the operation from any point.

(2) Push-button control. Slashers operated by push-button control shall have one start button at each end of the machine and stop buttons shall be located on both sides of the machines at intervals spaced not more than 6 feet on centers.

Note: Inching buttons should be installed.

(3) Dryer enclosure. The dryer enclosure shall be provided with an exhaust system which will effectively prevent wet air and steam from escaping into the workroom.

(4) Nip guards. All nip guards shall comply with Table R-1.

WAC 296-301-04503 (Cont.)

TABLE R-1
GUARD OPENINGS

Openings in the guard or between the guard and working surface shall not be greater than the following:

Distance of opening from nip point	Maximum width of opening
0 to 1 ½	1/4
1 1/2 to 2 ½	3/8
2 1/2 to 3 ½	1/2
3 1/2 to 5 ½	5/8
5 1/2 to 6 ½	3/4
6 1/2 to 7 ½	7/8
7 1/2 to 8 ½	1 1/4

The measurements in Table R-1 are all in inches.

(5) Expansion chambers. Slasher kettles and cookers shall be provided with expansion chambers in the covers, or drains, to prevent surging over. Steam control valves shall be so located that they can be operated without exposing the worker to moving parts, hot surfaces, or steam.

[Order 74-19, § 296-301-04503, filed 5/6/74.]

WAC 296-301-050 Warpers.

(1) Swiveled double-bar gates. Swiveled double-bar gates shall be installed on all warpers operating in excess of 450 yards per minute. These gates shall be so interlocked that the machine cannot be operated until the gate is in the "closed position," except for the purpose of inching or jogging.

(2) Closed position. "Closed position" shall mean that the top bar of the gate shall be at least 42 inches from the floor or working platform; and the lower bar shall be at least 21 inches from the floor or working platform; and the gate shall be located 15 inches from the vertical tangent to the beam head.

[Order 74-19, § 296-301-050, filed 5/6/74.]

WAC 296-301-055 Drawing frames, slubbers, roving parts, cotton combers, ring spinning frames, twisters. Gear housing covers on all installations of drawing frames, slubbers, roving frames, cotton combers, ring spinning frames, and twisters shall be equipped with interlocks.

[Order 74-19, § 296-301-055, filed 5/6/74.]

WAC 296-301-060 Gill boxes.

(1) Pin guard. A guard shall be placed ahead of the feed end and shall be so designed that it will prevent the worker's fingers from being caught in the pins of the intersecting fallers.

(2) Nip guards. All nip guards shall comply with the requirements of WAC 296-301-04503(4).

[Order 74-19, § 296-301-060, filed 5/6/74.]

WAC 296-301-065 Heavy draw boxes, finishers, and speeders used in worsted drawing.

(1) Band pulley covers. Covers for band pulleys shall be closed when the machine is in motion.

(2) Benches or working platforms. Benches or working platforms approximately 10 inches in height and 8 inches in width should be installed along the entire running length of the machine for the worker to stand on while creeling the machine. Such benches or platforms shall be covered with an abrasive or nonslip material.

[Order 74-19, § 296-301-065, filed 5/6/74.]

WAC 296-301-070 Silver and ribbon lappers (cotton). Cover guard. An interlocking cover guard shall be installed over the large calender drums and the lap spool, designed to prevent the operator from coming in contact with the nip.
[Order 74-19, § 296-301-070, filed 5/6/74.]

WAC 296-301-075 Looms.

(1) Shuttle guard. Each loom shall be equipped with a guard designed to minimize the danger of the shuttle flying out of the shed.

(2) Protection for loom fixer. Provisions shall be made so that every loom fixer can prevent the loom from being started while he is at work on the loom. This may be accomplished by means of a lock, the key to which is retained in the possession of the loom fixer, or by some other effective means to prevent starting the loom.
[Order 74-19, § 296-301-075, filed 5/6/74.]

WAC 296-301-080 Shearing machines. All revolving blades on shearing machines shall be guarded so that the opening between the cloth surface and the bottom of the guard will not exceed three-eighths inch.
[Order 74-19, § 296-301-080, filed 5/6/74.]

WAC 296-301-085 Continuous bleach range (cotton and rayon).

(1) J-box protection. Each valve controlling the flow of steam, injurious gases, or liquids into a J-box shall be equipped with a chain, lock, and key, so that any worker who enters the J-box can lock the valve and retain the key in his possession. Any other method which will prevent steam, injurious gases, or liquids from entering the J-box while the worker is in it will comply with this provision.

(2) Open-width bleaching. The nip of all in-running rolls on open-width bleaching machine rolls shall be protected with a guard to prevent the worker from being caught at the nip. The guard shall extend across the entire length of the nip.
[Order 74-19, § 296-301-085, filed 5/6/74.]

WAC 296-301-090 Kiers.

(1) Reducing valves, safety valves, and pressure gages. Reducing valves, safety valves, and pressure gages shall conform to the ASME Code for Unfired Pressure Vessels, section VIII, Unfired Pressure Vessels, 1968.

(2) Kier valve protection. Each valve controlling the flow of steam, injurious gases, or liquids into a kier shall be equipped with a chain, lock, and key, so that any worker who enters the kier can lock the valve and retains the key. Any other method which will prevent steam, injurious gases, or liquids from entering the kier while the worker is in it will be acceptable.
[Order 74-19, § 296-301-090, filed 5/6/74.]

WAC 296-301-095 Gray and white bins. Guard rails conforming to WAC 296-24-750 through 296-24-75011, of the general safety and health standards, shall be provided where workers are required to plait by hand from the top of the bin so as to protect the worker from falling to a lower level.
[Order 74-19, § 296-301-095, filed 5/6/74.]

WAC 296-301-100 Mercerizing range (piece goods).

(1) Stopping devices. A stopping device shall be provided at each end of the machine.

(2) Frame ends. A guard shall be installed at each end of the frame between the in-running chain and the clip opener, to prevent the worker's fingers from being caught.

(3) Mangle and washers. The nip at the in-running rolls shall conform to WAC 296-301-04503(4).
[Order 74-19, § 296-301-100, filed 5/6/74.]

WAC 296-301-105 Tenter frames.

(1) Stopping devices. A stopping device shall be provided at each end of the machine.

(2) Frame ends. A guard shall be installed at each end of the frame at the in-running chain and clip opener.

(3) Oil cups. Oil cups shall be located to permit safe and easy access. They shall be of the extension type to permit oiling while machines are operating.
[Order 74-19, § 296-301-105, filed 5/6/74.]

WAC 296-301-110 Dyeing jigs.

(1) Stopping devices. Each dye jig shall be equipped with individual mechanical or electrical means for stopping the machine.

(2) Roll arms. Roll arms on jigs shall be built to allow for extra large batches, and to prevent the center bar from being forced off, causing the batch to fall.
[Order 74-19, § 296-301-110, filed 5/6/74.]

WAC 296-301-115 Padders-Nip guards. All nip guards shall comply with the requirements of WAC 296-301-04503(4).
[Order 74-19, § 296-301-115, filed 5/6/74.]

WAC 296-301-120 Drying cans.

(1) Pressure reducing valves and pressure gages. Pressure reducing valves and pressure gages shall conform to the ASME Code for Pressure Vessels, section VIII, 1968, Unfired Pressure Vessels.

(2) Vacuum collapse. If cans are not designed to prevent vacuum collapse, each can shall be equipped with one or more vacuum relief valves with openings of such a size as to prevent the collapse of the can if vacuum occurs.
[Order 74-19, § 296-301-120, filed 5/6/74.]

WAC 296-301-125 Ironer.

(1) Each flat-work or collar ironer shall be equipped with a safety bar or other guard across the entire front of the feed or first pressure rolls, so arranged that the striking of the bar or guard by the hand of the operator or other person will stop the machine. The pressure rolls shall be covered or guarded so that the operator or other person cannot reach into the rolls without removing the guard. This may be either a vertical guard on all sides or a complete cover. If a vertical guard is used, the distance from the floor or working platform to the top of guard shall be not less than 6 feet.
[Order 74-19, § 296-301-125, filed 5/6/74.]

WAC 296-301-130 Extractors.

(1) Centrifugal extractor.

(a) Cover. Each extractor shall be equipped with a metal cover.

(b) Interlocking device. Each extractor shall be equipped with an interlocking device that will prevent the cover from being opened while the basket is in motion, and also prevent the power operation of the basket while the cover is open.

(c) Brakes. Each extractor shall be equipped with a mechanically or electrically operated brake to quickly stop the basket when the power driving the basket is shut off.

(d) Maximum allowable speed. Each centrifugal extractor shall be effectively secured in position on the floor or foundation so as to eliminate unnecessary vibration, and shall not be operated at a speed greater than the manufacturer's rating, which shall be stamped where easily visible in letters not less than one-quarter inch in height. The maximum allowable speed shall be given in revolutions per minute (rpm).

(2) Engine drum extractor-Over-speed governor. Each engine individually driving an extractor shall be provided with an approved engine stop and a speed limit governor.

(3) Squeezer or wringer extractor--Nip guards. All nip guards shall comply with the requirements of WAC 296-301-04503(4).

[Statutory Authority: RCW 49.17.010, .020, .040, .050, and .060. 07-03-163 (Order 06-30), § 296-301-130, filed 01/24/07, effective 04/01/07. Order 74-19, § 296-301-130, filed 5/6/74.]

WAC 296-301-135 Nip guards. All nip guards for water mangle, starch mangle, backwasher (worsted yarn) crabbing machines, decating machines, shall comply with the requirements of WAC 296-301-04503(4).

[Order 74-19, § 296-301-135, filed 5/6/74.]

WAC 296-301-140 Sanforizing and palmer machine. A safety trip rod, cable, or wire center cord shall be provided across the front and back of all palmer cylinders extending the length of the face of the cylinder. It shall operate readily whether pushed or pulled. This safety trip shall be not more than 72 inches above the level on which the operator stands and shall be readily accessible.

[Order 74-19, § 296-301-140, filed 5/6/74.]

WAC 296-301-145 Rope washers.

(1) Splash guard. Splash guards shall be installed on all rope washers unless the machine is so designed as to prevent the water or liquid from splashing the operator, the floor, or working surface.

(2) Safety stop bar. A safety trip rod, cable or wire center cord shall be provided across the front and back of all rope washers extending the length of the face of the washer. It shall operate readily whether pushed or pulled. This safety trip shall be not more than 72 inches above the level on which the operator stands and shall be readily accessible.

[Order 74-19, § 296-301-145, filed 5/6/74.]

WAC 296-301-150 Laundry washer tumbler or shaker.

(1) Interlocking device. Each drying tumbler, each double cylinder shaker or clothes tumbler, and each washing machine shall be equipped with an interlock device which will prevent the power operation of the inside cylinder when the outer door on the case or shell is open, and which will also prevent the outer door on the case or shell from being opened without shutting off the power. This should not prevent the movement of the inner cylinder by means of a hand operated mechanism or an "inching device."

(2) Means of holding covers or doors in open position. Each enclosed barrel shall also be equipped with adequate means for holding open the doors or covers of the inner and outer cylinders or shells while it is being loaded or unloaded.

[Order 74-19, § 296-301-150, filed 5/6/74.]

WAC 296-301-155 Printing machine (roller type).

(1) Nip guards. All nip guards shall comply with the requirements of WAC 296-301-04503(4).

(2) Crown wheel and roller gear nip protection. The engraved roller gears and the large crown wheel shall be provided with a protective disc which will enclose the nips of the in-running gears. Individual discs for each nip will be deemed to be in compliance with the provisions of WAC 296-301-04503(4).

[Order 74-19, § 296-301-155, filed 5/6/74.]

WAC 296-301-160 Calenders. The nip at the in-running side of the rolls shall be provided with a guard extending across the entire length of the nip and arranged to prevent the fingers of the workers from being pulled in between the rolls or between the guard and the rolls, and constructed so that the cloth can be fed into the rolls safely.
[Order 74-19, § 296-301-160, filed 5/6/74.]

WAC 296-301-165 Rotary staple cutters. A guard shall be installed completely enclosing the cutters to prevent the hands of the operator from reaching the cutting zone.
[Order 74-19, § 296-301-165, filed 5/6/74.]

WAC 296-301-170 Clothing folding machine. Cloth-folding machines shall meet the requirements of chapter 296-806 WAC, Machine safety.
[Statutory Authority: RCW 49.17.010, .040, .050, and .060. 04-14-028 (Order 01-12), § 296-301-170, filed 06/29/04, effective 01/01/05. Statutory Authority: RCW 49.17.010, .040, .050. 99-17-094 (Order 99-01), § 296-301-170, filed 08/17/99, effective 12/01/99. Statutory Authority: Order 74-19, § 296-301-170, filed 5/6/74.]

WAC 296-301-175 Hand bailing machine. An angle-iron-handle stop guard shall be installed at the right angle to the frame of the machine. The stop guard shall be so designed and so located that it will prevent the handle from traveling beyond the vertical position should the handle slip from the operator's hand when the pawl has been released from the teeth of the takeup gear.
[Order 74-19, § 296-301-175, filed 5/6/74.]

WAC 296-301-180 Roll bench. Cleats shall be installed on the ends of roll benches.
[Order 74-19, § 296-301-180, filed 5/6/74.]

WAC 296-301-185 Cuttle or swing folder (overhead type). The bottom of the overhead folders shall be located not less than 7 feet from the floor or working surface.
[Order 74-19, § 296-301-185, filed 5/6/74.]

WAC 296-301-190 Color-mixing room. Floors in color-mixing rooms shall be constructed to drain easily.
[Order 74-19, § 296-301-190, filed 5/6/74.]

WAC 296-301-195 Open tanks and vats for mixing and storage of hot or corrosive liquids.

(1) Guardrails shall be provided for open tanks and vats which conform to the requirements of WAC 296-24-750 through 296-24-75011.

(2) Shutoff valves. Boiling tanks, caustic tanks, and hot liquid containers, so located that the operator cannot see the contents from the floor or working area, shall have emergency shutoff valves controlled from a point not subject to danger of splash. Valves shall conform to the ASME Pressure Vessel Code, section VIII, Unfired Pressure Vessels, 1968.

[Statutory Authority: RCW 49.17.010, .040, .050. 99-17-094 (Order 99-01), § 296-301-195, filed 08/17/99, effective 12/01/99. Statutory Authority: Order 74-19, § 296-301-195, filed 5/6/74.]

WAC 296-301-200 Dye kettles and vats. Pipes or drains of sufficient capacity to carry the contents safely away from the working area shall be installed where there are dye kettles and vats which may at any time contain hot or corrosive liquids. These shall not empty directly onto the floor.

[Order 74-19, § 296-301-200, filed 5/6/74.]

WAC 296-301-205 Acid carboys. Carboys shall be provided with inclinators, or the acid shall be withdrawn from the carboys by means of pumping without pressure in the carboy, or by means of hand operated siphons.

[Order 74-19, § 296-301-205, filed 5/6/74.]

WAC 296-301-210 Handling caustic soda and caustic potash. Means shall be provided for handling and emptying caustic soda and caustic potash containers to prevent workers from coming in contact with the caustic (see WAC 296-301-220).

[Order 74-19, § 296-301-210, filed 5/6/74.]

WAC 296-301-215 First aid. The first-aid provisions of the safety and health core rule book, WAC 296-800-150 apply within the scope of chapter 296-301 WAC.

[Statutory Authority: RCW 49.17.010, .040, .050. 01-11-038 (Order 99-36), § 296-301-215, filed 05/09/01, effective 09/01/01 Statutory Authority: RCW 49.17.010, .040, .050. 00-01-038 (Order 99-08), § 296-301-215, filed 12/07/99, effective 02/01/2000. [Order 74-19, § 296-301-215, filed 5/6/74.]

WAC 296-301-220 Personal protective equipment.

(1) Personal protective equipment. Workers engaged in handling acids or caustics in bulk, repairing pipe lines containing acids or caustics, etc., shall be provided with personal protective equipment to conform to the requirements of WAC 296-800-160.

(2) Respiratory protection. Employers must provide respiratory protection as required in chapter 296-842 WAC.

Statutory Authority: RCW 49.17.010, .040, .050, and .060. 05-03-093 (Order 04-41), § 296-301-220, filed 01/18/05, effective 03/01/05. Statutory Authority: RCW 49.17.010, .040, .050. 01-11-038 (Order 99-36), § 296-301-220, filed 05/09/01, effective 09/01/01 Statutory Authority: RCW 49.17.010, .040, .050. 99-17-094 (Order 99-01), § 296-301-220, filed 08/17/99, effective 12/01/99. Statutory Authority: Order 74-19, § 296-301-220, filed 5/6/74.]

WAC 296-301-225 Workroom ventilation. In all workrooms in which potentially toxic substances are used, the maximum allowable concentrations listed in chapter 296-841 WAC, Airborne contaminants, shall be maintained. Open surface tanks shall conform to the requirements of WAC 296-62-11021.

[Statutory Authority: RCW 49.17.010, .020, .040, .050, and .060. 07-03-163 (Order 06-30), § 296-301-225, filed 01/24/07, effective 04/01/07. Statutory Authority: Order 74-19, § 296-301-225, filed 5/6/74.]