Chapter 296-78 WAC

SAFETY STANDARDS FOR SAWMILLS AND WOODWORKING OPERATIONS

WAC

296-78-500 Foreword.
296-78-505 Definitions applicable to this chapter.
296-78-510 Education and first-aid standards.
296-78-515 Management's responsibility.
296-78-520 Employee's responsibility.
296-78-525 Accident-prevention programs.
296-78-530 Safety and health committee plan.
296-78-535 Safety bulletin board.
296-78-540 First-aid training and certification.
296-78-545 First-aid supplies.
296-78-550 First-aid station.
296-78-560 Safe place standards.
296-78-565 Log dumps and ponds—Headmills.
296-78-56501 Log dumps and ponds.
296-78-56503 Log hauls.
296-78-56505 Boats and mechanical devices on waters.
296-78-56507 Log decks.
296-78-56509 Mechanical barkers.
296-78-56511 Head rigs and feed works.
296-78-56513 Log carriages.
296-78-570 Band saws—Saws.
296-78-575 Circular saws.
296-78-580 Edgers.
296-78-585 Equalizer saws.
296-78-590 Gang saws and re-saws.
296-78-595 Jump saws.
296-78-600 Trimmer and slasher saws.
296-78-605 Swing saws.
296-78-610 Circular saws, speeds, repairs.
296-78-615 Saw filing and grinding rooms and equipment.
296-78-620 Miscellaneous woodworking machines—Planers, stickers, molders, matchers.
296-78-625 Planers (stave and headings).
296-78-630 Stave croziers.
296-78-635 Jointers.
296-78-640 Jointers (stave and heading).
296-78-645 Wood shapers.
296-78-650 Boring and mortising machines.
296-78-655 Tenoning machines.
296-78-660 Lathe (pail and barrel).
296-78-665 Sanding machines.
296-78-670 Glue machines.
296-78-675 Lath mills.
296-78-680 Veneer and plywood plants—Peeling and barking.
296-78-685 Veneer lathe.
296-78-690 Veneer slicer and cutter.
296-78-695 Veneer clipper.
296-78-700 Veneer wringer (swede).
296-78-705 The shake and shingle industry.
296-78-70501 Definitions—Terms, general.
296-78-70503 Shake and shingle machinery—General.
296-78-70505 Shake machinery.
296-78-70507 Upright shingle machine.
296-78-70509 Related shake and shingle sawing machinery.
296-78-70511 Safety rules.
296-78-710 Construction and isolated equipment.
296-78-71001 General.
296-78-71003 Floor and wall openings.
296-78-71005 Floors, docks, platforms and runways.
296-78-71007 Footwalks and passageways.
296-78-71009 Stairways and ladders.
296-78-71011 Egress and exit.
296-78-71013 Cableways.
296-78-71015 Tanks and chemicals.
296-78-71017 Dry kilns.
296-78-71019 Exhaust systems.
296-78-71021 Spray painting.
296-78-71023 Lighting.
296-78-71025 Gas piping and appliances.
296-78-715 Mechanical, steam and electrical equipment.
296-78-71501 General provisions.
296-78-71503 Lock out—Tag out.
296-78-71505 Mechanical power transmission apparatus.
296-78-720 Boiler and pressure vessels.
296-78-725 Nonionizing radiation.
296-78-730 Electrical service and equipment.
296-78-735 Elevators, moving walks.
296-78-740 Transportation—Lumber handling equipment—Cranes—Construction.
296-78-745 Electrical equipment.
296-78-750 Chains, wire rope, cables and fiber rope.
296-78-755 Natural and synthetic fiber rope slings.
296-78-760 Synthetic web slings.
296-78-765 Floor operated cranes.
296-78-770 Operators.
296-78-775 Signalpersons.
296-78-780 Repairpersons.
296-78-785 Construction requirements.
296-78-790 Crane platforms and footwalks.
296-78-795 Crane cages.
296-78-800 Crane rail stops, bumpers and fenders.
296-78-805 Crawler locomotive and truck cranes.
296-78-810 Chain and electric hoists.
296-78-815 Monorail hoists.
296-78-820 Air hoists.
296-78-825 Jib, pillar, and portable floor cranes, crabs, and winches.
296-78-830 Standard crane hand signals—Illustrations.
296-78-835 Vehicles.
296-78-840 Loading, piling, storage and conveying.
296-78-84001 Loading, piling, storage and conveying—General.
296-78-84003 Conveyors.
296-78-84005 Dry kilns.
296-78-84007 Chippers and hogs.
296-78-84009 Bins and bunkers.
296-78-84011 Burners.

DISPOSITION OF SECTIONS FORMERLY CODIFIED IN THIS CHAPTER

296-78-005 Foreword. [Order 76-7, § 296-78-005, filed 3/1/76; Order 74-28, § 296-78-005, filed 5/7/74; Foreword, effective 6/1/51, filed 3/23/60.] Repealed by 81-18-029 (Order 81-21), filed 8/27/81. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240.

296-78-007 Definitions applicable to this chapter. [Order 74-28, § 296-78-007, filed 5/7/74.] Repealed by 81-18-029 (Order 81-21), filed 8/27/81. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240.

296-78-010 General safety standards. [Rules A-1 through A-19, effective 6/1/51, filed 3/23/60.] Repealed by Order 74-28, filed 5/7/74 and Order 76-7, filed 3/1/76.

296-78-015 Minimum requirements for first aid. [Rule B-1, effective 6/1/51, filed 3/23/60.] Repealed by Order 74-28, filed 5/7/74 and Order 76-7, filed 3/1/76.

296-78-020 First-aid kit. [Rule B-2, effective 6/1/51, filed 3/23/60.] Repealed by Order 74-28, filed 5/7/74 and Order 76-7, filed 3/1/76.

296-78-025 First-aid room. [Rule B-3, effective 6/1/51, filed 3/23/60.] Repealed by Order 74-28, filed 5/7/74 and Order 76-7, filed 3/1/76.

296-78-030 Construction and isolated equipment. [Order 77-12, § 296-78-030, filed 7/11/77; Order 76-7, § 296-78-030, filed 3/1/76; Order 74-28, § 296-78-030, filed 5/7/74; Rules C-1 through C-61, effective 6/1/51, filed 3/23/60.] Repealed by 81-18-029 (Order 81-21), filed 8/27/81. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240.

296-78-035 Mechanical, steam and electrical equipment—General provisions. [Order 74-28, § 296-78-035, filed 5/7/74; Rules D-1 through D-19, effective 6/1/51, filed 3/23/60.] Repealed by 81-18-029 (Order 81-21), filed

8/27/81. Statutory Authority: RCW 49.17.040, 49.17.-050 and 49.17.240.

296-78-040 Boiler and pressure vessels. [Order 74-28, § 296-78-040, filed 5/7/74; Rule D-20, effective 6/1/51, filed 3/23/60.] Repealed by 81-18-029 (Order 81-21), filed 8/27/81. Statutory Authority: RCW 49.17.040, 49.17.-050 and 49.17.240.

296-78-045 Electrical service and equipment. [Order 74-28, § 296-78-045, filed 5/7/74; Rule D-21, effective 6/1/51, filed 3/23/60.] Repealed by 81-18-029 (Order 81-21), filed 8/27/81. Statutory Authority: RCW 49.17.040, 49.17.-050 and 49.17.240.

296-78-050 Electrical utilization—Definitions. [Rule D-22, effective 6/1/51, filed 3/23/60.] Repealed by Order 74-28, filed 5/7/74 and Order 76-7, filed 3/1/76.

296-78-055 Electrical utilization—General requirements—Safety. [Rule D-23, effective 6/1/51, filed 3/23/60.] Repealed by Order 74-28, filed 5/7/74 and Order 76-7, filed 3/1/76.

296-78-060 Electrical utilization—General requirements—Current. [Rule D-24, effective 6/1/51, filed 3/23/60.] Repealed by Order 74-28, filed 5/7/74 and Order 76-7, filed 3/1/76.

296-78-065 Electrical utilization—General requirements—Grounding. [Rule D-25, effective 6/1/51, filed 3/23/60.] Repealed by Order 74-28, filed 5/7/74 and Order 76-7, filed 3/1/76.

296-78-070 Electrical utilization—General requirements—Circuits to be grounded. [Rule D-26, effective 6/1/51, filed 3/23/60.] Repealed by Order 74-28, filed 5/7/74 and Order 76-7, filed 3/1/76.

296-78-075 Electrical utilization—General requirements—Grounding noncurrent-carrying metal parts. [Rule D-27, effective 6/1/51, filed 3/23/60.] Repealed by Order 74-28, filed 5/7/74 and Order 76-7, filed 3/1/76.

296-78-080 Electrical utilization—Working spaces about electrical equipment—Dimensions. [Rule D-28, effective 6/1/51, filed 3/23/60.] Repealed by Order 74-28, filed 5/7/74 and Order 76-7, filed 3/1/76.

296-78-085 Electrical utilization—Guarding or isolating live parts—Inclosure or elevation. [Rule D-29, effective 6/1/51, filed 3/23/60.] Repealed by Order 74-28, filed 5/7/74 and Order 76-7, filed 3/1/76.

296-78-090 Electrical utilization—Separation and barriers. [Rule D-30, effective 6/1/51, filed 3/23/60.] Repealed by Order 74-28, filed 5/7/74 and Order 76-7, filed 3/1/76.

296-78-095 Electrical utilization—Hazardous locations. [Rule D-31, effective 6/1/51, filed 3/23/60.] Repealed by Order 74-28, filed 5/7/74 and Order 76-7, filed 3/1/76.

296-78-100 Electrical utilization—Suitability and size of conductors. [Rule D-32, effective 6/1/51, filed 3/23/60.] Repealed by Order 74-28, filed 5/7/74 and Order 76-7, filed 3/1/76.

296-78-105 Electrical utilization—Fuses and circuit breakers. [Rule D-33, effective 6/1/51, filed 3/23/60.] Repealed by Order 74-28, filed 5/7/74 and Order 76-7, filed 3/1/76.

296-78-110 Electrical utilization—General requirements for switches—Accessibility, marking and installation. [Rule D-34, effective 6/1/51, filed 3/23/60.] Repealed by Order 74-28, filed 5/7/74 and Order 76-7, filed 3/1/76.

296-78-115 Electrical utilization—Guarding switches. [Rule D-35, effective 6/1/51, filed 3/23/60.] Repealed by Order 74-28, filed 5/7/74 and Order 76-7, filed 3/1/76.

296-78-120 Electrical utilization—Platforms and mats. [Rule D-36, effective 6/1/51, filed 3/23/60.] Repealed by Order 74-28, filed 5/7/74 and Order 76-7, filed 3/1/76.

296-78-125 Electrical utilization—Switchboards and panelboards—Control or arrangement. [Rule D-37, effective 6/1/51, filed 3/23/60.] Repealed by Order 74-28, filed 5/7/74 and Order 76-7, filed 3/1/76.

296-78-130 Electrical utilization—Inclosure of parts. [Rule D-38, effective 6/1/51, filed 3/23/60.] Repealed by Order 74-28, filed 5/7/74 and Order 76-7, filed 3/1/76.

296-78-135 Electrical utilization—Motors and motor-driven machinery—Grounding machine frames. [Rule D-39, effective 6/1/51, filed 3/23/60.] Repealed by Order 74-28, filed 5/7/74 and Order 76-7, filed 3/1/76.

296-78-140 Electrical utilization—Mats and platforms. [Rule D-40, effective 6/1/51, filed 3/23/60.] Repealed by Order 74-28, filed 5/7/74 and Order 76-7, filed 3/1/76.

296-78-145 Electrical utilization—Water barrel rheostats prohibited. [Rule D-41, effective 6/1/51, filed 3/23/60.] Repealed by Order 74-28, filed 5/7/74 and Order 76-7, filed 3/1/76.

296-78-150 Electrical utilization—Employees—Safety requirements. [Rule D-42, effective 6/1/51, filed 3/23/60.] Repealed by Order 74-28, filed 5/7/74 and Order 76-7, filed 3/1/76.

296-78-155 Electrical utilization—"Bridging" fuses prohibited. [Rule D-43, effective 6/1/51, filed 3/23/60.] Repealed by Order 74-28, filed 5/7/74 and Order 76-7, filed 3/1/76.

296-78-160 Electrical utilization—Leakage of electricity shall be reported. [Rule D-44, effective 6/1/51, filed 3/23/60.] Repealed by Order 74-28, filed 5/7/74 and Order 76-7, filed 3/1/76.

296-78-162 Electrical utilization—Safe standing room required. [Rule D-45, effective 6/1/51, filed 3/23/60.] Repealed by Order 74-28, filed 5/7/74 and Order 76-7, filed 3/1/76.

296-78-165 Electrical utilization—Use of disconnected wires for starting machinery prohibited. [Rules D-46 through D-53, effective 6/1/51, filed 3/23/60.] Repealed by Order 74-28, filed 5/7/74 and Order 76-7, filed 3/1/76.

296-78-170 Elevators, moving walks and other lifting devices. [Order 76-29, § 296-78-170, filed 9/30/76; Order 74-28, § 296-78-170, filed 5/7/74; Rule D-54, effective 6/1/51, filed 3/23/60.] Repealed by 81-18-029 (Order 81-21), filed 8/27/81. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240.

296-78-175 Platform hoists. [Rule D-55, effective 6/1/51, filed 3/23/60.] Repealed by Order 74-28, filed 5/7/74 and Order 76-7, filed 3/1/76.

296-78-180 Transportation—Lumber handling equipment—Cranes—Construction. [Order 74-28, § 296-78-180, filed 5/7/74; Rule E-1, effective 6/1/51, filed 3/23/60.] Repealed by 81-18-029 (Order 81-21), filed 8/27/81. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240.

296-78-185 Electrical equipment. [Order 74-28, § 296-78-185, filed 5/7/74; Rule E-2, effective 6/1/51, filed 3/23/60.] Repealed by 81-18-029 (Order 81-21), filed 8/27/81. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240.

296-78-190 Chains, wire rope, cables and fiber rope. [Order 74-28, § 296-78-190, filed 5/7/74; Rule E-3, effective 6/1/51, filed 3/23/60.] Repealed by 81-18-029 (Order 81-21), filed 8/27/81. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240.

296-78-195 Floor operated cranes. [Order 74-28, § 296-78-195, filed 5/7/74; Rule E-4, effective 6/1/51, filed 3/23/60.] Repealed by 81-18-029 (Order 81-21), filed 8/27/81. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240.

296-78-200 Operators. [Order 77-12, § 296-78-200, filed 7/11/77; Order 74-28, § 296-78-200, filed 5/7/74; Rule E-5, effective 6/1/51, filed 3/23/60.] Repealed by 81-18-029 (Order 81-21), filed 8/27/81. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240.

296-78-205 Signalmen. [Order 74-28, § 296-78-205, filed 5/7/74; Rule E-6, effective 6/1/51, filed 3/23/60.] Repealed by 81-18-029 (Order 81-21), filed 8/27/81. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240.

296-78-210 Repairmen. [Order 74-28, § 296-78-210, filed 5/7/74; Rule E-7, effective 6/1/51, filed 3/23/60.] Repealed by 81-18-029 (Order 81-21), filed 8/27/81. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240.

296-78-215 Construction requirements. [Order 74-28, § 296-78-215, filed 5/7/74; Rule E-8, effective 6/1/51, filed 3/23/60.] Repealed by 81-18-029 (Order 81-21), filed 8/27/81. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240.

296-78-220 Crane platforms and footwalks. [Order 74-28, § 296-78-220, filed 5/7/74; Rule E-9, effective 6/1/51, filed 3/23/60.] Repealed by 81-18-029 (Order 81-21), filed 8/27/81. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240.

296-78-225 Crane cages. [Order 74-28, § 296-78-225, filed 5/7/74; Rule E-10, effective 6/1/51, filed 3/23/60.] Repealed by 81-18-029 (Order 81-21), filed 8/27/81. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240.

296-78-230 Crane rail stops, bumpers and fenders. [Order 74-28, § 296-78-230, filed 5/7/74; Rule E-11, effective 6/1/51, filed 3/23/60.] Repealed by 81-18-029 (Order 81-21), filed 8/27/81. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240.

296-78-235 Crawler locomotive and truck cranes. [Order 74-28, § 296-78-235, filed 5/7/74; Rule E-12, effective 6/1/51, filed 3/23/60.] Repealed by 81-18-029 (Order 81-21), filed 8/27/81. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240.

296-78-240 Construction, operation and maintenance—Chain and electric hoists. [Order 74-28, § 296-78-240, filed 5/7/74; Rule E-13, effective 6/1/51, filed 3/23/60.] Repealed by 81-18-029 (Order 81-21), filed 8/27/81. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240.

296-78-245 Monorail hoists. [Order 74-28, § 296-78-245, filed 5/7/74; Rule E-14, effective 6/1/51, filed 3/23/60.] Repealed by 81-18-029 (Order 81-21), filed 8/27/81. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240.

296-78-250 Air hoists. [Order 74-28, § 296-78-250, filed 5/7/74; Rule E-15, effective 6/1/51, filed 3/23/60.] Repealed by 81-18-029 (Order 81-21), filed 8/27/81. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240.

296-78-255 Jib, pillar, and portable floor cranes, crabs, and winches. [Order 74-28, § 296-78-255, filed 5/7/74; Rule E-16, effective 6/1/51, filed 3/23/60.] Repealed by 81-18-029 (Order 81-21), filed 8/27/81. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240.

296-78-260 Standard crane hand signals—Illustration. [Order 74-28, § 296-78-260, filed 5/7/74; Rule E-17, effective 6/1/51, filed 3/23/60.] Repealed by 81-18-029 (Order 81-21), filed 8/27/81. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240.

296-78-265 Vehicles. [Order 77-12, § 296-78-265, filed 7/11/77; Order 74-28, § 296-78-265, filed 5/7/74; Rules E-18 through E-39, effective 6/1/51, filed 3/23/60.] Repealed by 81-18-029 (Order 81-21), filed 8/27/81. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240.

296-78-270 Loading, piling, storage and conveying. [Order 76-7, § 296-78-270, filed 3/1/76; Order 74-28, § 296-78-270, filed 5/7/74; Rules F-1 through F-43, effective 6/1/51, filed 3/23/60.] Repealed by 81-18-029 (Order 81-21), filed 8/27/81. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240.

296-78-275 Log dumps and ponds—Headmills. [Order 76-7, § 296-78-275, filed 3/1/76; Order 74-28, § 296-78-275, filed 5/7/74; Rules G-1 through G-50, effective 6/1/51, filed 3/23/60.] Repealed by 81-18-029 (Order 81-21), filed 8/27/81. Statutory Authority: RCW 49.17.040, 49.17.-050 and 49.17.240.

296-78-280 Band saws—Saws. [Order 76-7, § 296-78-280, filed 3/1/76; Order 74-28, § 296-78-280, filed 5/7/74; Rule H-1, effective 6/1/51, filed 3/23/60.] Repealed by 81-18-029 (Order 81-21), filed 8/27/81. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240.

296-78-285 Circular saws. [Order 74-28, § 296-78-285, filed 5/7/74; Rule H-2, effective 6/1/51, filed 3/23/60.] Repealed by 81-18-029 (Order 81-21), filed 8/27/81. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240.

296-78-290 Edgers. [Order 77-12, § 296-78-290, filed 7/11/77; Order 76-7, § 296-78-290, filed 3/1/76; Order 74-28, § 296-78-290, filed 5/7/74; Rules H-3A through H-3J, effective 6/1/51, filed 3/23/60.] Repealed by 81-18-029 (Order 81-21), filed 8/27/81. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240.

296-78-295 Equalizer saws. [Order 74-28, § 296-78-295, filed 5/7/74; Rule H-4, effective 6/1/51, filed 3/23/60.] Repealed by 81-18-029 (Order 81-21), filed 8/27/81. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240.

296-78-300 Gang saws and re-saws. [Order 74-28, § 296-78-300, filed 5/7/74; Rule H-5, effective 6/1/51, filed 3/23/60.] Repealed by 81-18-029 (Order 81-21), filed 8/27/81. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240.

296-78-305 Jump saws. [Order 74-28, § 296-78-305, filed 5/7/74; Rule H-6, effective 6/1/51, filed 3/23/60.] Repealed by 81-18-029 (Order 81-21), filed 8/27/81. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240.

296-78-310 Saws—Shingle saws. [Rule H-7, effective 6/1/51, filed 3/23/60.] Repealed by Order 74-28, filed 5/7/74 and Order 76-7, filed 3/1/76.

296-78-315 Trimmer and slasher saws. [Order 74-28, § 296-78-315, filed 5/7/74; Rule H-8, effective 6/1/51, filed 3/23/60.] Repealed by 81-18-029 (Order 81-21), filed 8/27/81. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240.

296-78-320 Barrel stave saws. [Order 74-28, § 296-78-320, filed 5/5/74; Rule H-9, effective 6/1/51, filed 3/23/60.] Repealed by 81-18-029 (Order 81-21), filed 8/27/81. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240.

296-78-325 Swing saws. [Order 74-28, § 296-78-325, filed 5/7/74; Rule H-10, effective 6/1/51, filed 3/23/60.] Repealed by 81-18-029 (Order 81-21), filed 8/27/81. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240.

296-78-330 Table saws. [Order 74-28, § 296-78-330, filed 5/7/74; Rule H-11, effective 6/1/51, filed 3/23/60.] Repealed by 81-18-029 (Order 81-21), filed 8/27/81. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240.

296-78-335 Circular saws, speeds, repairs. [Order 74-28, § 296-78-335, filed 5/7/74; Rule H-12, effective 6/1/51, filed 3/23/60.] Repealed by 81-18-029 (Order 81-21), filed 8/27/81. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240.

296-78-340 Saw filing and grinding rooms and equipment. [Order 74-28, § 296-78-340, filed 5/7/74; Rule H-13, effective 6/1/51, filed 3/23/60.] Repealed by 81-18-029 (Order 81-21), filed 8/27/81. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240.

296-78-345 Miscellaneous woodworking machines—Planers, stickers, molders, matchers. [Order 74-28, § 296-78-345, filed 5/7/74; Rule I-1, effective 6/1/51, filed 3/23/60.] Repealed by 81-18-029 (Order 81-21), filed 8/27/81. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240.

296-78-350 Planers (stave and heading). [Order 74-28, § 296-78-350, filed 5/7/74; Rule I-2, effective 6/1/51, filed 3/23/60.] Repealed by 81-18-029 (Order 81-21), filed 8/27/81. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240.

296-78-355 Stave croziers. [Order 74-28, § 296-78-355, filed 5/7/74; Rule I-3, effective 6/1/51, filed 3/23/60.] Repealed by 81-18-029 (Order 81-21), filed 8/27/81. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240.

296-78-360 Jointers. [Order 74-28, § 296-78-360, filed 5/7/74; Rule I-4, effective 6/1/51, filed 3/23/60.] Repealed by 81-18-029 (Order 81-21), filed 8/27/81. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240.

296-78-365 Jointers (stave and heading). [Order 74-28, § 296-78-365, filed 5/7/74; Rule I-5, effective 6/1/51, filed 3/23/60.] Repealed by 81-18-029 (Order 81-21), filed 8/27/81. Statutory Authority: RCW 49.17.040, 49.17.-050 and 49.17.240.

296-78-370 Miscellaneous woodworking machines—Jointers—(Shingle). [Rule I-6, effective 6/1/51, filed 3/23/60.] Repealed by Order 74-28, filed 5/7/74 and Order 76-7, filed 3/1/76.

296-78-375 Wood shapers. [Order 74-28, § 296-78-375, filed 5/7/74; Rule I-7, effective 6/1/51, filed 3/23/60.] Repealed by 81-18-029 (Order 81-21), filed 8/27/81. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240.

296-78-380 Boring and mortising machines. [Order 74-28, § 296-78-380, filed 5/7/74; Rule I-8, effective 6/1/51, filed 3/23/60.] Repealed by 81-18-029 (Order 81-21), filed 8/27/81. Statutory Authority: RCW 49.17.040, 49.17.-050 and 49.17.240.

296-78-385 Tenoning machines. [Order 74-28, § 296-78-385, filed 5/7/74; Rule I-9, effective 6/1/51, filed 3/23/60.] Repealed by 81-18-029 (Order 81-21), filed 8/27/81. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240.

296-78-390 Lathe (pail and barrel). [Order 74-28, § 296-78-390, filed 5/7/74; Rule I-10, effective 6/1/51, filed 3/23/60.] Repealed by 81-18-029 (Order 81-21), filed 8/27/81. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240.

296-78-395 Sanding machines. [Order 74-28, § 296-78-395, filed 5/7/74; Rule I-11, effective 6/1/51, filed 3/23/60.] Repealed by 81-18-029 (Order 81-21), filed 8/27/81. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240.

296-78-400 Glue machines. [Order 74-28, § 296-78-400, filed 5/7/74; Rule I-12, effective 6/1/51, filed 3/23/60.] Repealed by 81-18-029 (Order 81-21), filed 8/27/81. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240.

296-78-405 Lath mills. [Order 74-28, § 296-78-405, filed 5/7/74; Rule J-1, effective 6/1/51, filed 3/23/60.] Repealed by

	81-18-029 (Order 81-21), filed 8/27/81. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240.
296-78-410	Veneer and plywood plants—Peeling and barking. [Order 74-28, § 296-78-410, filed 5/7/74; Rule K-1, effective 6/1/51, filed 3/23/60.] Repealed by 81-18-029 (Order 81-21), filed 8/27/81. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240.
296-78-415	Veneer lathe. [Order 74-28, § 296-78-415, filed 5/7/74; Rules K-2 through K-4, effective 6/1/51, filed 3/23/60.] Repealed by 81-18-029 (Order 81-21), filed 8/27/81. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240.
296-78-420	Veneer slicer and cutter. [Order 74-28, § 296-78-420, filed 5/7/74; Rule K-5, effective 6/1/51, filed 3/23/60.] Repealed by 81-18-029 (Order 81-21), filed 8/27/81. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240.
296-78-425	Veneer clipper. [Order 74-28, § 296-78-425, filed 5/7/74; Rule K-6, effective 6/1/51, filed 3/23/60.] Repealed by 81-18-029 (Order 81-21), filed 8/27/81. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240.
296-78-430	Veneer wringer (swede). [Order 74-28, § 296-78-430, filed 5/7/74; Rule K-7, effective 6/1/51, filed 3/23/60.] Repealed by 81-18-029 (Order 81-21), filed 8/27/81. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240.
296-78-450	The shake and shingle industry. [Order 76-7, § 296-78-450, filed 3/1/76; Order 74-28, § 296-78-450, filed 5/7/74.] Repealed by 81-18-029 (Order 81-21), filed 8/27/81. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240.
296-78-555	First-aid room. [Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-555, filed 8/27/81.] Repealed by 00-01-038, filed 12/7/99, effective 2/1/00. Statutory Authority: RCW 49.17.010, [49.17].040 and [49.17].050.

WAC 296-78-500 Foreword. (1) General requirements. The chapter 296-78 WAC shall apply to and include safety requirements for all installations where the primary manufacturing of wood building products takes place. The installations may be a permanent fixed establishment or a portable operation. These operations shall include but are not limited to log and lumber handling, sawing, trimming and planing, plywood or veneer manufacturing, canting operations, waste or residual handling, operation of dry kilns, finishing, shipping, storage, yard and yard equipment, and for power tools and affiliated equipment used in connection with such operation. WAC 296-78-450 shall apply to shake and shingle manufacturing. The provisions of WAC 296-78-500 through 296-78-84011 are also applicable in shake and shingle manufacturing except in instances of conflict with the requirements of WAC 296-78-705. (Rev. 1-28-76.)

(2) This standard shall augment the Washington state general safety and health standards, general occupational health standards, electrical workers safety rules, and any other standards which are applicable to all industries governed by chapter 80, Laws of 1973, Washington Industrial Safety and Health Act. In the event of any conflict between any portion of this chapter and any portion of any of the general application standards, the provisions of this chapter 296-78 WAC, shall apply.

(3) In exceptional cases where compliance with specific provisions of this chapter can only be accomplished to the serious detriment and disadvantage of an operation, variance from the requirement may be permitted by the director of the department of labor and industries after receipt of application for variance which meets the requirements of chapter 296-900 WAC.

(4) No safety program will run itself. To be successful, the wholehearted interest of the employees' group (labor unions) and management must not only be behind the program, but the fact must also be readily apparent to all.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, 49.17.060. 07-03-163, § 296-78-500, filed 1/24/07, effective 4/1/07. Statutory Authority: RCW 49.17.010, [49.17].040, and [49.17].050. 01-11-038, § 296-78-500, filed 5/9/01, effective 9/1/01. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-500, filed 8/27/81.]

WAC 296-78-505 Definitions applicable to this chapter. (1) "A-frame" means a structure made of two independent columns fastened together at the top and separated at the bottom for stability.

(2) "Annealing" heating then cooling to soften and render less brittle.

(3) "Binder" a hinged lever assembly used to connect the ends of a wrapper to tighten the wrapper around the load of logs or materials.

(4) "Boom" logs or timbers fastened together end to end and used to contain floating logs. The term includes enclosed logs.

(5) "Brow log" a log placed parallel to a roadway at a landing or dump to protect vehicles while loading or unloading.

(6) "Bunk" a cross support for a load.

(7) "Cant" a log slabbed on one or more sides.

(8) "Carriage" (log carriage) a framework mounted on wheels which runs on tracts or in grooves in a direction parallel to the face of the saw, and which contains apparatus to hold a log securely and advance it toward the saw.

(9) "Carrier" an industrial truck so designed and constructed that it straddles the load to be transported with mechanisms to pick up the load and support it during transportation.

(10) "Chipper" a machine which cuts material into chips.

(11) "Chock," "bunk block," and "cheese block" a wedge that prevents logs or loads from moving.

(12) "Cold deck" a pile of logs stored for future removal.

(13) "Crotch lines" two short lines attached to a hoisting line by a ring or shackle, the lower ends being attached to loading hooks.

(14) "Dog" (carriage dog) a steel tooth or assembly of steel teeth, one or more of which are attached to each carriage knee to hold log firmly in place on carriage.

(15) "Drag saw" a power-driven, reciprocating cross-cut saw mounted on suitable frame and used for bucking logs.

(16) "Head block" that part of a carriage which holds the log and upon which it rests. It generally consists of base, knee, taper set, and mechanism.

(17) "Head rig" a combination of head saw and log carriage used for the initial breakdown of logs into timbers, cants, and boards.

(18) "Hog" a machine for cutting or grinding slabs and other coarse residue from the mill.

(19) "Husk" a head saw framework on a circular mill.

(20) "Industrial truck" a mobile, power-driven vehicle used to carry, push or pull material. It is designed for "in-plant" or "on-site" use rather than highway use.

(21) "Kiln tender" the operator of a kiln.

(22) "Lift truck" an industrial truck used for lateral transportation and equipped with a power-operated lifting device, usually in the form of forks, for piling or unpiling lumber units or packages.

(23) "Live rolls" cylinders of wood or metal mounted on horizontal axes and rotated by power, which are used to convey slabs, lumber, and other wood products.

(24) "Loading boom" any structure projecting from a pivot point and intended to be used for lifting and guiding loads for the purpose of loading or unloading.

(25) "Log" a portion of a tree, usually a minimum of twelve feet in length, capable of being further processed into a variety of wood products.

(26) "Log deck" a platform in the sawmill on which the logs remain until needed for sawing.

(27) "Log haul" a conveyor for transferring logs to mill.

(28) "Lumber dimensions" the nominal size of surfaced lumber, unless otherwise stated.

(29) "Lumber hauling truck" an industrial truck, other than a lift truck or a carrier, used for the transport of lumber.

(30) "Package" a unit of lumber.

(31) "Peavy" a stout wooden handle fitted with a spike and hook and used for rolling logs.

(32) "Peeler block" a portion of a tree usually bucked in two foot intervals plus trim, to be peeled in a lathe or sliced in a slicer into veneer for further processing into plywood.

(33) "Pike pole" a long pole whose end is shod with a sharp pointed spike.

(34) "Pitman rod" connecting rod.

(35) "Resaw" band, circular, or sash gang saws used to break down slabs, cants, or flitches into lumber.

(36) "Running line" any moving rope as distinguished from a stationary rope such as a guyline.

(37) "Safety factor" a calculated reduction factor which may be applied to laboratory test values to obtain safe working stresses for wooden beams and other mechanical members; ratio of breaking load to safe load.

(38) "Saw guide" a device for steadying a circular or bandsaw.

(39) "Setwork" a mechanism on a sawmill carriage which enables an operator to move the log into position for another cut.

(40) "Sorting gaps" the areas on a log pond enclosed by boom sticks into which logs are sorted.

(41) "Spreader wheel" a metal wheel that separates the board from the log in back of circular saws to prevent binding.

(42) "Splitter" a knife-type, nonrotating spreader.

(43) "Sticker" a strip of wood or other material used to separate layers of lumber.

(44) "Stiff boom" the anchored, stationary boom sticks which are tied together and on which boom persons work.

(45) "Swifter" is a tying of boom sticks together to prevent them from spreading while being towed.

(46) "Telltale" a device used to serve as a warning for overhead objects.

(47) "Top saw" the upper of two circular saws on a head rig, both being on the same husk.

(48) "Tramway" a way for trams, usually consisting of parallel tracks laid on wooden beams.

(49) "Trestle" a braced framework of timbers, piles or steelwork for carrying a road or railroad over a depression.

(50) "Wrapper" a chain, strap or wire rope assembly used to contain a load of logs or materials.

[Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-505, filed 8/27/81.]

WAC 296-78-510 Education and first-aid standards. It shall be the duty of every employer to comply with such standards and systems of education for safety as shall be, from time to time, prescribed for such employer by the director of labor and industries through the division of industrial safety and health or by statute.

[Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-510, filed 8/27/81.]

WAC 296-78-515 Management's responsibility. (1) It shall be the responsibility of management to establish, supervise, and enforce, in a manner which is effective in practice:

(a) A safe and healthful working environment.

(b) An accident prevention program as required by these standards.

(c) Training programs to improve the skill and competency of all employees in the field of occupational safety and health. Such training shall include the on-the-job instructions on the safe use of powered materials handling equipment, machine tool operations, use of toxic materials and operation of utility systems prior to assignments to jobs involving such exposures.

(2) The employer shall develop and maintain a chemical hazard communication program as required by WAC 296-800-170, which will provide information to all employees relative to hazardous chemicals or substances to which they are exposed, or may become exposed, in the course of their employment.

(3) Management shall not assign mechanics, millwrights, or other persons to work on equipment by themselves when there is a probability that the person could fall from elevated work locations or equipment or that a person could be pinned down by heavy parts or equipment so that they could not call for or obtain assistance if the need arises.

Note: This subsection does not apply to operators of motor vehicles, watchperson or certain other jobs which, by their nature, are singular employee assignments. However, a definite procedure for checking the welfare of all employees during their working hours shall be instituted and all employees so advised.

(4) After the emergency actions following accidents that cause serious injuries that have immediate symptoms, a preliminary investigation of the cause of the accident shall be conducted. The investigation shall be conducted by a person designated by the employer, the immediate supervisor of the injured employee, witnesses, employee representative if available and any other person with the special expertise required to evaluate the facts relating to the cause of the accident. The findings of the investigation shall be documented by the employer for reference at any following formal investigation.

(5) Reporting of fatality or hospitalization incidents.

(a) Within eight hours after the fatality or probable fatality of any employee from a work-related incident or the inpa-

tient hospitalization of any employee as a result of a work-related incident, the employer of any employees so affected shall report the fatality/hospitalization by telephone or in person, to the nearest office of the department or by using the OSHA toll-free central telephone number, 1-800-321-6742.

(i) This requirement applies to each such fatality or hospitalization which occurs within thirty days of the incident.

(ii) Exception: If any employer does not learn of a reportable incident at the time it occurs and the incident would otherwise be reportable under this subsection, the employer shall make a report within eight hours of the time the incident is reported to any agent or employee of the employer.

(iii) Each report required by this subsection shall relate the following information: Establishment name, location of the incident, time of the incident, number of fatalities or hospitalized employees, contact person, phone number, and a brief description of the incident.

(b) Equipment involved in an incident resulting in an immediate or probable fatality or in the in-patient hospitalization of any employee, shall not be moved, until a representative of the department investigates the incident and releases such equipment, except where removal is essential to prevent further incident. Where necessary to remove the victim, such equipment may be moved only to the extent of making possible such removal.

(c) Upon arrival of a department investigator, employer shall assign to assist the investigator, the immediate supervisor and all employees who were witnesses to the incident, or whoever the investigator deems necessary to complete the investigation.

(6) A system for maintaining records of occupational injuries and illnesses as prescribed by chapter 296-27 WAC.

Note: Recordable cases include:
(a) Every occupational death.
(b) Every industrial illness.
(c) Every occupational injury that involves one of the following:
(i) Unconsciousness.
(ii) Inability to perform all phases of regular job.
(iii) Inability to work full time on regular job.
(iv) Temporary assignment to another job.
(v) Medical treatment beyond first aid.

All employers with eleven or more employees shall record occupational injury and illness information on forms OSHA 101 - supplementary record occupational injuries and illnesses and OSHA 200 - log and summary. Forms other than OSHA 101 may be substituted for the supplementary record of occupational injuries and illnesses if they contain the same items.

(7) Personal protective equipment required by this standard shall be provided at no cost to employees.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, 49.17.060. 09-05-071, § 296-78-515, filed 2/17/09, effective 4/1/09; 08-05-012, § 296-78-515, filed 2/8/08, effective 4/1/08. Statutory Authority: RCW 49.17.010, [49.17].040, and [49.17].050. 01-11-038, § 296-78-515, filed 5/9/01, effective 9/1/01. Statutory Authority: Chapter 49.17 RCW. 94-20-057 (Order 94-16), § 296-78-515, filed 9/30/94, effective 11/20/94; 91-24-017 (Order 91-07), § 296-78-515, filed 11/22/91, effective 12/24/91; 89-11-035 (Order 89-03), § 296-78-515, filed 5/15/89, effective 6/30/89. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-515, filed 8/27/81.]

WAC 296-78-520 Employee's responsibility. (1) Employees shall coordinate and cooperate with all other employees in an attempt to eliminate accidents.

(2) Employees shall study and observe all safe practices governing their work.

(3) Employees should offer safety suggestions, wherein such suggestions may contribute to a safer work environment.

(4) Employees shall apply the principles of accident prevention in their daily work and shall use proper safety devices and protective equipment as required by their employment or employer.

(5) Employees shall properly care for all personal protective equipment.

(6) Employees shall make a prompt report to their immediate supervisor, of each industrial injury or occupational illness, regardless of the degree of severity.

(7) Employees shall not wear torn or loose clothing while working around machinery.

[Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-520, filed 8/27/81.]

WAC 296-78-525 Accident-prevention programs. Each employer shall develop a formal accident-prevention program, tailored to the needs of the particular plant or operation and to the type of hazards involved. The department may be contacted for assistance in developing appropriate programs.

(1) The following are the minimal program elements for all employers:

(a) A safety orientation program describing the employer's safety program and including:

(i) How and when to report injuries, including instruction as to the location of first-aid facilities.

(ii) How to report unsafe conditions and practices.

(iii) The use and care of required personal protective equipment.

(iv) The proper actions to take in event of emergencies including the routes of exiting from areas during emergencies.

(v) Identification of the hazardous gases, chemicals or materials involved along with the instructions on the safe use and emergency action following accidental exposure.

(vi) A description of the employers total safety program.

(vii) An on-the-job review of the practices necessary to perform the initial job assignments in a safe manner.

(b) A designated safety and health committee consisting of management and employee representatives with the employee representatives being elected or appointed by fellow employees.

(2) Each accident-prevention program shall be outlined in written format.

[Statutory Authority: Chapter 49.17 RCW. 94-20-057 (Order 94-16), § 296-78-525, filed 9/30/94, effective 11/20/94. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-525, filed 8/27/81.]

WAC 296-78-530 Safety and health committee plan. (1) All employers of eleven or more employees, shall have a designated safety committee composed of employer and employee elected members.

(a) The terms of employee-elected members shall be a maximum of one year. Should a vacancy occur on the committee, a new member shall be elected prior to the next scheduled meeting.

(b) The number of employer-selected members shall not exceed the number of employee-elected members.

(2) The safety committee shall have an elected chairperson.

(3) The safety committee shall be responsible for determining the frequency of committee meetings.

Note: If the committee vote on the frequency of safety meetings is stalemated, the division's regional safety educational representative may be consulted for recommendations.

(a) The committee shall be responsible for determining the date, hour and location of the meetings.

(b) The length of each meeting shall not exceed one hour except by majority vote of the committee.

(4) Minutes of each committee meeting shall be prepared and filed for a period of at least one year and shall be made available for review by noncompliance personnel of the division of industrial safety and health.

(5) Safety and health committee meetings shall address the following:

(a) A review of the safety and health inspection reports to assist in correction of identified unsafe conditions or practices.

(b) An evaluation of the accident investigations conducted since the last meeting to determine if the cause of the unsafe acts or unsafe conditions involved was properly identified and corrected.

(c) An evaluation of the accident or illness prevention program with the discussion of recommendation for improvement where indicated.

(d) The attendance shall be documented.

(e) The subject(s) discussed shall be documented.

(6) All employers of ten or less employees and employers of eleven or more employees where the employees are segregated on different shifts or in widely dispersed locations in crews of ten or less employees, may elect to have foreman-crew meetings in lieu of a safety and health committee plan provided:

(a) Foreman-crew safety meetings be held at least once a month, however, if conditions require, weekly or semi-monthly meetings shall be held to discuss safety problems as they arise.

(b) All items under subsection (5) of this section shall be covered.

[Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-530, filed 8/27/81.]

WAC 296-78-535 Safety bulletin board. There shall be installed and maintained in every fixed establishment, a safety bulletin board sufficient in size to display and post safety bulletins, newsletters, posters, accident statistics and other safety educational material. It is recommended that safety bulletin boards be painted green and white.

[Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-535, filed 8/27/81.]

WAC 296-78-540 First-aid training and certification. The employer must ensure that first-aid trained personnel are available to help employees who are injured or who become acutely ill on the job. The employer must meet this requirement by maintaining first-aid trained staff on the job site. The employer must ensure that:

(1) Each person in charge of employees has first-aid training; or another person with first-aid training is present or available to the employees. Such training must be successfully completed every two years;

(2) Documentation of first-aid training is kept;

(3) Emergency telephone numbers are adequately posted.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. 04-07-160, § 296-78-540, filed 3/23/04, effective 5/1/04. Statutory Authority: RCW 49.17.010, [49.17].040, and [49.17].050. 01-11-038, § 296-78-540, filed 5/9/01, effective 9/1/01; 00-01-038, § 296-78-540, filed 12/7/99, effective 2/1/00. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-540, filed 8/27/81.]

WAC 296-78-545 First-aid supplies. The first-aid kits and supplies requirements of WAC 296-800-150 apply within the scope of chapter 296-78 WAC.

[Statutory Authority: RCW 49.17.010, [49.17].040, and [49.17].050. 01-11-038, § 296-78-545, filed 5/9/01, effective 9/1/01; 00-01-038, § 296-78-545, filed 12/7/99, effective 2/1/00. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-545, filed 8/27/81.]

WAC 296-78-550 First-aid station. Employers with fifty or more employees per shift at one location must establish a first-aid station in accordance with the requirements in chapter 296-24 WAC, Part A-1.

[Statutory Authority: RCW 49.17.010, [49.17].040 and [49.17].050. 00-01-038, § 296-78-550, filed 12/7/99, effective 2/1/00. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-550, filed 8/27/81.]

WAC 296-78-560 Safe place standards. (1) Each employer shall furnish to each of his employees a place of employment free from recognized hazards that are causing or likely to cause serious injury or death to his employees.

(2) Every employer shall furnish and use safety devices and safeguards, and shall adopt and use practices, means, methods, operations, and processes which are reasonably adequate to render such employment and place of employment safe. Every employer shall do every other thing reasonably necessary to protect the life and safety of employees.

(3) No employer shall require any employee to go or be in any employment or place of employment which is not safe.

(4) No employer shall fail or neglect:

(a) To provide and use safety devices and safeguards.

(b) To adopt and use methods and processes reasonably adequate to render the employment and place of employment safe.

(c) To do every other thing reasonably necessary to protect the life and safety of employees.

(5) No employer, owner, or lessee of any real property shall construct or cause to be constructed any place of employment that is not safe.

(6) No person shall do any of the following:

(a) Remove, displace, damage, destroy or carry off any safety device, safeguard, notice, or warning, furnished for use in any employment or place of employment.

(b) Interfere in any way with the use thereof by any other person.

(c) Interfere with the use of any method or process adopted for the protection of any employee, including himself, in such employment, or place of employment.

(d) Fail or neglect to do every other thing reasonably necessary to protect the life and safety of employees.

(e) Intoxicating beverages and narcotics shall not be permitted or used in or around work sites. Workers under the influence of alcohol or narcotics shall not be permitted on the work site. This rule does not apply to persons taking prescription drugs and or narcotics as directed by a physician providing such use shall not endanger the worker or others.

[Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-560, filed 8/27/81.]

WAC 296-78-565 Log dumps and ponds—Headmills.

[Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-565, filed 8/27/81.]

WAC 296-78-56501 Log dumps and ponds. (1) Log dumps, booms, ponds or storage areas, if used at night, shall be illuminated in accordance with the requirements of WAC 296-800-210, safety and health core rules.

(2) A log dump shall be constructed at each log pond or decking ground. Log trucks shall not be unloaded by use of peavies or by hand.

(a) The roadbed shall be of hard packed gravel, heavy planking or equivalent material and shall be maintained at all times. Roadbeds at log dumps shall be of width and evenness to insure safe operation of equipment.

(b) A mechanical unloading device shall be provided and used for unloading logs. Log unloading areas shall be arranged and maintained to provide a safe working area.

(c) Signs prohibiting unauthorized foot or vehicle traffic in log unloading and storage areas shall be posted.

(d) At no time shall one person be permitted to work alone on a log dump, a booming or rafting grounds, or a log pond.

(3) Water log dumps. Ungrounded electrically powered hoists using handheld remote control in grounded locations, such as log dumps or mill log lifts, shall be actuated by circuits operating at less than 50 volts to ground.

(4)(a) A brow log, skid timbers or the equivalent shall be installed on all log dumps.

(b) Where logs are unloaded onto skids, sufficient space shall be provided between the top of the skids and the ground to accommodate the body of a person.

(c) All truck dumps shall be built with not more than six inches variation of level from side to side.

(5)(a) All truck log dumps shall be equipped with a positive safeguard to prevent logs from leaving the load on the side opposite the brow log. Jill pokes shall not be used on truck log dumps.

(b) Unloading lines shall be attached and tightened or other positive safeguard in place before binder chains are released at any log dump.

(c) Stakes and chocks which trip shall be constructed in such manner that the tripping mechanism that releases the stake or chocks is activated at the opposite side of the load being tripped.

(d) Binders shall be released only from the side on which the unloader operates, except when released by remote control devices or except when person making release is protected by racks or stanchions or other equivalent means.

(e) Loads on which a binder is fouled by the unloading machine shall have an extra binder or metal band of equal strength placed around the load, or the load shall be otherwise secured so that the fouled binder can be safely removed.

(f) Unloading lines, crotch lines, or equally effective means shall be arranged and used in a manner to minimize the possibility of any log swinging or rolling back.

(6)(a) In unloading operations, the operator of unloading machine shall have an unobstructed view of the vehicle and the logs being unloaded.

(b) Unloading lines shall be arranged so that it is not necessary for the employees to attach them from the pond or dump site of the load except when entire loads are lifted from the log-transporting vehicle.

(7) All log dumps shall be kept reasonably free of bark and other debris.

(8) Employees shall remain in the clear until all moving equipment has come to a complete stop.

(9) Artificial log ponds subject to unhealthy stagnation shall be drained, cleansed, and water changed at least once every six months.

(10) All employees whose regular work requires walking on logs shall wear spiked or calked shoes, except when working in snow.

(11) Employees whose duties require them to work from boats, floating logs, boom sticks, or walkways along or on water must be provided with and must wear appropriate buoyant devices while performing such duties.

(a) Employees are not considered exposed to the danger of drowning:

(i) When working behind standard height and strength guardrails;

(ii) When working inside operating cabs or stations which eliminate the possibility of accidentally falling into the water;

(iii) When wearing approved safety belts with lifeline attached so as to preclude the possibility of falling into the water.

(b) Prior to and after each use, personal floating devices shall be inspected for defects which would reduce their designed effectiveness. Defective personal flotation devices shall not be used.

(c) To meet the approved criteria required by this subsection (11), a personal flotation device shall be approved by the United States Coast Guard as a Type I PFD, Type II PFD, Type III PFD, or Type V PFD, or their equivalent, pursuant to 46 C.F.R. 160 (Coast Guard lifesaving equipment specifications) and 33 C.F.R. 175.23 (Coast Guard table of devices equivalent to personal flotation devices). Ski belt or inflatable type personal flotation devices are specifically prohibited.

(12)(a) Wooden pike poles shall be of continuous, straight grained No. 1 material. Defective poles, blunt or dull pikes shall not be used.

(b) Aluminum or other metal poles shall not be used where hazard of coming in contact with live electric wires exists.

(13)(a) Walkways and floats shall be provided and security anchored to provide safe passage for workers.

(b) Permanent cable swifters shall be so arranged that it will not be necessary to roll boom sticks in order to attach or detach them.

(c) Inspection of cable or dogging lines shall be made as necessary to determine when repair or removal from service is necessary.

(14)(a) Decks of floats or other walkways shall be kept above the waterline at all times and shall be capable of supporting four times the load to be imposed.

(b) Floating donkeys or other power-driven machinery used on booms shall be placed on a raft or float with enough buoyancy to keep the deck above water.

(15)(a) All regular boom sticks and foot logs shall be reasonably straight, have all protruding knots and bark removed, and shall be capable of supporting above the waterline at either end, any necessary weight of workers and equipment.

(b) Stiff booms shall be two float logs wide secured by boom chains or other connecting devices, and of a width adequate for the working needs. Walking surfaces shall be free of loose material and maintained in good repair.

(c) Boom sticks shall be fastened together with crossties or couplings.

[Statutory Authority: RCW 49.17.010, [49.17].040, and [49.17].050. 02-03-124, § 296-78-56501, filed 1/23/02, effective 3/1/02; 01-11-038, § 296-78-56501, filed 5/9/01, effective 9/1/01. Statutory Authority: Chapter 49.17 RCW. 89-11-035 (Order 89-03), § 296-78-56501, filed 5/15/89, effective 6/30/89. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-56501, filed 8/27/81.]

WAC 296-78-56503 Log hauls. (1) Every log haul used as a walkway shall have at least one walkway with standard railing to enable workers to stand clear of the logs in the chute. Cleats shall be installed to provide safe footing on sloping walkways.

(2) Workers shall not stand under or dangerously near to logs that are being hoisted vertically to the log deck.

(3)(a) Log haul gears and bull chain drive mechanism shall be adequately guarded for the protection of employees.

(b) Log haul bull chains or cable shall be designed, installed, and maintained to provide a four to one safety factor for the intended load.

(c) Troughs for the return strand of log haul chains shall be provided over passageways.

(d) Overhead protection shall be provided for employees working below logs being moved to the log deck.

(4) Log haul controls shall be arranged to operate from a position where the operator will at all times be in the clear of logs, machinery lines and rigging. Such controls shall operate mechanism only when moved toward the log slip or deck.

(5) Where possible an automatic stop shall be installed on all log hauls. A positive stop shall be installed on all log hauls to prevent logs from traveling too far ahead in the mill.

(6)(a) Slip persons shall handle pike poles in such manner as to be in the clear in case of a slip back.

(b) All sorting gaps shall have a stiff boom on each side.

(c) The banks of the log pond in the vicinity of the log haul shall be reinforced to prevent caving in.

[Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-56503, filed 8/27/81.]

WAC 296-78-56505 Boats and mechanical devices on waters. (1) The applicable provisions of the Standard for Fire Protection for Motorcraft, NFPA No. 302-1994, shall be complied with. Prior to starting the boat motor, any spilled fuel shall be removed and vapors shall be exhausted from any area in which they may accumulate.

(2) The bilge area shall be kept clean and oil, grease, fuel, or highly combustible materials shall not be allowed to accumulate.

(3) Adequate ventilation equipment shall be provided and used for the bilge area to prevent the accumulation of toxic or explosive gases or vapors.

(4) Adequate ventilation equipment shall be provided and used for the cabin area on enclosed cabin-type boats to prevent an accumulation of harmful gases or vapors.

(5) Deck and cabin lighting shall be provided and used where necessary to provide safe levels of illumination aboard boats. Boats operated during the period from sunset to sunrise, or in conditions of restricted visibility, shall display navigation lights as required by the United States Coast Guard. Searchlights or floodlights shall be provided to facilitate safe navigation and to illuminate working or boarding areas adjacent to the craft.

(6) Decks of pond boats shall be covered with nonslip material. On craft used by workers wearing calked shoes, all areas where the operator or workers must stand or walk shall be made of or be covered with wood or other suitable matting or nonslip material and such covering shall be maintained in good condition.

(7) Each boat shall be provided with a fire extinguisher and life ring with at least fifty feet of one-fourth inch line attached.

Note: For additional requirements relating to portable fire extinguishers see WAC 296-800-300.

(8)(a) Along docks, walkways, or other fixed installations on or adjacent to open water more than five feet deep, approved life rings with at least ninety feet of one-fourth inch line attached, shall be provided. The life rings shall be spaced at intervals not to exceed two hundred feet and shall be kept in easily visible and readily accessible locations.

(b) When employees are assigned work at other casual locations where exposure to drowning exists, at least one approved life ring with at least ninety feet of line attached, shall be provided in the immediate vicinity of the work assigned.

(c) When work is assigned over water where the vertical drop from the accidental fall would exceed fifty feet, special arrangements shall be made with and approved by the department of labor and industries prior to such assignment.

(d) Lines attached to life rings on fixed locations shall be at least ninety feet in length, at least one-fourth inch in diameter, and have a minimum breaking strength of five hundred

pounds. Similar lines attached to life rings on boats shall be at least fifty feet in length.

(e) Life rings must be United States Coast Guard approved thirty-inch size.

(f) Life rings and attached lines shall be provided and maintained to retain their buoyancy and strength.

(g) Log broncs, boomscooters, and boomboats shall not be loaded with personnel or equipment so as to adversely affect their stability or seaworthiness.

(h) Boats shall not be operated at an excessive speed or handled recklessly.

(i) Boat fuel shall be transported and stored in approved containers. Refer to WAC 296-24-58501(19) for definition of approved.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.-060. 03-06-076, § 296-78-56505, filed 3/4/03, effective 8/1/03. Statutory Authority: RCW 49.17.010, [49.17].040, and [49.17].050. 02-03-124, § 296-78-56505, filed 1/23/02, effective 3/1/02; 01-17-033, § 296-78-56505, filed 8/8/01, effective 9/1/01. Statutory Authority: Chapter 49.17 RCW. 96-17-056, § 296-78-56505, filed 8/20/96, effective 10/15/96; 88-23-054 (Order 88-25), § 296-78-56505, filed 11/14/88. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-56505, filed 8/27/81.]

WAC 296-78-56507 Log decks. (1) Dry deck storage.

(a) Dry deck storage areas shall be kept orderly and shall be maintained in a condition which is conducive to safe operation of mobile equipment.

(b) Logs shall be stored in stabilized piles, and roadways and traffic lanes shall be maintained at a width adequate for safe travel of log handling equipment.

(c) Logs shall be arranged to minimize the chance of accidentally rolling from the deck.

(2)(a) Employees shall not spool cable on winch or drums with their hands.

(b) Log wells shall be provided with safeguard to prevent logs from rolling back into well off log deck.

(3) Jump skids on log decks shall be installed in grooves in a manner that they cannot work out onto the carriage way.

(4)(a) Log decks shall be provided with effective means to prevent logs from accidentally rolling down the deck onto the carriage or its runway.

(b) Swing saws. Swing saws on log decks shall be equipped with a barricade and stops for protection of employees who may be on the opposite side of the log haul chute.

(c) Drag saws. Where reciprocating log cutoff saws (drag saws) are provided, they shall not project into walkway or aisle.

(d) Circular cutoff saws. Circular log bucking or cutoff saws shall be so located and guarded as to allow safe entrance to and exit from the building.

(e) Entrance doorway. Where the cutoff saw partially blocks the entrance from the log haul runway the entrance shall be guarded.

(5) A barricade or other positive stop shall be erected between the sawyer's stand and the log deck to protect the sawyer from rolling logs. Such barricade or stop shall be of sufficient strength to stop any log.

(6) Chains from overhead canting gear or other equipment shall not be allowed to hang over the log deck in such manner as to endanger workers.

(7) Canting gear control levers shall be so arranged that they move away from the carriage to operate.

(8) Moving parts or equipment on or about log decks shall be guarded.

(9) Peavies, canthooks and other hand tools shall be kept in good repair at all times.

(10) Workers shall not go below logs on decks that are likely to roll or be rolled. Means of access shall be provided to the head rig which does not subject employees to the hazard of moving logs or equipment.

[Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-56507, filed 8/27/81.]

WAC 296-78-56509 Mechanical barkers. (1) Rotary barkers. Rotary barking devices shall be so guarded as to protect employees from flying chips, bark, or other extraneous material.

(2) Elevating ramp. If an elevating ramp or gate is used, it shall be provided with a safety chain, hook, or other means of suspension while employees are underneath.

(3) Area around barkers. The hazardous area around ring barkers and their conveyors shall be fenced off or posted as a prohibited area for unauthorized persons.

(4) Enclosing hydraulic barkers. Hydraulic barkers shall be enclosed with strong baffles at the inlet and outlet. The operator shall be protected by adequate safety glass or equivalent.

(5) Holddown rolls. Holddown rolls shall be installed at the infeed and outfeed sections of mechanical ring barkers to control the movement of logs.

(6) If such holddown rolls have a tendency to throw logs or chunks, horseshoe or equivalent type guards shall be installed to contain the logs or chunks.

[Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-56509, filed 8/27/81.]

WAC 296-78-56511 Head rigs and feed works. (1) A clear walkway shall be provided along the upper side of the log deck and around the head rig unless an overhead walkway is provided.

(2) The sawyer shall be primarily responsible for the safety of the carriage crew and off-bearers. He shall exercise due care in the operation of the carriage and log turning devices.

(3) Feedworks and log turning control levers shall be so arranged that they may be securely locked when not in use and shall be guarded against accidental contact.

(4)(a) A positive means shall be provided to prevent unintended movement of the carriage. This shall involve a control locking device, a carriage tie-down, or both.

(b) An emergency control or equally effective means shall be provided so that the sawyer may stop the head rig section of the mill without leaving the operator station.

(5) An effective method of disengaging the head rig saws from the power unit shall be installed on all head rigs where the power unit is not directly controlled by the sawyer. The saws shall be disengaged from the source of power while repairs or changes are made.

(6) A shield of lexan, makrolon, merlon, plestar, or equivalent transparent material, shall be installed between the sawyer's stand and the head saws in all circular mills. In band

mills and chipper type installations, a wire screen of not less than twelve gauge wire, one-half inch mesh, mounted in a frame in compliance with chapter 296-806 WAC, Machine safety, is an acceptable substitute for the type shield required in circular mills.

(7) Safety glasses, safety shields or other suitable eye protection shall be provided for and use by head rig off-bearers.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.-060. 04-14-028, § 296-78-56511, filed 6/29/04, effective 1/1/05. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-56511, filed 8/27/81.]

WAC 296-78-56513 Log carriages. (1) Carriages upon which employees are required to work shall be solidly decked over.

(2) Dogs. Dogging devices shall be adequate to secure logs, cants, or boards, during sawing operations.

(3) The feed control lever of friction or belt driven carriage feed works shall be arranged to operate away from the saws or carriage track.

(4) A quick action valve, controlled from the sawyer's stand, shall be located in the steam line to any steam operated feed works. The valve shall be tested daily.

(5) Valves in steam feeds shall be closed and locked in a neutral position before the sawyer leaves his station. Leaking steam valves or piping shall not be used on carriage drives.

(6)(a) Where employees ride the headrig carriage, clearance of the rear edge of the carriage shall be either not more than two inches or shall be not less than thirty inches from the side wall of the building. The side wall shall be boarded over smoothly to height of not less than six feet six inches from the setter's platform and for at least the length of the carriage travel. Where the clearance is thirty inches or more the floor between the back side of the setter's platform and the wall shall be raised to the level of the platform. The clearance between the floor edge and the platform shall not be more than two inches.

(b) Barriers and warning signs. A barrier shall be provided to prevent employees from entering the space necessary for travel of the carriage, with headblocks fully receded, for the full length and extreme ends of carriage runways. Warning signs shall be posted at possible entry points to this area.

(7) Safe access to the head rig shall be provided.

(8) No roof truss or roof timber or other obstruction shall be located within six feet six inches of the upper surface of the setter's platform on any carriage.

(9) Doors which lead onto a passageway at the end or side of the carriage runway shall be provided with a handrail opposite such doorway. Handrail shall not be less than eighteen inches from the carriage run. A warning sign shall be posted on the entrance side of such doorways.

(10) A stop or bumper capable of stopping the loaded carriage at operating speed shall be installed at each end of the carriage run.

(11) Rail sweeps shall be installed in front of the front wheels in the direction of travel. Such sweeps shall extend to within one-fourth inch of the rail.

(12) Where power operated log turners are used, carriage knees shall be provided with goosenecks or other means of protecting the carriage crew from climbing logs.

(13) Employees shall use a stick or wire brush to clear head blocks of debris.

(14) All weakened or broken carriage boards which will not support the load to be imposed with a safety factor of 4, shall be immediately replaced.

(15) Carriage control. A positive means shall be provided to prevent unintended movement of the carriage. This may involve a control locking device, a carriage tie-down, or both.

[Statutory Authority: Chapter 49.17 RCW. 96-17-056, § 296-78-56513, filed 8/20/96, effective 10/15/96. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-56513, filed 8/27/81.]

WAC 296-78-570 Band saws—Saws. (1) Band head rigs shall be given a thorough daily inspection and any deficiency reported and corrected.

(2) Any band saw found to have developed a crack greater than one-tenth the width of the saw shall be removed from service until the width of the saw is reduced to eliminate the crack, the cracked section is removed, or the development of the crack is arrested by welding.

(3) Band saws shall not be continued in use of the head rig for which they have been designed after they have been reduced forty percent in width.

(4) Leather gloves, or equivalent hand protection, shall be worn by employees while changing band saws.

(5) All head band saw wheels shall have a minimum rim thickness of five-eighths inch, except for a distance of not to exceed one inch from the front edge of the wheel.

(6) Provisions shall be made for alerting and warning employees before starting band head saws, and measures shall be taken to insure that all persons are in the clear.

(7) No band saw shall be run at a peripheral speed in excess of that recommended by the manufacturer. The manufacturer's recommended maximum speed shall be stamped in plainly legible figures on some portion of the assembly.

(8) A band wheel that has developed a crack in the rim shall be immediately removed from service. If a crack has developed in a spoke the wheel shall be removed from service until repaired.

(9) All band wheels shall be completely encased or guarded on both sides. The exposed part of the saw blade on the uptravel between the two wheels shall be encased, and no portion of the blade exposed, except such part of the cutting edge as is essential for sawing the material at hand.

(10) All band wheel guards shall be constructed of not less than ten U.S. gauge metal, or not less than two inch wood material or equivalent, attached to the frames. Ventilating ports shall not exceed 2 x 4 inches in size. Openings necessary for lubrication or repair of the saw shall have doors or gates of equivalent strength to the remainder of the guard, and such doors or gates shall be securely closed during operation.

(11) Every band mill shall be equipped with a saw catcher, rest or guard of substantial construction.

(12) All band saws other than head mills shall be enclosed or guarded except the working side of the blade

between the guide and the table. The guard for the portion of the saw between the sliding guide and the upper saw wheel guard shall be adjusted with the guide.

(13) Each gang ripper of band or straight saw type shall have the cutting edges of the saw guarded by a hood or screen secured to the framework of the machine.

[Statutory Authority: Chapter 49.17 RCW. 96-17-056, § 296-78-570, filed 8/20/96, effective 10/15/96. Statutory Authority: RCW 49.17.040, 49.17.-050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-570, filed 8/27/81.]

WAC 296-78-575 Circular saws. (1) Single circular head saws. Circular head saws shall not be operated at speeds in excess of those specified by the manufacturer. Maximum speed shall be etched on the saw.

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

(3) Circular head saws shall be equipped with safety guides that can be readily adjusted without use of wrench or other hand tools. Brackets or edging supports shall be installed between the saw and the side of the husk.

(4) The upper saw of a double circular mill shall be provided with a hood or guard. A screen or other suitable device shall be placed so as to protect the sawyer from flying particles.

(5) All circular sawmills where live rolls are not used behind the head saw shall be equipped with an effective spreader or splitter. In any mill where the head saw is used for edging lumber, the splitter shall be solid and stationary and shall extend above the head blocks.

(6) Drag saws or circular cut-off saws shall be so arranged that they will not project into any passageway. When existing installations do not leave clear passage, saws shall be fenced off in order to make it impossible for anyone to walk into them. Means to securely hold material being sawed shall be provided wherever such material creates a hazard.

(7) All employees shall be in the clear before starting operation of drag or swing cut-off saws.

(8) Twin circular head saws. Twin circular head saw rigs such as scrag saws, shall meet the specifications for single circular head saws in subsection (1) of this section, where applicable.

[Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-575, filed 8/27/81.]

WAC 296-78-580 Edgers. (1) Edgers shall be guarded by a metal housing of ten gauge sheet metal, ten gauge by one-half inch mesh wire, screen, or by a baffle of not less than two inch wood material.

(2) Openings in end frames shall be enclosed with sheet metal, wire screen or wood and may be hinged or arranged to permit oiling and removal of saws.

(3) The top of the edger shall be guarded to prevent contact by employees or debris being thrown and all chains and gears fully enclosed as required by WAC 296-78-710 of this chapter.

(4) Vertical arbor edgers installed ahead of the main saw shall be so located and guarded that an employee cannot contact any part of the edger saws from his normal operating position.

(5) Edgers shall not be located in the main roll case behind the head saw.

(6) All edgers shall be equipped with pressure feed rolls. The controls shall be installed and located so that from the normal work station the operator can quickly stop the infeed drive without releasing the hold down tension of the pressure rolls.

(7) All edgers shall be provided with a method of preventing or guarding against kickbacks. Finger units or dogs installed at the edger, or hinged steel plates suspended across the feed table may be used for this purpose. A kickback barricade, in line with the edger, if fenced off may be used.

(8) Pressure and feed rolls on edgers shall be guarded against accidental contact by means of roll covers, bars or strips. The pressure rolls shall not be lifted while stock is being run, or while any person is in line with the feed side of the saws.

(9) Edger men shall not raise feed rolls and reach between saws while edger is in operation.

(10) Edger men shall not put hands on cants being run through the edger.

(11) Live rolls and rotating powered tailing devices in back of edger shall operate at a speed not less than the speed of the edger feed rolls.

(12) Tables in back of edgers shall be kept clear of cants, edgings and unnecessary debris.

[Statutory Authority: Chapter 49.17 RCW. 96-17-056, § 296-78-580, filed 8/20/96, effective 10/15/96. Statutory Authority: RCW 49.17.040, 49.17.-050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-580, filed 8/27/81.]

WAC 296-78-585 Equalizer saws. (1) Equalizer saws for bolts, staves, heading, etc., shall have the saws encased, except that portion immediately adjacent to the feeding device.

(2) Feeding devices on all such equipment shall be provided with guards to prevent contact with the feeding device by employees.

[Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-585, filed 8/27/81.]

WAC 296-78-590 Gang saws and re-saws. (1) Gang saws and re-saws shall be fully guarded or housed in accordance with conditions. Cranks, pitman rods, and other moving parts shall be guarded.

(2) Feed rolls shall be enclosed by a cover over the top, front, and open ends except where guarded by location. Drive mechanism to feed rolls shall be enclosed.

(3) Feed rolls shall be enclosed and if the operator stands within thirty inches of the feed rolls, they shall be so guarded as to prevent operator coming into contact with them.

(4) Circular re-saws or rip saws, except power feed rip saws with a roller or wheel back of the saw, shall be provided with splitters or spreaders.

(5) A hood of metal or wood of sufficient strength to give protection against splinters or flying teeth shall be provided over all circular rip saws.

(6) That portion of the saw extending below the table shall be so guarded as to prevent contact.

(7) Circular rip saws shall be equipped with a standard anti-kickback device.

(8) Carriage cradles of whole-log sash gang saws, Swedish gangs shall be of height to prevent logs from kicking out while being loaded.

(9) Band re-saws. Band re-saws shall meet the specifications for band head saws as required in WAC 296-78-570(7).

(10) Circular gang re-saws.

(a) Banks of circular gang re-saws shall be guarded by a hood to contain teeth or debris which can be thrown by the saws.

(b) Circular gang re-saws shall be provided with safety fingers or other anti-kickback devices.

(c) Circular gang re-saws shall not be operated at speeds exceeding those recommended by the manufacturer.

(d) Feed belts and drive pulleys shall be guarded in accordance with chapter 296-806 WAC, Machine safety.

(e) Each circular gang re-saw, except self-feed saws with a live roll or wheel at back of saw, shall be provided with spreaders.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.-060. 04-14-028, § 296-78-590, filed 6/29/04, effective 1/1/05. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-590, filed 8/27/81.]

WAC 296-78-595 Jump saws. (1) Jump saws shall have guards below the top of the table or roll case. A guard shall be placed over the roll casing to prevent persons from walking into or over the saw.

(2) Jump saws, underhung swing saws, or bed trimmers shall be so arranged that the saws are fully enclosed when not in actual use.

(3) A positive stop shall be installed to prevent the saw from passing the front edge of the roll case or table. The throat in the table or roll case shall be only wide enough to permit unobstructed operation of the saw.

(4) Guards constructed of not less than two inch wood material or of heavy wire mesh mounted in a steel frame shall be placed in front of jump saw trimmers. Stops shall be installed to prevent timber from being thrown off the roll case.

(5) Foot treadle operated saws shall be provided with safeguards to prevent accidental contact.

[Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-595, filed 8/27/81.]

WAC 296-78-600 Trimmer and slasher saws. (1) Trimmer of [and] slasher saws shall be guarded in front by a flat or round steel framework with a rigid metal screen or light iron bars attached thereto, or by wood baffles of not less than two inch wood material securely bolted to the frame.

Maximum speed. Trimmer saws shall not be run at peripheral speeds in excess of those recommended by the manufacturer.

(2) Front guards for a series of saws shall be set as close to the top of the feed table as is practical when considering the type of machine in use and the material being cut. The end saws of a series shall be guarded or fenced off.

(3) The rear of a series of saws shall have a stationary or swinging guard of not less than two inch wood material or equivalent the full width of the saws and as much wider as is necessary to protect persons at the rear of the trimmer.

(4) Safety stops. Automatic trimmer saws shall be provided with safety stops or hangers to prevent saws from dropping on table.

(5) Feed chains shall be stopped while employees are on the feed table.

(6) Spotters for trimmers or slashers shall be provided with goggles or other eye protection when conditions so warrant.

[Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-600, filed 8/27/81.]

WAC 296-78-605 Swing saws. (1) Manually operated swing cut-off saws of the following types shall be set up, guarded and operated in accordance with chapter 296-806 WAC, Machine safety:

• Saws into which materials to be cut are fed or positioned and/or held in position by hand pressure during the cutting stroke; and/or

• Saws on which the cutting stroke is propelled by hand pressure; and/or

• Saws on which the operator is within arm's reach of the blade when the operator is standing at the operator's control station and the blade is fully extended to the limit of operating travel.

(2) Operators of hand operated swing saws shall not stand directly in front of saw while making a cut.

(3) Swing cut-off saws which are fed by powered live rolls, conveyor chains and/or belts and which are operated from a remote operator's station (defined as being beyond arm's reach of the blade when the blade is fully extended to the limit of operating travel) shall be set up, guarded and operated in accordance with the following:

(a) Overhead swing cut-off saws shall be guarded by a hood which shall cover the upper half of the cutting edge at least to the depth of the teeth.

(b) The driving belts on overhead swing cut-off saws, where exposed to contact, shall be provided with guards as required by WAC 296-78-71505.

(c) Saws shall be completely enclosed when in idle position.

(d) Power operated swing saws shall have controls so arranged that the operators will not stand directly in front of saw when making cut.

(e) All swing saws shall be equipped with a counter balance which shall be permanently fastened to the frame of the saw and so arranged or adjusted that it will return the saw beyond the rear edge of the table or roll case without a rebounding motion. Wire rope, chain or nonmetallic rope running to a weight over a sheave shall not be used for attaching counter balance.

(f) No swing cut-off or trim saw shall be located directly in line with stock coming from an edger.

(g) Swing limit stops shall be provided and so adjusted that at no time shall the forward swing of the saw extend the cutting edge of the saw beyond a line perpendicular with the edge of the saw table, roll case, guard or barrier.

(h) Saws that are fed into the cut by means of air, steam, hydraulic cylinders, or other power device or arrangement

shall be designed so they can be locked or rendered inoperative.

(i) Foot treadle operated saws shall be provided with safeguards to prevent accidental contact.

(j) Swing saws on log decks shall be equipped with a positive stop for the protection of persons who may be on the opposite side of the log haul chute.

(k) Tables or roll casings for swing saws shall be provided with stops or lineup rail to prevent material being pushed off on opposite side.

(4) Operators of hand operated swing saws shall not stand directly in front of saw while making cut.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.-060. 04-14-028, § 296-78-605, filed 6/29/04, effective 1/1/05. Statutory Authority: Chapter 49.17 RCW. 96-17-056, § 296-78-605, filed 8/20/96, effective 10/15/96. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-605, filed 8/27/81.]

WAC 296-78-610 Circular saws, speeds, repairs. (1) Circular saws shall not be operated at speeds in excess of that specified by the manufacturer. Speeds shall be etched on all new saws. When saws are repaired, remanufactured or retensioned in any way to change their operating speeds, such change of speed shall be etched on the saw. These etched speeds shall not be exceeded.

(2) Circular saws shall be inspected for cracks each time that the teeth are filed or set.

(3) A circular saw shall be discontinued from use until properly repaired when found to have developed a crack equal to the length indicated in the following table:

Length of Crack	Diameter
1/2 -inch	Up to 12"
1 -inch	Over 12" to 24"
1-1/2 -inch	Over 24" to 36"
2 -inch	Over 36" to 48"
2-1/2 -inch	Over 48" to 60"
3 -inch	Over 60"

(4) Welding or slotting of cracked saws shall be done by a sawsmith under a procedure recommended by the saw manufacturer. Holes shall not be drilled in saws as a means of arresting cracks. After saws are repaired they shall be retensioned. Unless a sawsmith is employed, saws shall be returned to the manufacturer for welding or tensioning.

[Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-610, filed 8/27/81.]

WAC 296-78-615 Saw filing and grinding rooms and equipment. (1) Approaches to filing rooms shall be kept free from material and equipment at all times.

(2) Enclosed grinding and filing rooms shall be ventilated as specified in the general occupational health standard, WAC 296-62-110 through 296-62-11019.

(3) Each filing and grinding room shall be provided with two exits so arranged as to permit easy escape in case of fire.

(4) Floor shall be cleaned regularly and shall be kept free from oil, grease and other materials that might cause employees to slip or fall.

(5) Flooring around machines shall be kept in good repair at all times.

(6) Saw grinding machine belts shall be provided with guards where these belts pass through the frame of the machine.

(7) All grinding wheels on such machines shall be provided with a metal retaining hood which shall also cover the arbor ends if they are exposed to contact.

(8) Filing room employees shall be provided with goggles, face shields, or other necessary protective equipment and are required to wear the same.

(9) Guarding and mounting of abrasive wheels shall be in accordance with chapter 296-806 WAC, Machine safety.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.-060. 04-14-028, § 296-78-615, filed 6/29/04, effective 1/1/05. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-615, filed 8/27/81.]

WAC 296-78-620 Miscellaneous woodworking machines—Planers, stickers, molders, matchers. (1) Each planing, molding, sticking and matching machine shall have all cutting heads, and saws if used, covered by a solid metal guard. If such guard is constructed of sheet metal, the material used shall be not less than one-sixteenth inch in thickness, and if cast iron is used, it shall be not less than three-sixteenths inch in thickness.

(2) Planers, stickers, molding, sticking and matching machines shall be provided with exhaust fans, hoods and dust conveyors to remove the harmful dusts, etc., from the vicinity of the operator. Such hoods may be arranged to serve as guards for cutting heads.

(3) Planers and other machinery or equipment shall not be oiled while in motion, unless provided with guards or other devices to permit oiling without any possibility of contact with moving parts of machinery.

(4) Feed rolls shall be guarded by means of roll covers, bars or strips, attached to the roll frame in such manner as to remain in adjustment for any thickness of lumber.

(5)(a) Levers or controls shall be so arranged or guarded as to prevent accidental operation of machines.

(b) Foot treadle operated machines shall have a treadle guard fastened over the treadle.

(c) Locks, blocks, or other device shall be provided for positive immobilization of machine controls while repairs or adjustments are being made.

(6) Side head hoods shall be of sufficient height to safeguard the head set screw.

(7) Side heads shall not be adjusted while machine is in operation, except when extension adjusting devices are provided.

(8) Side belt and pulley guards shall be kept in place at all times the machine is in motion.

(9) All universal joints shall be enclosed.

[Statutory Authority: Chapter 49.17 RCW. 96-17-056, § 296-78-620, filed 8/20/96, effective 10/15/96. Statutory Authority: RCW 49.17.040, 49.17.-050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-620, filed 8/27/81.]

WAC 296-78-625 Planers (stave and headings). (1) Each planer (stave and heading) shall have all cutting heads, and saws if used, covered by a solid metal guard.

(2) Stave and heading planers shall be provided with exhaust fans, hoods and dust conveyors to remove the harmful dusts, etc., from the vicinity of the operator. Such hoods may be arranged to serve as guards for cutting heads.

(3) Sectional feed rolls should be provided. Where solid feed rolls are used, a sectional finger device (or other means equally effective) shall be provided to prevent kickbacks.

[Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-625, filed 8/27/81.]

WAC 296-78-630 Stave croziers. (1) Stave croziers shall have the heads guarded completely by the exhaust hood or other device, except that portion which actually inbeds itself in the stock.

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

[Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-630, filed 8/27/81.]

WAC 296-78-635 Jointers. (1) Each hand feed jointer or buzz planer with horizontal head shall be provided with an automatic guard over the cutting head both in front of and in back of the guide.

(2) Each jointer or buzz planer with horizontal head shall be equipped with a cylindrical cutting head, the throat of which shall not exceed three-eighths inch in depth or one-half inch in width. The knife projection shall not exceed one-eighth inch beyond the cylindrical body of the head.

(3) The opening in the table shall be kept as small as possible. The clearance between the edge of the rear table and the cutter head shall be not more than one-eighth inch. The table throat opening shall be not more than two and one-half inches when tables are set or aligned with each other for zero cut.

(4) Each jointer or buzz planer with 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. The guard shall effectively protect the operator's hand from coming in contact with the revolving knives. The guard shall automatically adjust itself to cover the unused portion of the head and shall remain in contact with the material at all times.

(5) Push sticks shall be provided and used for feeding stock through hand operated jointers or buzz planers.

[Statutory Authority: Chapter 49.17 RCW. 96-17-056, § 296-78-635, filed 8/20/96, effective 10/15/96. Statutory Authority: RCW 49.17.040, 49.17.-050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-635, filed 8/27/81.]

WAC 296-78-640 Jointers (stave and heading). (1) Stave and heading jointers and matchers shall have the heads guarded completely by the exhaust hood or other device, except that portion where the stock is applied.

(2) Foot power stave jointing machines shall have the knife effectively guarded to prevent the operator's fingers from coming in contact with it.

[Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-640, filed 8/27/81.]

WAC 296-78-645 Wood shapers. (1) 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 or other device so designed as to keep the operator's hands 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 wherever the nature of the work permits. The diameter of circular shaper guards shall be not less than the greatest diameter of the cutter.

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

[Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-645, filed 8/27/81.]

WAC 296-78-650 Boring and mortising machines. (1) Boring and mortising machines shall be provided with safety bit chucks without projecting set screws. Automatic machines shall be provided with point of operation guards. When necessary to prevent material from revolving with the bit, clamps or stops shall be provided and used to hold material firmly against the guides.

(2) The requirements of WAC 296-806-48048, Make sure boring and mortising machines meet these requirements, shall be applicable to boring and mortising machines.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.-060. 04-14-028, § 296-78-650, filed 6/29/04, effective 1/1/05. Statutory Authority: Chapter 49.17 RCW. 96-17-056, § 296-78-650, filed 8/20/96, effective 10/15/96. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-650, filed 8/27/81.]

WAC 296-78-655 Tenoning machines. (1) Each tenoning machine shall have all cutting heads, saws if used, and all exposed moving parts guarded. In the case of cutting heads and saws, the guard shall be of solid metal.

(2) If sheet metal is used, it shall be not less than ten U.S. gauge in thickness. If cast metal is used it shall be not less than three-sixteenths inch thick, or if aluminum is used, it shall be not less than five-eighths inch thick. 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 herein.

(3) 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.

(4) The rear end of the frame over which the feed conveyors run shall be so extended that the material as it leaves the machine will be guided to a point within easy reach of the person removing stock at the rear of the tenoner.

(5) Single end tenoners, hand fed, shall have a piece of sheet metal placed so that the operator's hands cannot slip off the lever handle into the tool in passing. Such guard shall be fastened to the lever.

[Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-655, filed 8/27/81.]

WAC 296-78-660 Lathe (pail and barrel). (1) Each profile, swing-head and back-knife lathe shall have all cutting heads covered by a solid metal guard.

(2) If sheet metal is used, it shall be not less than ten U.S. gauge in thickness. If cast metal is used, it shall be not less than three-sixteenths inch thick, or if aluminum is used, it shall be not less than five-eighths inch thick. 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 above.

(3) Pail and barrel lathes shall be guarded in accordance with the specifications for profile and back-knife lathes insofar as they are applicable.

(4) The requirements of WAC 296-806-450, Lathes, shall be applicable to pail and barrel lathes.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.-060. 04-14-028, § 296-78-660, filed 6/29/04, effective 1/1/05. Statutory Authority: Chapter 49.17 RCW. 96-17-056, § 296-78-660, filed 8/20/96, effective 10/15/96. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-660, filed 8/27/81.]

WAC 296-78-665 Sanding machines. (1) Each belt sanding machine shall have both pulleys enclosed in such a manner as to guard the points where the belt runs onto the pulleys. The edges of the unused run of belt shall be enclosed or otherwise guarded from contact by employees.

(2) Each drum sanding machine shall be provided with a guard so arranged as to completely enclose the revolving drum except such portion required for the application of the material to be finished. Guards with hinges to facilitate the insertion of sandpaper may be installed. The exhaust hood may form part or all of this guard. When so used, the hood shall conform to the specifications as given under exhaust systems in WAC 296-78-710.

(3) All standard stationary sanding machines shall be provided with exhaust systems in conformity with the section of this code dealing with exhaust systems.

(4) All portable sanding machines shall be provided with means of removing excessive dust, or employees using equipment shall be provided with such necessary respiratory protective equipment as will conform to the requirements of chapter 296-842 WAC, Respirators.

(5) The requirements of WAC 296-806-475, sanding machines, shall be applicable to sanding machines.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, 49.17.060. 05-20-055, § 296-78-665, filed 10/3/05, effective 12/1/05; 05-03-093, § 296-78-665, filed 1/18/05, effective 3/1/05; 04-14-028, § 296-78-665, filed 6/29/04, effective 1/1/05. Statutory Authority: RCW 49.17.010, [49.17].040 and [49.17].050. 99-10-071, § 296-78-665, filed 5/4/99, effective 9/1/99. Statutory Authority: Chapter 49.17 RCW. 96-17-056, § 296-78-665, filed 8/20/96, effective 10/15/96. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-665, filed 8/27/81.]

WAC 296-78-670 Glue machines. (1) Personal protective equipment as required by the safety and health core rules, WAC 296-800-160, and the general occupational health standard, WAC 296-62-11021, and proper washing facilities with noncaustic soap and sterilizers, shall be provided for all employees handling glue. Rubber gloves and other personal equipment must be sterilized when transferred from one person to another.

(2) Glue spreaders shall be enclosed on the in-running side, leaving only sufficient space to insert the stock.

(3) All glue spreaders shall be equipped with a panic bar or equivalent type device that can be reached from either the infeed or outfeed side of the spreader to shut off the power in an emergency situation. Such device shall be installed on existing glue spreaders no later than April 1, 1982, and be standard equipment on any glue spreader purchased after January 1, 1982.

(4) All glue mixing and handling rooms where located above work areas shall have water tight floors.

(5) All glue rooms shall be provided with ventilation in accordance with WAC 296-62-110 through 296-62-11013, of the general occupational health standard.

[Statutory Authority: RCW 49.17.010, [49.17].040, and [49.17].050. 01-11-038, § 296-78-670, filed 5/9/01, effective 9/1/01. Statutory Authority: Chapter 49.17 RCW. 94-20-057 (Order 94-16), § 296-78-670, filed 9/30/94, effective 11/20/94. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-670, filed 8/27/81.]

WAC 296-78-675 Lath mills. (1) Lath mills shall be so arranged that stock pickers shall be protected from slabs and blocks from slasher and trimmers.

(2) Bolters and lath machines shall be provided with a wall or shield of not less than two inch wood material or equivalent, constructed in front of the machines, to protect stock pickers and passing employees from kickbacks.

(3) Lath bolters and lath mills shall have all feed rolls, belts, gears and moving parts provided with approved guards. Feed chains shall be guarded to as low a point as the maximum height of the stock will permit.

(4)(a) Lath bolters and lath mill saws shall be provided with a sheet metal guard not less than one-eighth inch thick, or a cast iron guard not less than three-sixteenths inch thick, or equivalent. These hoods may be hinged so that they can be turned back to permit changing of the saws.

(b) A metal plate baffle, finger device or other device, shall be installed to prevent kickbacks.

(5)(a) The feed rolls on bolters or lath mills shall not be raised while any employee is in line with the saws.

(b) The stock shall be pushed through the saws with another piece of stock or push stick.

(6)(a) The lath trimmer shall be provided with guards on the ends, the top and the rear so designed as to contain debris and prevent employee contact with the saw. The belt drive shall be provided with guards as required by WAC 296-78-710.

(b) The entire top half of all trimmer saws shall be provided with guards. The guards shall be so adjusted as to prevent employees from accidentally contacting saws.

[Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-675, filed 8/27/81.]

WAC 296-78-680 Veneer and plywood plants—Peeling and barking. (1) Where peeling or barking pits are located directly under the log cranes, logs shall not be moved over workers.

(2) Single spiked hooks without a bell shall not be used for handling logs. Hooks shall be equipped with hand holds and shall be maintained in condition to safely perform the job application.

(3) Mechanical barking devices shall be so guarded as to protect employees from flying chips, bark or other matter.

(4) Logs shall not be removed from barker until barking head has ceased to revolve, unless barker is so designed and arranged that barking head will not create or constitute a hazard to employees.

[Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-680, filed 8/27/81.]

WAC 296-78-685 Veneer lathe. (1) The elevating ramp (gate) shall be provided with a safety chain and hook or other positive means of suspension while employees are working underneath same.

(2) The area under the tipple from lathe to stock trays shall be provided with railings or other suitable means of preventing employees from entering this area, if access is not prevented by the construction of the machine and employees can enter this area.

(3) Catwalks shall be provided along stock trays so that employees will not have to climb on the sides of trays to straighten stock.

(4) Any section of stock trays shall be locked out or shall have an operator stationed at starting controls while stock is being removed or adjusted.

(5) Guards which will cover the cutting edge of veneer lathe and clipper blades shall be provided and used while such blades are being transported about premises.

[Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-685, filed 8/27/81.]

WAC 296-78-690 Veneer slicer and cutter. (1) Each veneer slicer and each rotary veneer cutter shall have all revolving and other moving knives provided with guards.

(2) The requirements of chapter 296-806 WAC, Machine safety, shall be applicable to veneer slicers and cutters.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.-060. 04-14-028, § 296-78-690, filed 6/29/04, effective 1/1/05. Statutory Authority: Chapter 49.17 RCW. 96-17-056, § 296-78-690, filed 8/20/96, effective 10/15/96. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-690, filed 8/27/81.]

WAC 296-78-695 Veneer clipper. (1) 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. Where practicable, such guard shall be of the vertical finger type.

(2) The rear of each manually operated 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.

[Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-695, filed 8/27/81.]

WAC 296-78-700 Veneer wringer (swede). The entry side of each veneer wringer other than glue spreader shall be enclosed, leaving only sufficient space to insert stock. A guard shall be provided to prevent the veneer from overriding the top roll and kicking back.

[Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-700, filed 8/27/81.]

WAC 296-78-705 The shake and shingle industry. The following terms and standards shall apply only in the manufacturing of shakes and shingles and these requirements shall take precedence over other sawmill and woodworking standards.

[Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-705, filed 8/27/81.]

WAC 296-78-70501 Definitions—Terms, general. (1) "Block(s)" - Those sections of a log cut in various lengths.

(2) "Block(s)" and "bolt(s)" may be considered to be synonymous.

(3) "Clipper saw" - A circular saw used to trim manufactured shingles.

(4) "Groover" - A cylinder-type knife (knives) similar to a planer knife (knives), used to cut grooves into the face surface of shakes or shingles.

(5) "Hip" and "ridge saw" - A circular saw used to cut various angles on the side edge of shakes or shingles.

(6) "Johnson bar" - A shaft used to control the feed of the carriage.

(7) "Knee bolter circular saw" - A stationary circular saw used to trim and debark blocks (the blocks are manually maneuvered onto a carriage and fed into a saw).

(8) "Log haul" - A power conveyor used to move logs to mill.

(9) "Packers" - Employees who pack the manufactured shakes or shingles into bundles.

(10) "Panagraph power splitter" - A hydraulically operated wedge, manually positioned into place, used to split blocks.

(11) "Power saw splitter" - A stationary circular saw used to split (saw) blocks, (the blocks are manually maneuvered onto a carriage and fed into the saw).

(12) "Set works" - A component of the shingle machine, located on the machine frame, used to control the thickness of each shingle being manufactured.

(13) "Shake machine" - A band saw used to cut shake blanks into manufactured shakes.

(14) "Shake splitter" - A stationary hydraulically operated wedge, manually controlled, used to split shake blocks into shake blanks or boards.

(15) "Shim saw" - A circular saw used to re-cut manufactured shingles into narrow widths.

(16) "Shingle machine" - A machine used to manufacture shingles; composed of a feed, set works, and carriage system, all functioning in relation to a circular saw.

(17) "Shingle saw" - A circular saw used to cut shingles from blocks.

(18) "Spault" - The first and last section(s) of a block as it is cut into shingles.

(19) "Spault catcher" - A device located on the shingle machine next to the solid feed rolls, used to hold the last section of each block being cut (called a spault), in place.

(20) "Track or swing cutoff saw" - A circular saw used to cut blocks from a log.

[Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-70501, filed 8/27/81.]

WAC 296-78-70503 Shake and shingle machinery—General. (1) Track or swing cutoff circular saw.

(a) Manually operated track or swing circular cutoff saws of the following types shall be set up, guarded and operated in accordance with chapter 296-806 WAC, Machine safety:

• Saws into which materials to be cut are fed or positioned and/or held in position by hand pressure during the cutting stroke; and

• Saws on which the cutting stroke is propelled by manual (hand) pressure; and

• Saws on which the operator is within arm's reach of the blade when the blade is fully extended to the limit of operating travel and the operator is standing at the operator's normal control station/location.

(b) Large track or swing circular cutoff saws into which materials to be cut are fed by powered live rolls, conveyor belts and/or chains and which are operated from a remote operator's control station, defined as beyond arm's reach when the blade is fully extended to the limit of operating travel, shall be set up, guarded and operated in accordance with the following:

(i) A power operated track or swing cutoff circular saw shall have controls so arranged that operators are not positioned directly in front of the saw while making a cut.

(ii) All track or swing cutoff circular saws shall be completely encased or guarded when the saw is in the retract position, except for that portion of the guard that must be left open for the operation of the saw.

(iii) Track or swing cutoff circular saw guards shall be constructed of sheet metal not less than one-eighth inch thick, or a wood guard of not less than nominal two inch thick wood material, or equivalent.

Hinged or removable doors or gates will be permitted where necessary to permit adjusting and oiling.

(iv) The driving belt(s) on the track or swing cutoff circular saw shall be guarded in accordance with chapter 296-806 WAC, Machine safety.

(v) A safety catch shall be provided to prevent the track cutoff saw from leaving the track.

(2) Overhead deck splitter - Panagraph.

(a) Panagraph splitters shall have a shroud incorporated on the upper pressure plate to eliminate the possibility of the splitter moving from the operating area. This shroud shall be constructed of solid design with a minimum width of three inches and a minimum thickness of three-eighths inch.

(b) Mechanically operated overhead splitters shall have handles moving opposite the stroke of the piston.

(c) When the leading edge of the panagraph splitter is completely extended, the maximum clearance from the deck to the splitting edge shall be two inches.

(3) Power splitter saw. Power splitters shall have spreaders behind the saw to prevent materials from squeezing the saw or being thrown back on the operator. The top of the saw shall be completely covered.

(4) Knee bolter circular saw.

(a) A safety catch shall be provided to prevent the bolter carriage from leaving the track.

(b) Bolter saws shall be provided with a canopy guard of sheet metal not less than one-eighth inch thick, or cast iron guard not less than three-sixteenths inch thick or a wood guard of not less than nominal four inch thick wood material or equivalent.

The bolter canopy guard shall completely enclose the rear portion of the saw. It shall be so arranged and adjusted as to cover the front of the saw; not to exceed twenty inches from the top of the carriage to the bottom of the guard on sixteen inch and eighteen inch block and twenty-six inches on twenty-four inch blocks, of the material being cut.

(c) Bolter saws shall be provided with wipers of belting or other suitable material. These wipers shall be installed on both sides of the saw in such a manner as to deflect knots, chips, slivers, etc., that are carried by the saw.

(d) A positive device shall be provided and used to manually lock and hold the feed table in the neutral position when not in use.

(e) That portion of all bolter saws which is below and behind the saw table shall be guarded by the exhaust hood or other device. Hinged or removable doors or gates will be permitted where necessary to permit adjusting and oiling.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.-060. 04-14-028, § 296-78-70503, filed 6/29/04, effective 1/1/05. Statutory Authority: Chapter 49.17 RCW. 96-17-056, § 296-78-70503, filed 8/20/96, effective 10/15/96. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-70503, filed 8/27/81.]

WAC 296-78-70505 Shake machinery. (1) Shake splitters.

(a) A positive deenergizing device shall be provided within ready reach of each shake splitter operator.

(b) Each shake splitter shall be provided with an adjustable stroke limiter to eliminate the splitting blade from striking the table.

(c) All splitters shall have a maximum clearance of four inches, from the splitting edge to the table surface, when the splitter is in the extended position.

(d) All splitter tables shall have a friction surface to reduce kick out of the material being split.

(e) Shake splitters shall not be operated at a speed that would cause chunks to be thrown in such a manner as to create a hazard.

(f) The use of foot pedal (treadle) mechanisms shall be provided with protection to prevent unintended operation from falling or moving objects or by accidental stepping onto the pedal.

(i) The pedal shall have a nonslip surface.

(ii) The pedal return spring shall be of the compression type, operating on a rod or guided within a hole or tube, or designed to prevent interleaving of spring coils in event of breakage.

(iii) If pedal counterweights are provided, the path of the travel of the weight shall be enclosed.

(2) Shake saw guards.

(a) Every shake band saw shall be equipped with a saw guard on both sides of the blade down to the top side of the guide.

(b) The outside saw guard shall extend a minimum of three and one-half inches below the bottom edge of the saw guide.

(c) The maximum opening between the saw guide and table rolls shall be fifteen inches.

(3) Shake saw band wheel guards.

(a) The band wheels on all shake band saws shall be completely encased or guarded on both sides. The guards shall be constructed of not less than No. 14 U.S. gauge metal or material equal in strength.

(b) The metal doors, on such guards, shall have a wood liner of a minimum thickness of one-half inch.

(4) Shake saw band wheel speeds and maintenance.

(a) No band wheel shall be run at a peripheral speed in excess of that recommended by the manufacturer.

(b) Each band wheel shall be carefully inspected at least once a month by management.

Any band wheel in which a crack is found in the rim or in a spoke shall be immediately discontinued from service until properly repaired.

(c) Each band saw frame shall be provided with a tension indicator.

[Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-70505, filed 8/27/81.]

WAC 296-78-70507 Upright shingle machine. (1) Upright shingle saw guard.

(a) Every shingle machine carriage shall be equipped with a hand guard which:

(i) Projects at least one inch beyond the cutting edge of the saw.

(ii) Shall be located not more than one-half inch from the side of the saw blade.

(b) Shingle saw guards shall have a rim guard so designed and installed as to prevent chips and knots from flying from the saws. Such guards shall cover the edge of the saw to at least the depth of the teeth, except such part of the cutting edge as is essential for sawing the material.

(c) Saw arbors and couplings shall be guarded to prevent contact.

(d) Every part of a clipper saw blade, except that part which is exposed to trim shingles, shall be enclosed by a guard, so designed and installed to prevent contact with the clipper saw. An additional guard shall be installed not more than four inches above the clipper board and not more than one-half inch from the vertical plane of the saw.

(e) The underside of clipper saw boards shall be equipped with a finger guard to effectively protect the operator's fingers. The guard shall be a minimum of five inches long and one and one-quarter inches deep.

(2) Upright carriage guards.

(a) Automatic revolving cam set works and rocker arms, on machine frame, shall be guarded where exposed to contact.

(b) The spault catchers shall be not less than three-sixteenths inch thick and kept sharp at all times. Missing teeth shall be replaced.

(3) Carriage feed works.

(a) The pinion gear, bull wheel and Johnson bar, operating the saw carriage, shall be guarded where exposed to contact.

(b) Each shingle machine clutch treadle shall be arranged so that it is necessary to manually operate the treadle to start the machine. Devices which start the machine when the jaw treadle is released shall not be installed or used. The carriage shall have a brake to hold it in a neutral position.

(c) Carriage speed shall not exceed thirty-four strokes per minute.

[Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-70507, filed 8/27/81.]

WAC 296-78-70509 Related shake and shingle sawing machinery. (1) Flat or taper saw. A wood or metal guard or its equivalent shall be secured to the sliding table at the side nearest the sawyer to protect him from contact with the cutting edge of the saw when a block is not in the cut.

(2) Hip and ridge saws. The hip and ridge saws shall be guarded with a hood-like device. This guard shall cover that portion of the saw not needed to cut the material, located above the cutting table.

(a) The remaining portion of the saw, located below the table, shall be guarded to prevent contact by employees.

(b) The hip and ridge guarding standard is applicable to both shake and shingle hip and ridge saws.

(3) Shim stock saws. The top ends and sides of the shim stock saws shall be guarded. All shim stock saw power transmission mechanism shall be guarded.

(4) Shake or shingle groover. The top ends and sides of the groover, to include the press rolls, shall be guarded to contain material or debris which can be thrown and to prevent contact. All groover machine power transmission mechanism shall be guarded in compliance with WAC 296-78-710.

(5) Circular saws, speeds and repairs.

(a) Maximum allowable speeds.

(i) No circular saw shall be run at a speed in excess of that recommended by the manufacturer.

(ii) Such speed shall be etched or otherwise permanently marked on the blade, and that speed shall not be exceeded.

(b) Repairs and reconditions.

(i) Shingle saws when reduced in size to less than forty inches in diameter shall be discontinued from service as shingle saws on upright or vertical machines.

(ii) Shingle saws may be reconditioned for use as clipper saws provided the surface is reground and the proper balance attained.

(iii) Shingle saws may be used to no less than thirty-six inches on flat or taper saw machines.

[Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-70509, filed 8/27/81.]

WAC 296-78-70511 Safety rules. (1) General.

(a) Workers shall not leave shingle machines unattended while the carriage is in motion.

(b) Shingle blocks shall not be piled more than one tier high on tables or roll cases. Chunks may be placed horizontally one tier high on top of shingle blocks. Shingle blocks shall be piled in a stable manner, not more than seventy-two inches high, within the immediate working area of the shingle sawyer or the area shall be barricaded.

(c) Provisions shall be made to prevent blocks from falling into the packing area.

(d) On each machine operated by electric motors, positive means shall be provided for rendering such controls or devices inoperative while repairs or adjustments are being made to the machines they control.

(e) Workers shall not stand on top of blocks while in the process of splitting other blocks into bolts.

(2) Jointers (shingle). Shingle jointers shall have the front, or cutting face of the knives, housed except for a narrow slot through which the shingles may be fed against the knives.

[Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-70511, filed 8/27/81.]

WAC 296-78-710 Construction and isolated equipment.

[Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-710, filed 8/27/81.]

WAC 296-78-71001 General. (1) Construction when not specifically covered in these standards shall be governed by such other standards adopted by the department of labor and industries as may apply.

(2) All buildings, docks, tramways, walkways, log dumps and other structures shall be so designed, constructed, and maintained as to provide a safety factor of four. This means that all members shall be capable of supporting four times the maximum load to be imposed. This provision refers to buildings, docks and so forth designed and constructed subsequent to the effective date of these standards and also refers in all cases where either complete or major changes or repairs are made to such buildings, docks, tramways, walkways, log dumps and other structures.

(3) Basements on ground floors under mills shall be evenly surfaced, free from unnecessary obstructions and debris, and provided with lighting facilities in compliance with the requirements of the safety and health core rules, WAC 296-800-210.

(4) All engines, motors, transmission machinery or operating equipment installed in mill basements or ground floors shall be equipped with standard safeguards for the protection of workers.

(5) Flooring of buildings, ramps and walkways not subject to supporting motive equipment shall be of not less than two-inch wood planking or material of equivalent structural strength.

(6) Flooring of buildings, ramps, docks, trestles and other structure required to support motive equipment shall be of not less than full two and one-half inch wood planing or material of equivalent structural strength. However, where flooring is covered by steel floor plates, two inch wood planking or material or equivalent structural strength may be used.

(7) Walkways, docks, and platforms.

(a) Walkways, docks and platforms shall be constructed and maintained in accordance with the requirements of WAC 296-24-735 through 296-24-75011 and WAC 296-800-270.

(b) Maintenance. Walkways shall be evenly floored and kept in good repair.

(c) Where elevated platforms are used they shall be equipped with stairways or ladders in accordance with WAC 296-24-765 through 296-24-81013, WAC 296-800-250 and chapter 296-876 WAC, Ladders, portable and fixed.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, 49.17.060. 06-16-020, § 296-78-71001, filed 7/24/06, effective 12/1/06; 04-18-080, § 296-78-71001, filed 8/31/04, effective 11/1/04; 03-06-076, § 296-78-71001, filed 3/4/03, effective 8/1/03. Statutory Authority: RCW 49.17.010, [49.17].040, and [49.17].050. 01-11-038, § 296-78-71001, filed 5/9/01, effective 9/1/01. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-71001, filed 8/27/81.]

WAC 296-78-71003 Floor and wall openings. (1) All floor and wall openings either temporary or permanent, shall be protected as required by WAC 296-24-750 through 296-24-75011 and WAC 296-800-260.

(2) The area under floor openings shall, where practical, be fenced off. When this is not practical, the areas shall be plainly marked with yellow lines and telltails shall be installed to hang within five and one-half feet of the ground or floor level.

(3) Where floor openings are used to drop materials from one level to another, audible warning systems shall be installed and used to indicate to employees on the lower level that material is to be dropped.

[Statutory Authority: RCW 49.17.010, [49.17].040, and [49.17].050. 01-11-038, § 296-78-71003, filed 5/9/01, effective 9/1/01. Statutory Authority: Chapter 49.17 RCW. 96-17-056, § 296-78-71003, filed 8/20/96, effective 10/15/96. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-71003, filed 8/27/81.]

WAC 296-78-71005 Floors, docks, platforms and runways. (1) Faces of docks except on loading and unloading sides of rail and truck loading platforms, and runways used for the operation of lift trucks and other vehicles shall have a guard or shear timber eight by eight inches set over three inch blocks and securely fastened to the floor by bolts of not less than five-eighths inch diameter.

(2) The flooring of buildings, docks and passageways shall be kept in good repair at all times. When a hazardous condition develops that cannot be immediately repaired, the area shall be fenced off and not used until adequate repairs are made.

(3) All working areas shall be kept free from unnecessary obstruction and debris.

(4) Floors around machines and other places where workers are required to stand shall be provided with effective means to prevent slipping.

[Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-71005, filed 8/27/81.]

WAC 296-78-71007 Footwalks and passageways. (1) All footwalks and passageways subject to slipping hazards due to peculiarities of conditions or processes of the operation shall be provided with nonslip surfaces.

(2) Walkways in accordance with WAC 296-78-71001 (8) shall be provided over roll casings, transfer tables, conveyors or other moving parts except where stepping over such equipment is not in connection with usual and necessary traffic.

(3) Walkways alongside of sorting tables shall be of sufficient width to provide safe working area. Such walkways shall be evenly floored and kept in good repair at all times. They shall be kept free from obstructions and debris.

(4) When employees are required to clear plug-ups in veneer trays or lumber sorting trays, adequate walkways with standard guardrails shall be provided for access to the trays whenever possible. When walkways are not provided, safety belts or harnesses with lanyards, tied off to substantial anchorages, shall be provided and used at all times.

(5) Walkways and stairways with standard hand rails shall be provided wherever space will permit, for oilers and other employees whose duties require them to go consistently to elevated and hazardous locations.

(a) Where such passageways are over walkways or work areas, standard toeboards shall be provided.

(b) Protection as required by chapter 296-806 WAC, Machine safety, shall be provided against contact with transmission machinery or moving conveyors.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.-060. 04-14-028, § 296-78-71007, filed 6/29/04, effective 1/1/05. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-71007, filed 8/27/81.]

WAC 296-78-71009 Stairways and ladders. (1) Stairways shall be used in preference over ladders wherever possible. Stairways or ladders, whichever is used, shall be constructed and maintained in accordance with the provisions of WAC 296-24-75009 through 296-24-81013, WAC 296-800-250 and chapter 296-876 WAC, Ladders, portable and fixed.

(2) Doors shall not open directly on a flight of stairs.

(3) Permanent ladders shall be fastened securely at both top and bottom.

(4) Portable ladders shall not be used upon footing other than suitable type.

(5) Hooks or other means of securing portable ladders when in use, shall be provided.

(6) Portable ladders shall not be used for oiling machinery which is in motion.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, 49.17.060. 06-16-020, § 296-78-71009, filed 7/24/06, effective 12/1/06. Statutory Authority: RCW 49.17.010, [49.17].040, and [49.17].050. 01-11-038, § 296-78-71009, filed 5/9/01, effective 9/1/01. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-71009, filed 8/27/81.]

WAC 296-78-71011 Egress and exit. (1) In all enclosed buildings, means of egress shall be provided in accordance with the provisions of WAC 296-800-310.

(2) All swinging doors shall be provided with windows, the bottom of which shall be not more than forty-eight inches above the floor. One window shall be provided for each section of double swinging doors. All such windows shall be of shatter proof or safety glass unless otherwise protected against breakage.

(3) Outside exits shall open outward. Where sliding doors are used as exits, an inner door not less than two feet six inches by six feet shall be cut inside each of the main doors and arranged to open outward.

(4) At least two fire escapes or substantial outside stairways, shall be provided for mill buildings where the floor level is more than eight feet above the ground.

(a) Buildings over one hundred fifty feet in length shall have at least one additional fire escape or substantial outside stairway for each additional one hundred fifty feet of length or fraction thereof.

(b) Passageways to fire escapes or outside stairways shall be marked and kept free of obstructions at all times.

(c) Fire protection. The requirements of chapter 296-24 WAC, Part G-3 of the general safety and health standard, and WAC 296-800-300 of the safety and health core rules, and chapter 296-811 WAC, Fire brigades, shall be complied with in providing the necessary fire protection for sawmills.

(d) Fire drills shall be held at least quarterly and shall be documented.

(5) Where a doorway opens upon a roadway, railroad track, or upon a tramway or dock over which vehicles travel, a barricade or other safeguard and a warning sign shall be placed to prevent workers from stepping directly into moving traffic.

(6) Tramways and trestles shall be substantially supported by piling or framed bent construction which shall be frequently inspected and maintained in good repair at all times. Tramways or trestles used both for vehicular and pedestrian traffic shall have a walkway with standard hand rail at the outer edge and shear timber on the inner edge, and shall provide three feet clearance to vehicles. When walkways cross over other thoroughfares, they shall be solidly fenced at the outer edge to a height of forty-two inches over such thoroughfares.

(7) Where tramways and trestles are built over railroads they shall have a vertical clearance of twenty-two feet above the top of the rails. When constructed over carrier docks or roads, they shall have a vertical clearance of not less than six feet above the drivers foot rest on the carrier, and in no event shall this clearance be less than twelve feet from the surface of the lower roadway or dock.

(8) Walkways (either temporary or permanent) shall be not less than twenty-four inches wide and two inches thick, nominal size, securely fastened at each end. When such walkways are used on an incline the angle shall not be greater than twenty degrees from horizontal.

(9) Walkways from the shore or dock to floats or barges shall be securely fastened at the shore end only and clear space provided for the other end to adjust itself to the height of the water.

(10) Cleats of one by four inch material shall be fastened securely across walkways at uniform intervals of eighteen inches whenever the grade is sufficient to create a slipping hazard.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, 49.17.060. 06-01-073, § 296-78-71011, filed 12/20/05, effective 3/1/06; 03-06-076, § 296-78-71011, filed 3/4/03, effective 8/1/03. Statutory Authority: RCW 49.17.-010, [49.17].040, and [49.17].050. 01-11-038, § 296-78-71011, filed 5/9/01, effective 9/1/01. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-71011, filed 8/27/81.]

WAC 296-78-71013 Cableways. (1)(a) Inclined cableways shall have a central line between the rails in practical alignment with the center of the hoisting drums. A substantial bumper shall be installed at the foot of each incline.

(b) Barricades or warning signs shall be installed to warn pedestrians to stand clear of the cables on inclined cableways. The cables shall not be put into motion without activating an alarm system, either audible or visible, which will inform anyone on the tracks to stand clear.

(2) Employees shall not ride on or stand below the cars on an inclined cableway.

[Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-71013, filed 8/27/81.]

WAC 296-78-71015 Tanks and chemicals. (1) All open vats and tanks into which workers may fall shall be guarded with standard railings or screen guards in all cases where such guarding is possible with regard to practical operation.

(2) Foundations of elevated tanks shall be accessible for inspections. When the tank platform is more than five feet

above the ground a stairway or ladder shall be permanently attached.

(3) Every open tank over five feet in height shall be equipped with fixed standard ladders both inside and out, extending from the bottom to the rim of the tank arranged to be accessible to each other, so far as local conditions permit.

(4) The use of chemicals for treating of lumber for prevention of sap stain or mold or as preservatives, shall conform to the requirements of chapter 296-835 WAC, Dipping and coating operations (dip tanks).

(a) Storage, handling, and use of chemicals. Threshold limits. Employees shall not be exposed to airborne concentration of toxic dusts, vapors, mists or gases that exceed the threshold limit values set forth in chapter 296-62 WAC, Part H, and chapter 296-841 WAC, Airborne contaminants.

(b) Protective equipment. The use of chemicals shall be controlled so as to protect employees from harmful exposure to toxic materials. Where necessary, employees shall be provided with and required to wear such protective equipment as will afford adequate protection against harmful exposure as required by WAC 296-800-160, and chapter 296-842 WAC, Respirators.

(5)(a) Means shall be provided and used to collect any excess of chemicals used in treating lumber so as to protect workers from accidental contact with harmful concentrations of toxic chemicals or fumes.

(b) Dip tanks containing flammable or combustible liquids shall be constructed, maintained and used in accordance with chapter 296-835 WAC, Dipping and coating operations (dip tanks).

(c) An evacuation plan shall be developed and implemented for all employees working in the vicinity of dip tanks using flammable and/or combustible liquids. A copy of the plan shall be available at the establishment for inspection at all times. Every employee shall be made aware of the evacuation plan and know what to do in the event of an emergency and be evacuated in accordance with the plan. The plan shall be reviewed with employees at least quarterly and documented.

(d) When automatic foam, automatic carbon dioxide or automatic dry chemical extinguishing systems are used, an alarm device shall be activated to alert employees in the dip tank area before and during the activation of the system. The following combinations of extinguishment systems when used in conjunction with the evacuation plan as stated above will be acceptable in lieu of bottom drains:

(i) A dip tank cover with an automatic foam extinguishing system under the cover, or an automatic carbon dioxide system, or an automatic dry chemical extinguishing system, or an automatic water spray extinguishing system;

(ii) An automatic dry chemical extinguishing system with an automatic carbon dioxide system or a second automatic dry chemical extinguishing system or an automatic foam extinguishing system;

(iii) An automatic carbon dioxide system with a second automatic carbon dioxide system or an automatic foam extinguishing system.

(e) The automatic water spray extinguishing systems, automatic foam extinguishing systems, and dip tank covers shall conform with the requirements of chapter 296-835 WAC, Dipping and coating operations (dip tanks). The automatic carbon dioxide systems and dry chemical extinguishing system shall conform with the requirements of WAC 296-24-615 and 296-24-620.

(6) Where workers are engaged in the treating of lumber with chemicals or are required to handle lumber or other materials so treated, the workers shall be provided with, at no cost to the worker, and required to use such protective equipment as will provide complete protection against contact with toxic chemicals or fumes therefrom.

(7) Sanitation requirements. The requirements of WAC 296-800-220 and 296-800-230 (safety and health core rules), shall govern sanitation practices.

(8) The sides of steam vats and soaking pits unless otherwise guarded shall extend forty-two inches above the floor level. The floor adjacent thereto shall be of nonslip construction.

(9) Large steam vats or soaking pits, divided into sections, shall be provided with substantial walkways between each section, each walkway to be provided with standard railings which may be removable if necessary.

(10) Covers shall be removed only from that portion of the steaming vats on which workers are working and a portable railing shall be placed at this point to protect the operators.

(11) Workers shall not ride or step on logs in steam vats.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, 49.17.060. 07-05-062, § 296-78-71015, filed 2/20/07, effective 4/1/07; 05-20-055, § 296-78-71015, filed 10/3/05, effective 12/1/05; 05-03-093, § 296-78-71015, filed 1/18/05, effective 3/1/05. Statutory Authority: RCW 49.17.010, [49.17].-040, and [49.17].050. 02-15-102, § 296-78-71015, filed 7/17/02, effective 10/1/02; 01-11-038, § 296-78-71015, filed 5/9/01, effective 9/1/01. Statutory Authority: Chapter 49.17 RCW. 96-17-056, § 296-78-71015, filed 8/20/96, effective 10/15/96; 94-20-057 (Order 94-16), § 296-78-71015, filed 9/30/94, effective 11/20/94. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-71015, filed 8/27/81.]

WAC 296-78-71017 Dry kilns. (1) Dry kilns shall be so constructed upon solid foundations that tracks will not sag. Dry kilns shall be provided with suitable walkways. Each kiln shall have doors that operate from the inside and be provided with escape doors of adequate height and width to accommodate an average size man, that also operates from the inside, and shall be located in or near the main door. Escape doors shall swing in the direction of exit. Kiln doors and door carriers shall be fitted with safety devices to prevent the doors or carriers from falling.

(2) Ladders. A fixed ladder, in accordance with the requirements of chapter 296-876 WAC, Ladders, portable and fixed, or other means shall be provided to permit access to the roof. Where controls and machinery are mounted on the roof, a permanent stairway with standard handrail shall be installed in accordance with the requirements of WAC 296-800-250.

(3) A heated room shall be provided for the use of the kiln operator in inclement weather. He should remain in such room for at least ten minutes after leaving a hot kiln before going to cold outside air.

(4) Where operating pits are used, they shall be well ventilated, drained and lighted. Substantial gratings shall be installed at the kiln floor line. Steam lines shall be provided with insulation wherever exposed to contact by employees. Fans shall be enclosed by standard safeguards.

(5) Mechanical equipment. All belts, pulleys, blowers, and other exposed moving equipment used in or about kilns shall be guarded in accordance with chapter 296-806 WAC, Machine safety.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, 49.17.060. 06-16-020, § 296-78-71017, filed 7/24/06, effective 12/1/06; 04-14-028, § 296-78-71017, filed 6/29/04, effective 1/1/05. Statutory Authority: RCW 49.17.010, [49.17].040, and [49.17].050. 01-11-038, § 296-78-71017, filed 5/9/01, effective 9/1/01. Statutory Authority: Chapter 49.17 RCW. 96-17-056, § 296-78-71017, filed 8/20/96, effective 10/15/96. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-71017, filed 8/27/81.]

WAC 296-78-71019 Exhaust systems. (1) Air requirements in buildings, where persons are habitually employed, shall meet the requirements of the general occupational health standard, WAC 296-62-100 through 296-62-11013.

(2) Where the natural ventilation is not sufficient to remove dust, fumes or vapors that create or constitute a hazard, additional means of removal shall be provided.

(3) All mills containing one or more machines whose operations create dust, shavings, chips or slivers during a period of time equal to or greater than one-fourth of the working day or shift, shall be equipped with a collecting system either continuous or automatic in action and of sufficient strength and capacity to thoroughly remove such refuse from the points of operation of the machines and the work areas.

(4) Each woodworking machine that creates dust, shavings, chips, or slivers shall be equipped with an exhaust or conveyor system located and adjusted to remove the maximum amount of refuse from the point of operation and immediate vicinity.

(5) Blower, collecting and exhaust systems shall be designed, constructed and maintained in accordance with American National Standards Z33.1 - 1961 (for the installation of blower and exhaust systems for dust, stock and vapor removal or conveying) and Z12.20 - 1962 (R1969) (code for the prevention of dust explosions in woodworking and wood flour manufacturing plants).

(6) Fans used for ventilating shall be of ample capacity, as evidenced by the performance schedules of the manufacturers, and shall be guarded when exposed to contact. Hoods, dust conveyors, dust collectors and other accessary equipment shall be large enough to insure free intake and discharge.

(7) The outlet or discharge of all ventilating equipment shall be so arranged that at no time will the dust, vapors, gases or other air borne impurities discharged, create or constitute a hazard.

(8) Where a hood is used to form a part or all of the guard required on a given machine, it shall be constructed of not less than ten U.S. gauge sheet metal, or if of cast iron it shall be not less than three-sixteenths inches in thickness.

(9) All exhaust pipes shall be of such construction and internal dimensions as to minimize the possibility of clogging. They shall be readily accessible for cleaning.

(10) All exhaust pipes shall empty into settling or dust chambers which shall effectively prevent the dust or refuse from entering any work area. Such settling or dust chambers shall be so designed and operated as to reduce to a minimum the danger of fire or dust explosions.

(11) In lieu of a general ventilating system, exhaust or blower units may be installed on the dust or fume producing machine, provided the required protection is secured thereby.

(12) When proper ventilation is not provided, and temporary hazardous conditions are therefore encountered, the employer shall furnish approved respiratory and visual equipment: Provided, however, That the exposure to such hazard shall not be for more than two hours duration. Protective measures and equipment shall meet the requirements of chapter 296-842 WAC, Respirators.

(13) Provisions for the daily removal of refuse shall be made in all operations not required to have an exhaust system, or having refuse too heavy, or bulky, or otherwise unsuitable to be handled by an exhaust system.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, 49.17.060. 07-03-163, § 296-78-71019, filed 1/24/07, effective 4/1/07; 05-03-093, § 296-78-71019, filed 1/18/05, effective 3/1/05. Statutory Authority: RCW 49.17.-010, [49.17].040, and [49.17].050. 01-11-038, § 296-78-71019, filed 5/9/01, effective 9/1/01; 99-10-071, § 296-78-71019, filed 5/4/99, effective 9/1/99. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-71019, filed 8/27/81.]

WAC 296-78-71021 Spray painting. All spray painting operations shall be carried on in accordance with the requirements of the general safety and health standard, WAC 296-24-370 through 296-24-37027 and the general occupational health standard, WAC 296-62-11019.

[Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-71021, filed 8/27/81.]

WAC 296-78-71023 Lighting. The lighting and illumination requirements of the safety and health core rules, WAC 296-800-210, shall apply.

[Statutory Authority: RCW 49.17.010, [49.17].040, and [49.17].050. 01-11-038, § 296-78-71023, filed 5/9/01, effective 9/1/01. Statutory Authority: RCW 49.17.040 and 49.17.050. 82-13-045 (Order 82-22), § 296-78-71023, filed 6/11/82. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-71023, filed 8/27/81.]

WAC 296-78-71025 Gas piping and appliances. All gas piping and appliances shall be installed in accordance with the American National Standard Requirements for Gas Appliances and Gas Piping Installations, Z21.30 - 1964.

[Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-71025, filed 8/27/81.]

WAC 296-78-715 Mechanical, steam and electrical equipment.

[Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-715, filed 8/27/81.]

WAC 296-78-71501 General provisions. (1) All machinery or other equipment located or used on the premises of the operation or in the processes incidental thereto, shall be provided and maintained with approved standard safeguards, irrespective of ownership.

(2) Machines shall be so located that each operator will have sufficient space in which to handle material with the least possible interference from or to other workers or machines.

(3) Machines shall be so placed that it will not be necessary for the operator to stand where passing traffic creates a hazard.

(4) Aisles of sufficient width to permit the passing of vehicles or employees without crowding shall be provided in all work areas and stock or storage rooms.

(5) All metal decking around machinery shall be equipped to effectively prevent slipping.

(6) All machinery or equipment started by a control so located as to create impaired vision of any part of such machinery or equipment shall be provided with an audible warning device, where such machinery or equipment is exposed to contact at points not visible to the operator. Such devices shall be sounded before starting up unless positive mechanical or electrical interlocking controls are provided which will prevent starting until all such posts are cleared.

(7) A mechanical or electrical power control device shall be provided at each machine which will make it possible for the operator to stop the machine feed without leaving his position at the point of operation.

(8) All machines operated by means of treadles, levers, or other similar devices, shall be provided with positive and approved nonrepeat devices except where such machine is being used as an automatic repeating device.

(9) Operating levers and treadles on all machines or machinery shall be so located and protected that they cannot be shifted or tripped accidentally.

(10) All power driven machinery shall be stopped and brought to a complete standstill before any repairs or adjustments are made or pieces of material or refuse removed, except where motion is necessary to make adjustments.

[Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-71501, filed 8/27/81.]

WAC 296-78-71503 Lock out—Tag out. (1) To avoid accidental activation of machinery, electrical devices or other equipment which could create a hazardous condition while performing maintenance, repair, cleanup or construction work, the main disconnect(s) (line circuit breakers) shall first be locked out and tagged in accordance with the following provisions:

(2) Effective date. Effective July 1, 1982, only padlocks or other equivalent protective devices shall be used for locking out the main disconnect(s) (line circuit breakers) of machinery, electrical devices or other equipment that is shut down while maintenance, repair, cleanup, construction work or other type of work is done to the equipment. Tags shall be used to supplement the padlocks or other equivalent protective devices, and shall be used only for informational purposes.

(3) Padlocks, tags or equivalent protective devices to be supplied. The employer shall supply and the employee(s) shall use as many padlocks or other equivalent protective devices as are necessary to effectively lock out all affected equipment.

(4) Lock out plan. An effective lock out plan shall be formulated in writing and all concerned employees so informed. The plan shall contain specific procedures for locking out equipment, information to be contained on supplemental tags and specific procedures for unlocking equipment after repairs, cleanup, etc., have been completed.

(5) Informational tags. Tags used for providing supplemental information with lock out padlocks or other equivalent protective devices shall contain the name of the person authorizing placement, reason for placing, date, signature of person placing tag and such other relative information as deemed necessary by the person placing the tag.

(6) Lock out by pushbutton only. Locking out a machine or item of equipment by use of a pushbutton or other local control device only will not be acceptable as meeting the intent of these rules.

(7) Coordination of locking out devices. When repair, adjustment, cleanup, maintenance or construction work is necessary and the lock out procedures must be followed by any person not familiar with all power sources or material entry sources to any area involved, that person shall consult with the operator, supervisor, or some person that is capable of informing him of proper lock out procedures and supplemental tagging information.

(8) Lock out before removing guards. Equipment shall be stopped and locked out before employees remove guards or reach into any potentially hazardous area. The only exception to this rule will be when equipment must be in motion in order to make proper adjustments.

(9) Removal of lock outs. Each person actively engaged in the repair, maintenance, cleanup, etc., shall lock out the affected equipment and place the informational tag. Upon completion of the work and reinstallation of the guards, that person shall personally remove his lock and tag, except when it is positively determined that an employee has left the premises without removing his lock and tag, other persons may remove the locks and tags in accordance with a procedure formulated by each firm and approved by the division of industrial safety and health.

(10) Valves to be locked and tagged out. Each valve used to control the flow of hazardous materials into, or used to activate the equipment being worked on, shall be locked and tagged out.

(11) Piping systems deactivated. Prior to working on piping systems containing pressurized or hazardous materials, the valve(s) controlling the flow to the affected area shall be locked and tagged out. The piping in the area to be worked on shall be drained and purged, if needed. If the piping contains hazardous materials, the piping shall be isolated from the work area by the insertion of blank flanges in the piping system.

(12) Pipe lines without valves. If pipelines or ducts are constructed without valves or closures that can be locked out, the lines or ducts shall be broken at a flange and a blank flange inserted to stop accidental flow of any hazardous material.

(13) Testing after lock out. After locking out and tagging equipment, a test shall be conducted to ascertain that the equipment has been made inoperative or the flow of hazardous material has been positively stopped. Precautions shall be taken to ascertain that persons will not be subjected to hazard while conducting the test if power source or flow of material is not shut off.

(14) Temporary or alternate power to be avoided. Whenever possible, temporary or alternate sources of power to the equipment being worked on shall be avoided. If the use of such power is necessary, all affected employees shall be

informed and the source of temporary or alternate power shall be identified.

[Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-71503, filed 8/27/81.]

WAC 296-78-71505 Mechanical power transmission apparatus. (1) Machines and other equipment shall not be oiled while in motion, unless provided with guards or other devices to permit oiling without any possibility of contact with moving parts of machinery.

(2) Inspections shall be made to assure that shaftings, bearings and machines are in proper alignment at all times and that bolts in shaft hangars, couplings and boxes are tight.

(3) Isolated bearings or other equipment not reached by walkway shall be served by a ladder or other means of safe access.

(4) Running belts under power on or off pulleys shall be accomplished by mechanical means which will not expose employees to moving elements of the operation.

(5) Counterweights located on or near passageways or work areas shall be provided with enclosures. Overhead counterweights shall be provided with substantial safety chains or cables, or otherwise secured against falling.

(6) The construction, operation, and maintenance of all mechanical power-transmission apparatus shall be in accordance with chapter 296-806 WAC, Machine safety.

(7) Baffles shall be erected, where necessary, to protect employees from breaking belts, chains, ropes or cables.

(8) Overhead horizontal belts, chains or rope drives shall be provided with guards.

(9) Hydraulic systems. Means shall be provided to block, chain, or otherwise secure equipment normally supported by hydraulic pressure so as to provide for safe maintenance.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.-060. 04-14-028, § 296-78-71505, filed 6/29/04, effective 1/1/05. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-71505, filed 8/27/81.]

WAC 296-78-720 Boiler and pressure vessels. Boilers and pressure vessels shall be constructed, maintained and inspected in accordance with the provisions of the boiler and unfired pressure vessel law, chapter 70.79 RCW, and chapter 296-104 WAC as administered by the boiler inspection section of the department of labor and industries.

[Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-720, filed 8/27/81.]

WAC 296-78-725 Nonionizing radiation. (1) Only qualified and trained employees shall be assigned to install, operate, adjust, and maintain laser equipment. Proof of qualification of the laser equipment operator shall be available and in possession of operator at all times.

(2) Employees, when working in areas in which a potentially hazardous exposure (see WAC 296-62-09005(4)) to direct or reflected laser radiation exists, shall be provided with antilaser eye protection devices specified in WAC 296-62-09005, general occupational health standards.

(3) Areas in which lasers are used shall be posted with standard laser warning placards.

(4) Beam shutters or caps shall be utilized, or the laser turned off, when laser transmission is not actually required. When the laser is left unattended for a substantial period of time, such as during lunch hour, overnight, or at change of shifts, the laser shall be turned off or shutters or caps shall be utilized.

(5) The laser beam shall not be directed at employees.

(6) Only mechanical or electronic means shall be used as a detector for guiding the internal alignment of the laser.

(7) The laser equipment shall bear such labels, logos and data placards to indicate maximum output and class designation as required of the manufacturer at time of sale, by I.A.W. Part 1040, C.F.R. Title 21. Such labels, logos, data placards, etc., shall be maintained in a legible condition.

(8) When it is raining or snowing, or when there is dust or fog in the air, and it is impracticable to cease laser system operation, employees shall be kept out of range of the area of source and target during such weather conditions.

(9) Employees shall not be exposed to light intensities in excess of:

(a) Direct staring: One micro-watt per square centimeter;

(b) Incidental observing: One milliwatt per square centimeter;

(c) Diffused reflected light: Two and one-half watts per square centimeter.

(10) The laser equipment shall not be modified except by the manufacturer.

(11) Laser unit in operation shall be set up above the heads of the employees, when possible.

(12) Employees shall not be exposed to radio frequency/microwave radiation in excess of the permissible exposure limits specified in WAC 296-62-09005.

[Statutory Authority: Chapter 49.17 RCW. 96-17-056, § 296-78-725, filed 8/20/96, effective 10/15/96. Statutory Authority: RCW 49.17.040, 49.17.-050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-725, filed 8/27/81.]

WAC 296-78-730 Electrical service and equipment. (1) Electrical service and equipment shall be constructed, maintained, inspected and operated according to chapter 296-24 WAC, General safety and health standards, Part L, and WAC 296-800-280 of the safety and health core rules.

(2) Repairs. Electrical repairs shall be made only by authorized and qualified personnel.

(3) Identification. Marks of identification on electrical equipment shall be clearly visible.

(4) Protective equipment. Rubber protective equipment shall be provided as required by WAC 296-800-160 of the safety and health core rules.

(5) Open switches. Before working on electrical equipment, switches shall be open and shall be locked out.

(6) Concealed conductors. Where electrical conductors are known to be concealed, no work shall be performed until such conductors are located.

(7) Overload relays. Overload relays shall be reset by authorized qualified personnel only.

(8) Passageways to panels. Passageways to switch centers or panels shall at all times be kept free from obstruction. Not less than three feet of clear space shall be maintained in front of switch centers or panels at all times.

(9) Bridging fuses. Fuses shall not be doubled or bridged.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, 49.17.060. 07-03-163, § 296-78-730, filed 1/24/07, effective 4/1/07. Statutory Authority: RCW 49.17.010, [49.17].040, and [49.17].050. 01-11-038, § 296-78-730, filed 5/9/01, effective 9/1/01. Statutory Authority: Chapter 49.17 RCW. 91-24-017 (Order 91-07), § 296-78-730, filed 11/22/91, effective 12/24/91. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-730, filed 8/27/81.]

WAC 296-78-735 Elevators, moving walks. Elevators, moving walks and other lifting devices intended for either passenger or freight service shall be constructed, maintained, inspected and operated in accordance with the provisions of chapter 70.87 RCW, WAC 296-24-875 through 296-24-90009 of the general safety and health standards, and those specific standards which are applicable from the division of building and construction safety inspection services, elevator section.

[Statutory Authority: RCW 49.17.010, [49.17].040, and [49.17].050. 01-11-038, § 296-78-735, filed 5/9/01, effective 9/1/01. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-735, filed 8/27/81.]

WAC 296-78-740 Transportation—Lumber handling equipment—Cranes—Construction. (1) All apparatus shall be designed throughout, with not less than the following factors of safety, under static full rated load stresses, based on ultimate strength of the material used:

Material	Factor of Safety
Cast iron	12
Cast steel	8
Structural steel	5
Forged steel	5
Cables	5

(2) A notice shall be placed on every crane and hoist showing the maximum allowable load in pounds or tons. This notice shall be placed in such a manner as to be clearly legible from the floor.

(3) Cranes shall be of what is known as "all steel construction." No cast iron shall be used in parts subject to tension except in drums, trolley sides, bearings, brackets and brake shoes.

(4) The construction of cranes shall be such that all parts may be safely lubricated and inspected when cranes are not in operation.

(5) Bolts subject to stress shall be of the through type and all bolts shall be equipped with approved protection so that the bolt will not work loose or nuts work off.

(6) Outside crane cages shall be enclosed. There shall be windows on three sides of the cage and windows in the front, and the side opposite the door shall be the full width of the cage.

(7) Where a tool box or receptacle is used for the storing of oil cans, tools, etc., it shall be permanently secured in the cage or on the foot-walk of outside cranes and on the foot-walk of inside cranes. Tool boxes of hot metal cranes shall be constructed of metal.

(8) All gears on cranes shall be provided with standard guards.

(9) Keys projecting from revolving shafts shall be guarded.

(10) A braking apparatus shall be provided on every type of crane and shall be so designed and installed as to be capable of effectually braking a weight of at least one and one-half times the full rated load.

[Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-740, filed 8/27/81.]

WAC 296-78-745 Electrical equipment. (1) All exposed current-carrying parts except conductors, connected to circuits above three hundred volts to ground shall be so isolated, insulated, or guarded that no employee can come in contact with them. Exposed parts less than 300 volts shall be protected in some suitable way against possible accidental contact. Exposed metallic parts of conduit armored cable or molding shall be permanently grounded.

(2) Guards for the current-carrying parts of unisolated electrical equipment, such as controllers, motors, transformers, automatic cutouts, circuit breakers, switches, and other devices shall consist of cabinets, casings, or shields of permanently grounded metal or of insulating material.

(3) All parts of electrical equipment, such as fuses and the handles and arc chutes of circuit breakers, shall be so isolated or guarded that the liability of employees being struck or burned by sparking, flashing or movement during operation is reduced to a minimum.

(4) All exposed noncurrent carrying metal parts of electrical equipment shall be permanently grounded. The ground connection through well bonded track rails will be considered satisfactory.

(5) The metallic parts of portable cranes, derricks, hoists, and similar equipment on which wires, cables, chains, or other conducting objects are maintained shall be provided with an effective protective ground, where operated in the vicinity of supply lines.

(6) Readily accessible means shall be provided whereby all conductors and equipment located in cranes can be disconnected entirely from the source of energy at a point as near as possible to the main current collectors.

(7) Means shall be provided to prevent the starting and operation of equipment by unauthorized persons.

(8) The control levers of traveling cranes shall be so located that the operator can readily face the direction of travel.

(9) A hoist limiting device shall be provided for each hoist.

(10) All fuses shall be of the enclosed arcless type.

[Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-745, filed 8/27/81.]

WAC 296-78-750 Chains, wire rope, cables and fiber rope. (1) Ropes, cables, slings, and chains.

(a) Safe usage. Ropes, cables, slings, and chains shall be used in accordance with safe use practices recommended by the manufacturer or within safe limits recommended by the equipment manufacturer when used in conjunction with it.

Work by qualified persons. Installation, inspection, maintenance, repair, and testing of ropes, cables, slings, and chains shall be done only by persons qualified to do such work.

(b) Proof testing. The employer shall ensure that before use, each new, repaired, or reconditioned alloy steel chain

sling, including all welded components in the sling assembly, shall be proof tested by the sling manufacturer or equivalent entity, in accordance with paragraph 5.2 of the American Society of Testing and Materials Specification A391.65 (ANSI G61.1-1968). The employer shall retain the certificate of the proof test and shall make it available for examination. When a chain sling assembly is made up of segments of proof tested alloy chain and proof tested individual components such as mechanical coupling links, hooks and similar devices; it is not necessary to test the assembled unit, when appropriate test certification of individual components is available and the assembled sling is appropriately tagged by the manufacturer or equal entity. The sling shall not be used in excess of the rated capacity of the weakest component.

(c) Slings. Slings and their fittings and fastenings, when in use, shall be inspected daily for evidence of overloading, excessive wear, or damage. Slings found to be defective shall be removed from service.

(2) Proper storage shall be provided for slings while not in use.

(3) Protection shall be provided between the sling and sharp unyielding surfaces of the load to be lifted.

(4) Hooks. No open hook shall be used in rigging to lift any load where there is hazard from relieving the tension on the hook from the load or hook catching or fouling.

(5) Ropes or cables. Wire rope or cable shall be inspected when installed and once each day thereafter, when in use. It shall be removed from hoisting or load-carrying service when kinked or when one of the following conditions exist:

(a) When three broken wires are found in one lay of 6 by 6 wire rope.

(b) When six broken wires are found in one lay of 6 by 19 wire rope.

(c) When nine broken wires are found in one lay of 6 by 37 wire rope.

(d) When eight broken wires are found in one lay of 8 by 19 wire rope.

(e) When marked corrosion appears.

(f) Wire rope of a type not described herein shall be removed from service when four percent of the total number of wires composing such rope are found to be broken in one lay.

(g) Condemned. When wire rope, slings or cables deteriorate through rust, wear, broken wires, kinking or other conditions, to the extent there is a reasonable doubt that the necessary safety factor is maintained, the use of such equipment shall be discontinued.

(6) Wire rope removed from service due to defects shall be plainly marked or identified as being unfit for further use on cranes, hoists, and other load-carrying devices.

(7) The ratio between the rope diameter and the drum, block, sheave, or pulley tread diameter shall be such that the rope will adjust itself to the bend without excessive wear, deformation, or injury. In no case shall the safe value of drums, blocks, sheaves, or pulleys be reduced when replacing such items unless compensating changes are made for rope used and for safe loading limits.

(8) Drums, sheaves, and pulleys. Drums, sheaves, and pulleys shall be smooth and free from surface defects liable to injure rope. Drums, sheaves, or pulleys having eccentric bores or cracked hubs, spokes, or flanges shall be removed from service.

(9) Connections. Connections, fittings, fastenings, and other parts used in connection with ropes and cables shall be of the quality, size and strength recommended by the manufacturer for the use intended. These connections shall be installed in accordance with the manufacturer's recommendations.

(10) Socketing, splicing, and seizing.

(a) Socketing, splicing, and seizing of cables shall be performed only by qualified persons.

(b) All eye splices shall be made in a manner recommended by the manufacturer and wire rope thimbles of proper size shall be fitted in the eye, except that in slings the use of thimbles shall be optional.

(11) Wire rope clips attached with U-bolts shall have these bolts on the dead or short end of the rope. The U-bolt nuts shall be retightened immediately after initial load carrying use and at frequent intervals thereafter. The number and spacing of clips shall be as follows:

Improved Plow Steel Diameter of Rope	Number of Clips (Drop Forged)	Required Other Material	Minimum Space Between Clips
3/8 to 5/8"	3	4	3-3/4 "
3/4"	4	5	4-1/2 "
7/8"	4	5	5-1/4 "
1 "	5	6	6 "
1-1/8"	6	6	6-3/4 "
1-1/4"	6	7	7-1/2 "
1-3/8"	7	7	8-1/4 "
1-1/2"	7	8	9 "

(a) When a wedge socket-type fastening is used, the dead or short end of the cable shall be clipped with a U-bolt or otherwise made secure against loosening.

(b) Fittings. Hooks, shackles, rings, pad eyes, and other fittings that show excessive wear or that have been bent, twisted, or otherwise damaged shall be removed from service.

(12) Running lines. Running lines of hoisting equipment located within six feet six inches of the ground or working level shall be boxed off or otherwise guarded, or the operating area shall be restricted.

(13) Preventing abrasion. The reeving of a rope shall be so arranged as to minimize chafing or abrading while in use.

(14) Sheave guards. Bottom sheaves shall be protected by close fitting guards to prevent cable from jumping the sheave.

(15) There shall be not less than two full wraps of hoisting cable on the drums of cranes and hoists at all times of operation.

(16) Where the cables are allowed to pile on the drums of cranes, the drums shall have a flange at each end to prevent the cables from slipping off the drum.

(17) Chains. Chains used in load carrying service shall be inspected before initial use and weekly thereafter.

If at any time any three-foot length of chain is found to have stretched one-third the length of a link it shall be discarded.

(18) Chains shall be spliced in compliance with the requirements of the general safety and health standard, WAC 296-24-29413.

(19) Wherever annealing of chains is attempted, it shall be done in properly equipped annealing furnaces and under the direct supervision of a competent person thoroughly versed in heat treating.

Chain shall be normalized or annealed periodically as recommended by the manufacturer.

(20) Fiber rope.

(a) Frozen fiber rope shall not be used in load carrying service.

(b) Fiber rope that has been subjected to acid shall not be used for load carrying purposes.

(c) Fiber rope shall be protected from abrasion by padding where it is fastened or drawn over square corners or sharp or rough surfaces.

[Statutory Authority: Chapter 49.17 RCW. 96-17-056, § 296-78-750, filed 8/20/96, effective 10/15/96. Statutory Authority: RCW 49.17.040, 49.17.-050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-750, filed 8/27/81.]

WAC 296-78-755 Natural and synthetic fiber rope slings. (1) Sling use.

(a) Fiber rope slings made from conventional three strand construction fiber rope shall not be used with loads in excess of the rated capacities prescribed in Tables D-16 through D-19 of Part "D" of the general safety and health standards, chapter 296-24 WAC.

(b) Slings not included in these tables shall be used only in accordance with the manufacturer's recommendations.

(2) Safe operating temperatures. Natural and synthetic fiber rope slings, except for wet frozen slings, may be used in a temperature range from minus 20°F to plus 180°F without decreasing the working load limit. For operations outside this temperature range and for wet frozen slings, the sling manufacturer's recommendations shall be followed.

(3) Splicing. Spliced fiber rope slings shall not be used unless they have been spliced in accordance with the following minimum requirements and in accordance with any additional recommendations of the manufacturer:

(a) In manila rope, eye splices shall consist of at least three full tucks, and short splices shall consist of at least six full tucks, three on each side of the splice center line.

(b) In synthetic fiber rope, eye splices shall consist of at least four full tucks, and short splices shall consist of at least eight full tucks, four on each side of the center line.

(c) Strand end tails shall not be trimmed flush with the surface of the rope immediately adjacent to the full tucks. This applies to all types of fiber rope and both eye and short splices. For fiber rope under one inch in diameter, the tail shall project at least six rope diameters beyond the last full tuck. For fiber rope one inch in diameter and larger, the tail shall project at least six inches beyond the last full tuck. Where a projecting tail interferes with the use of the sling, the tail shall be tapered and spliced into the body of the rope using at least two additional tucks (which will require a tail length of approximately six rope diameters beyond the last full tuck).

(d) Fiber rope slings shall have a minimum clear length of rope between eye splices equal to ten times the rope diameter.

(e) Knots shall not be used in lieu of splices.

(f) Clamps not designed specifically for fiber ropes shall not be used for splicing.

(g) For all eye splices, the eye shall be of such size to provide an included angle of not greater than sixty degrees at the splice when the eye is placed over the load or support.

(4) End attachments. Fiber rope slings shall not be used if end attachments in contact with the rope have sharp edges or projections.

(5) Removal from service. Natural and synthetic fiber rope slings shall be immediately removed from service if any of the following conditions are present:

(a) Abnormal wear.

(b) Powdered fiber between strands.

(c) Broken or cut fibers.

(d) Variations in the size or roundness of strands.

(e) Discoloration or rotting.

(f) Distortion of hardware in the sling.

(6) Repairs. Only fiber rope slings made from new rope shall be used. Use of repaired or reconditioned fiber rope slings is prohibited.

[Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-755, filed 8/27/81.]

WAC 296-78-760 Synthetic web slings. (1) Sling identification. Each sling shall be marked or coded to show the rated capacities for each type of hitch and type of synthetic web material.

(2) Webbing. Synthetic webbing shall be of uniform thickness and width and selvage edges shall not be split from the webbing's width.

(3) Fittings. Fittings shall be:

(a) Of a minimum breaking strength equal to that of the sling; and

(b) Free of all sharp edges that could in any way damage the webbing.

(4) Attachment of end fittings to webbing and formation of eyes. Stitching shall be the only method used to attach end fittings to webbing and to form eyes. The thread shall be in an even pattern and contain a sufficient number of stitches to develop the full breaking strength of the sling.

(5) Sling use. Synthetic web slings illustrated in Figure D-6 shall not be used with loads in excess of the rated capacities specified in Tables D-20 through D-22. Slings not included in these tables shall be used only in accordance with the manufacturer's recommendations.

(6) Environmental conditions. When synthetic web slings are used, the following precautions shall be taken:

(a) Nylon web slings shall not be used where fumes, vapors, sprays, mists or liquids of acids or phenolics are present.

(b) Polyester and polypropylene web slings shall not be used where fumes, vapors, sprays, mists or liquids of caustics are present.

(c) Web slings with aluminum fittings shall not be used where fumes, vapors, sprays, mists or liquids of caustics are present.

(7) Safe operating temperatures. Synthetic web slings of polyester and nylon shall not be used at temperatures in

excess of 180°F. Polypropylene web slings shall not be used at temperatures in excess of 200°F.

(8) Repairs.

(a) Synthetic web slings which are repaired shall not be used unless repaired by a sling manufacturer or an equivalent entity.

(b) Each repaired sling shall be proof tested by the manufacturer or equivalent entity to twice the rated capacity prior to its return to service. The employer shall retain a certificate of the proof test and make it available for examination.

(c) Slings, including webbing and fittings, which have been repaired in a temporary manner shall not be used.

(9) Removal from service. Synthetic web slings shall be immediately removed from service if any of the following conditions are present:

(a) Acid or caustic burns;

(b) Melting or charring of any part of the sling surface;

(c) Snags, punctures, tears or cuts;

(d) Broken or worn stitches; or

(e) Distortion of fittings.

[Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-760, filed 8/27/81.]

WAC 296-78-765 Floor operated cranes. (1) An unobstructed aisle not less than three feet wide shall be maintained for travel of the operator except in such cases where the control handles are hung from the trolleys of traveling cranes.

(2) The controller or controllers, if rope operated, shall automatically return to the "off" position when released by the operator.

(3) Pushbuttons, in pendant stations, shall return to the "off" position when pressure is released by the crane operator.

(4) All pushbuttons shall be marked to indicate their purpose.

[Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-765, filed 8/27/81.]

WAC 296-78-770 Operators. (1) Cranes shall be operated only by regular crane operators, authorized substitutes who have had adequate experience and training under the supervision of a competent operator, or by crane repair person or inspectors.

(2) No person under the age of eighteen years shall be permitted to operate a crane.

(3) Operators shall be required to pass a practical examination limited to the specific type of equipment to be operated. Operators shall meet the following physical qualifications:

(a) Have vision of at least 20/30 Snellen in one eye, and 20/50 in the other, with or without corrective lenses.

(b) Be able to distinguish red, green, and yellow, regardless of position of colors, if color differentiation is required for operation.

(c) Hearing, with or without hearing aid, must be adequate for the specific operation.

(d) A history of epilepsy or an uncorrected disabling heart condition shall be cause for a doctor decision to determine qualifications to operate a crane.

(4) Hands shall be kept free when going up and down ladders. Articles which are too large to go into pockets or belts shall be lifted to or lowered from the crane by hand line. (Except where stairways are provided.)

(5) Cages shall be kept free of clothing and other personal belongings. Tools, extra fuses, oil cans, waste and other articles necessary in the crane cage shall be stored in a tool box and not left loose on or about the crane.

(6) The operator shall familiarize himself fully with all crane rules and with the crane mechanism and its proper care. If adjustments or repairs are necessary, he shall report the same at once to the proper authority.

(7) The operator shall not eat, smoke or read while actually engaged in the operation of the crane.

(8) The operator or someone especially designated shall lubricate all working parts of the crane.

(9) Cranes shall be examined for loose parts or defects each day on which they are in use.

(10) Sawdust, oil or other debris shall not be allowed to accumulate to create a fire, health or slipping hazard.

(11) Operators shall avoid, as far as possible, carrying loads over workers. Loads shall not be carried over employees without sounding an audible warning alarm.

(12) Whenever the operator finds the main or emergency switch open, he shall not close it, even when starting on regular duty, until he has made sure that no one is on or about the crane. He shall not oil or repair the crane unless the main switch is open.

(13) If the power goes off, the operator shall immediately throw all controllers to "off" position until the power is again available.

(14) Before closing the main switch the operator shall make sure that all controllers are in "off" position until the power is again available.

(15) The operator shall pay special attention to the block, when long hitches are made, to avoid tripping the limit switch.

(16) The operator shall recognize signals only from the person who is supervising the lift except for emergency stop signals. Operating signals shall follow established standard crane signals as illustrated in WAC 296-78-830 of this chapter. Whistle signals may be used where one crane only is in operation. Cranes shall have audible warning device which shall be sounded in event of emergency.

(17) Before starting to hoist, the operator shall place the trolley directly over the load to avoid swinging it when being hoisted.

(18) The operator shall not make side pulls with the crane except when especially instructed to do so by the proper authority.

(19) When handling maximum loads, the operator shall test the hoist brakes after the load has been lifted a few inches. If the brakes do not hold, the load shall be lowered at once and the brakes adjusted or repaired.

(20) Bumping into runway stops or other cranes shall be avoided. When the operator is ordered to engage with or push other cranes, he shall do so with special care for the safety of persons on or below cranes.

(21) When lowering a load, the operator shall proceed carefully and make sure that he has the load under safe control.

(22) When leaving the cage the operator shall throw all controllers to "off" position and open the main switch.

(23) If the crane is located out of doors the operator shall lock the crane in a secure position to prevent it from being blown along or off the track by a severe wind.

(24) Railroad cars shall not be pulled along the tracks with sidepulls on an overhead crane.

(25) Operators shall not move the crane or a load unless floor signals are clearly understood.

(26) The rated lifting capacity of a crane shall not be exceeded. If any doubt exists about the weight of a load which might exceed the rated capacity, the foreman in charge must be contacted before any attempt is made to lift the load. The foreman shall determine that the load is within the rated capacity of the crane or the load shall not be lifted.

(27) Crane operators and floorpersons shall coordinate their activities on every lift or movement of the crane. Both the operator and signalperson shall clearly understand any problem a movement might create with regard to surrounding materials, structures, equipment or personnel.

[Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-770, filed 8/27/81.]

WAC 296-78-775 Signalpersons. (1) Signalpersons shall give all the signals to the operator in accordance with established standard signals as illustrated in WAC 296-78-830 of this chapter.

(2) A designated person shall be responsible for the condition and use of all hoisting accessories and for all hitches.

(3) Before an operator moves a crane upon which an empty chain or cable sling is hanging, both ends of the sling shall be placed on the hook.

(4) Signalpersons, where necessary, shall walk ahead of the moving load and warn people to keep clear of it. They shall see that the load is carried high enough to clear all obstructions.

(5) Signalpersons shall notify the person in charge in advance when an extra heavy load is to be handled.

(6) No person shall be permitted to stand or pass under an electric magnet in use.

(7) The electrical circuit for electric magnets shall be maintained in good condition. Means for taking up the slack cable shall be provided.

[Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-775, filed 8/27/81.]

WAC 296-78-780 Repairpersons. (1) When repairs are necessary, repairpersons shall have the crane run to a location where the repair work will least interfere with the other cranes and with operations on the floor.

(2) Before starting repairs, repairpersons shall see that all controllers are thrown to the "off" position, and that main or emergency switches are opened; one of these shall be locked out in compliance with WAC 296-78-715(11) of this chapter.

(3) Repairpersons shall immediately place warning signs or "Out of Order" signs on a crane to be repaired and also on the floor beneath or hanging from the crane so that it can easily be seen from the floor. If other cranes are operated on the same runway, repairpersons shall also place rail stops at a safe distance or make other safe provisions.

(4) When repairing runways, repairpersons shall place rail stops and warning signs or signals so as to protect both ends of the section to be repaired.

(5) Repairpersons shall take care to prevent loose parts from falling or being thrown upon the floor beneath.

(6) Repairs shall not be considered complete until all guards and safety devices have been put in place and the block and tackle and other loose material have been removed.

[Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-780, filed 8/27/81.]

WAC 296-78-785 Construction requirements. (1) Calculations for wind pressure on outside overhead traveling cranes shall be based on not less than 30 pounds per square foot of exposed surface.

(2) No overhung gears shall be used unless provided with an effective means of keeping them in place, and keys shall be secured to prevent gears working loose.

Safety lugs or brackets shall be provided on the trolley frames and bridge ends of overhead traveling cranes, so that in the event of a broken axle or wheel the trolley or bridge proper will not have a drop greater than one inch.

(3) Where there are no members over an outside overhead crane suitable for attaching blocks for repair work, and a locomotive crane is not available, a structural steel outrigger of sufficient strength to lift the heaviest part of the trolley shall be provided.

(4) Outside overhead traveling cranes shall be equipped with wind indicators and rail clamps as required by the general safety and health standards, WAC 296-24-23503.

(5) Foot brakes, or other effective means shall be provided to control the bridge travel of all overhead traveling cranes.

[Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-785, filed 8/27/81.]

WAC 296-78-790 Crane platforms and footwalks. (1) Platforms shall be provided when changing and repairing truck wheels on end trucks.

(2) A platform or footwalk shall be located on crane or crane runway to give access to the crane cage, and it shall be accessible from one or more stairways or fixed ladders. This platform or footwalk shall be not less than eighteen inches in width.

(3) Where stairways are used to give access to platforms they shall make an angle of not more than fifty degrees with the horizontal and shall be equipped with substantial railing. If ladders are used to give access to platforms they shall extend not less than thirty-six inches above the platform. Railed stairways or ladders to be used as a means of ingress and egress to crane cages shall be located at either or both ends.

(4) A footwalk shall be placed along the entire length of the bridge on the motor side, and a short platform twice the length of the trolley placed at one end of the girder on the opposite side, with a vertical clearance of a least six feet six inches where the design of crane or building permits, but in no case shall there be less than four feet clearance. For hand operated cranes the footwalk shall not be required to be installed on the bridge of the crane, but there shall be a repair platform equal in strength and design to that required for

motor operated cranes, installed on the wall of the building or supported by the crane runway at a height equal to the lower edge of the bridge girder to facilitate necessary repairs.

(5) Clear width of footwalks shall not be less than eighteen inches except around the bridge motor where it may be reduced to fifteen inches.

(6) Footwalks shall be of substantial construction and rigidly braced. Footwalks for outside service shall be constructed so as to provide proper drainage, but the cracks between the boards shall not be wider than one-fourth inch.

(7) Every footwalk shall have a standard railing and toeboard at all exposed edges. Railings and toeboards shall conform in construction and design with the following requirements:

(a) Railings shall be not less than thirty-six inches nor more than forty-two inches in height, with an additional rail midway between the top rail and the floor.

(b) Pipe railings shall be not less than one and one-fourth inch inside diameter if of iron or be not less than one and one-half inches outside diameter if of brass tubing.

(c) Metal rails other than pipe shall be at least equal in strength to that of one and one-half by three-sixteenths inch angle and shall be supported by uprights of equal strength.

(d) Posts or uprights shall be spaced not more than eight feet center to center.

(e) Toeboards shall be not less than four inches in height.

(f) Toeboards shall be constructed in a permanent and substantial manner of metal, wood, or other material equivalent thereto in strength. Where of wood, toeboards shall be at least equal in cross section to one inch by four inches; where of steel at least one-eighth inch by four inches; where of other construction at least equal to the requirements for steel. Perforations up to one-half inch are permissible in metal toeboards.

(8) No openings shall be permitted between the bridge footwalk and the crane girders. Where wire mesh is used to fill this opening the mesh openings shall be not greater than one-half inch.

(9) All footwalks and platforms shall be so designed as to be capable of sustaining a concentrated load of one hundred pounds per lineal foot.

[Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-790, filed 8/27/81.]

WAC 296-78-795 Crane cages. (1) Safe means of escape shall be provided for operators of all cranes in all operating locations. Rope ladders shall not be used as a regular means of access but may be installed as an emergency escape device to be used in the event of fire, mechanical breakdown or other emergency.

(2) The operator's cage shall be located at a place from which signals can be clearly distinguishable, and shall be securely fastened in a place and well braced to minimize vibration. It shall be large enough to allow ample room for the control equipment and the operator. The operator shall not be required to step over an open space of more than eighteen inches when entering the cage.

(3) Cab operated cranes shall be equipped with a portable fire extinguisher which meets the requirements of WAC 296-24-590 through 296-24-59007 and WAC 296-800-300.

(4) In establishments where continuous loud noises prevail such as caused by the operation of pneumatic tools, steam exhausts from boilers, etc., adequate signals shall be installed on cranes or one or more employees shall be placed on the floor for each crane operated to give warning to other employees of the approach of a crane with a load. Where there are more than two cranes on the same runway or within the same building structure, signaling devices are required to give warning to other employees of the approach of a crane with a load.

(5) Cages of cranes subjected to heat from below shall be of noncombustible construction and shall have a steel plate shield not less than one-eighth inch thick, placed not less than six inches below the bottom of the floor of the cage.

(6) Outside crane cages shall be enclosed. There shall be windows on three sides of the cage. The windows in the front and the side opposite the door shall be the full width of the cage.

(7) The floor of the cage on out-door cranes shall be extended to form an entrance landing which shall be equipped with a handrail and toeboard constructed to the specifications of WAC 296-78-790 of this chapter.

(8) A copy of the rules for operators shall be permanently posted in the cages of all cage-operated cranes.

[Statutory Authority: RCW 49.17.010, [49.17].040, and [49.17].050. 01-11-038, § 296-78-795, filed 5/9/01, effective 9/1/01. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-795, filed 8/27/81.]

WAC 296-78-800 Crane rail stops, bumpers and fenders. (1) Rail stops shall be provided at both ends of the crane runway and at ends of the crane bridge. When two trolleys are operated on the same bridge rails, bumpers shall be provided to prevent collision of trolleys.

(2) Bumpers and rail stops shall extend at least as high as the centers of the wheel.

(3) Rail stops shall be fastened to the girders or girders and rails, but not to the rails alone. This does not apply to portable rail stops. Portable rail stops shall not be used as permanent rail stops.

(4) Rail stops shall be built up of plates and angles or be made of cast steel.

(5) Fenders shall be installed which extend below the lowest point of the treads of gantry type crane wheels. They shall be of a shape and form that will tend to push or raise an employee's hand, arm or leg off the rail and away from the wheel.

[Statutory Authority: Chapter 49.17 RCW. 96-17-056, § 296-78-800, filed 8/20/96, effective 10/15/96. Statutory Authority: RCW 49.17.040, 49.17.-050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-800, filed 8/27/81.]

WAC 296-78-805 Crawler locomotive and truck cranes. Crawler locomotive and truck cranes shall be constructed, maintained, inspected and operated in accordance with the provisions of WAC 296-24-240 through 296-24-24019 of the general safety and health standards.

[Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-805, filed 8/27/81.]

WAC 296-78-810 Chain and electric hoists. (1) Chain and electric hoists shall be of what is known as "all steel con-

struction." No cast iron shall be used in parts subject to tension except drums, bearings or brake shoes.

(2) The chains shall be made of the best quality steel or iron with welded links.

(3) Chain and electric hoists shall have a factor of safety of at least five.

(4) Chain and electric hoists shall be equipped with a device which will automatically lock the load when hoisting is stopped.

(5) Electric hoists shall be provided with a limit stop to prevent the hoist block from traveling too far in case the operating handle is not released in time.

(6) Workers shall not ride the load of any chain or electric hoist. If necessary to balance the load manually, it shall be done from a safe distance.

(7) The rated capacity of the hoist shall be posted on both the hoist and the jib or rail.

[Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-810, filed 8/27/81.]

WAC 296-78-815 Monorail hoists. (1) No attempt shall be made with a monorail hoist to lift or move an object by a side pull, unless designed for that purpose.

(2) A stop shall be provided at all switches and turntables which will prevent the trolley from running off should the switch be turned or be left in the open position.

(3) All monorail hoists operating on swivels shall be equipped with one or more safety catches which will support the load should a suspension pin fail. All trolley frames shall be safeguarded against spreading.

(4) Rail stops shall be provided at the ends of crane runways. Such rail stops shall extend at least as high as the centers of the wheels.

(5) All monorail hoists shall have the rated capacity posted on both the hoist and the rail.

[Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-815, filed 8/27/81.]

WAC 296-78-820 Air hoists. (1) To prevent piston rod lock nuts from becoming loose and allowing rod to drop when supporting a load, lock nut shall be secured to piston rod by a castellated nut and cotter-pin.

(2) A clevis, "D" strap or other means shall be used to prevent the hoist cylinder becoming detached from the hanger.

(3) All air hoists shall have their rated capacity posted on both the hoist and the jib or rail.

[Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-820, filed 8/27/81.]

WAC 296-78-825 Jib, pillar, and portable floor cranes, crabs, and winches. (1) Side pulls shall not be made with jib or pillar cranes. The arm or boom shall be directly over the load when making a lift.

(2) The gears of all cranes shall be enclosed, and if hand operated by means of a crab or winch, a locking dog shall be provided to hold load when the handle is released.

(3) Some form of brake or safety lowering device shall be provided on all crabs, winches, and jib cranes.

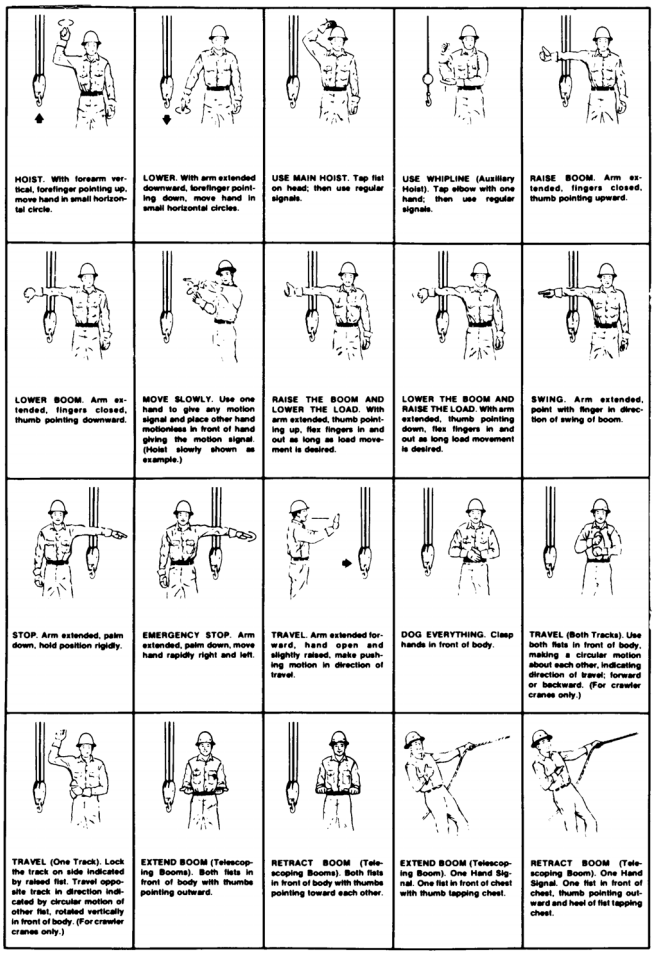
(4) A hoist limiting device shall be provided on all jib cranes of ten or more tons capacity.

(5) The rated capacity of the hoisting device shall be posted on the hoist and the arm or boom.

[Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-825, filed 8/27/81.]

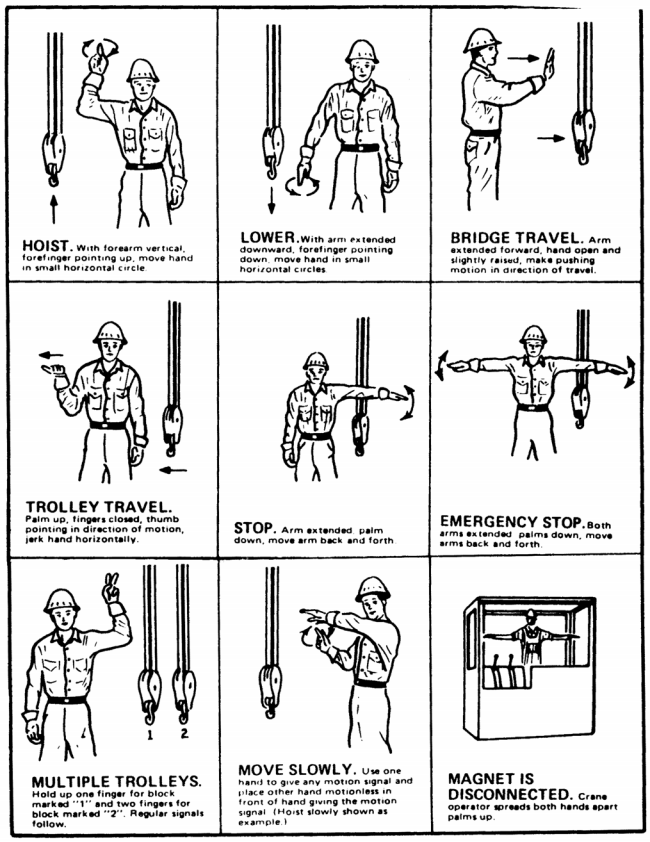
WAC 296-78-830 Standard crane hand signals—Illustrations. (1) The following hand signals shall be used for crawler, locomotive, and truck cranes and a copy shall be posted in the cab at the operator's station.

CRAWLER, LOCOMOTIVE, AND TRUCK CRANES



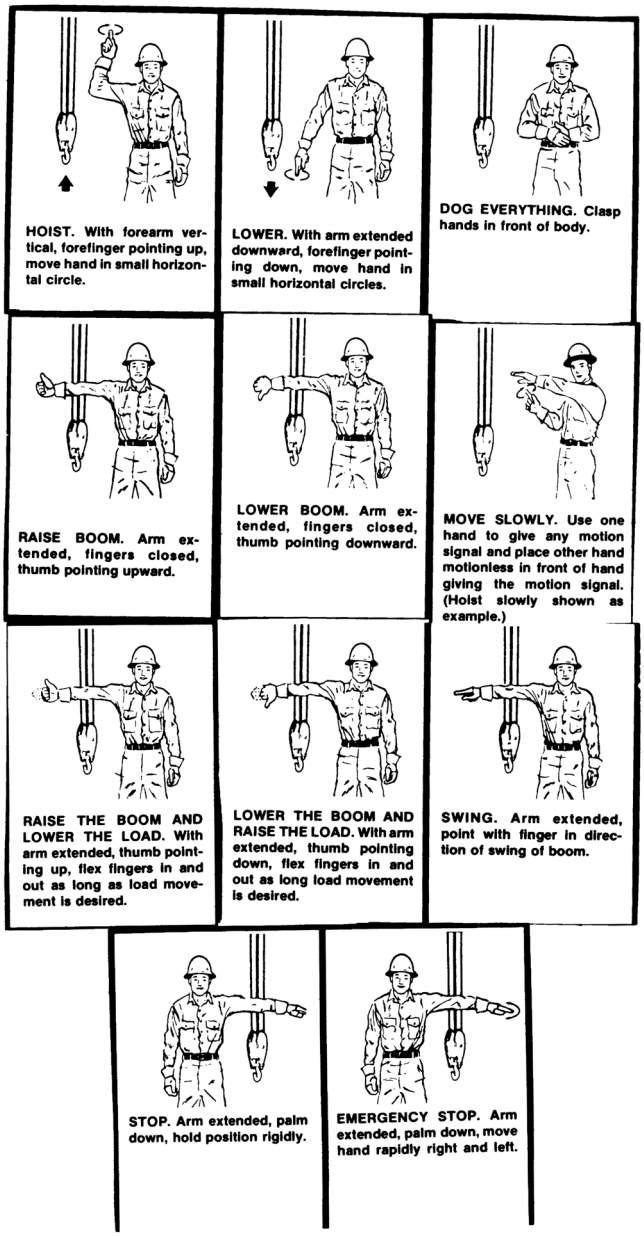
(2) The following hand signals shall be used for overhead and gantry cranes and a copy shall be posted in the cab at the operator's station.

STANDARD HAND SIGNALS FOR CONTROLLING OVERHEAD AND GANTRY CRANES



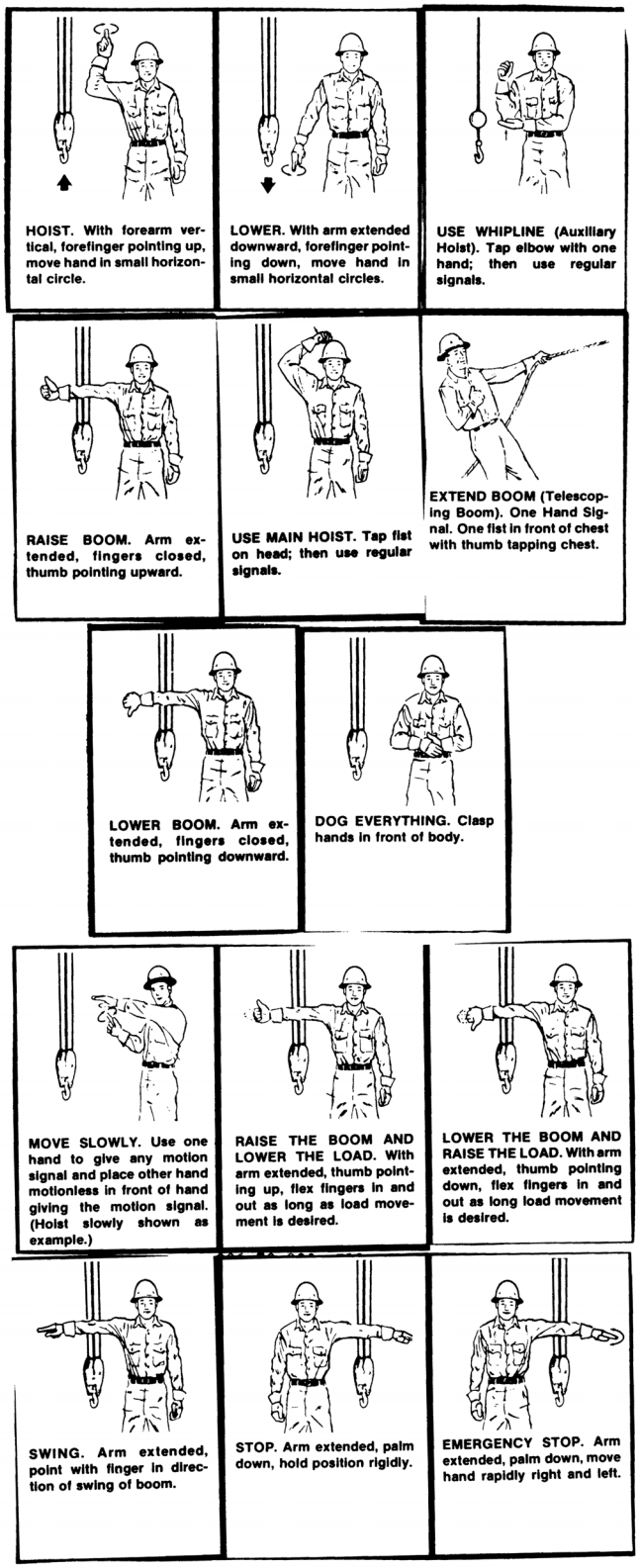
(3) The following hand signals shall be used for derricks and a copy shall be posted in the cab at the operator's station.

STANDARD HAND SIGNALS FOR CONTROLLING DERRICKS



(4) The following hand signals shall be used for portal, tower, and pillar cranes and a copy shall be posted in the cab at the operator's station.

STANDARD HAND SIGNALS FOR CONTROLLING PORTAL, TOWER AND PILLAR CRANES



[Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-830, filed 8/27/81.]

WAC 296-78-835 Vehicles. (1) Vehicles.

(a) Scope. Vehicles shall include all mobile equipment normally used in sawmill, planing mill, storage, shipping, and yard operations, including log sorting yards.

(b) Lift trucks. Lift truck shall be designed, constructed, maintained and operated in accordance with the requirements of WAC 296-24-230 through 296-24-23035 of the general safety and health standards.

(c) Carriers. Drive chains on lumber carriers shall be adequately guarded to prevent contact at the pinch points.

(d)(i) Lumber carriers shall be so designed and constructed that the operator's field of vision shall not be unnecessarily restricted.

(ii) Carriers shall be provided with ladders or equivalent means of access to the operator's platform or cab.

(e) Lumber hauling trucks.

(i) On trucks where the normal operating position is ahead of the load in the direction of travel, the cab shall be protected by a barrier at least as high as the cab. The barrier shall be capable of stopping the weight of the load capacity of the vehicle if the vehicle were to be stopped suddenly while traveling at its normal operating speed. The barrier shall be constructed in such a manner that individual pieces of a normal load will not go through openings in the barrier.

(ii) Stakes, stake pockets, racks, tighteners, and binders shall provide a positive means to secure the load against any movement during transit.

(iii) Where rollers are used, at least two shall be equipped with locks which shall be locked when supporting loads during transit.

(2) Warning signals and spark arrestors. All vehicles shall be equipped with audible warning signals and where practicable shall have spark arrestors.

(3) Flywheels, gears, sprockets and chains and other exposed parts that constitute a hazard to workers shall be enclosed in standard guards.

(4) All vehicles operated after dark or in any area of reduced visibility shall be equipped with head lights and backup lights which adequately illuminate the direction of travel for the normal operating speed of the vehicle. The vehicle shall also be equipped with tail lights which are visible enough to give sufficient warning to surrounding traffic at the normal traffic operating speed.

(5) All vehicles operated in areas where overhead hazards exist shall be equipped with an overhead guard for the protection of the operator.

(6) Where vehicles are so constructed and operated that there is a possibility of the operator being injured by backing into objects, a platform guard shall be provided and so arranged as not to hinder the exit of the driver.

(7) Trucks, lift trucks and carriers shall not be operated at excessive rates of speed. When operating on tramways or docks more than six feet above the ground or lower level they shall be limited to a speed of not more than twelve miles per hour. When approaching blind corners they shall be limited to four miles per hour.

(8) Vehicles shall not be routed across principal thoroughfares while employees are going to or from work unless pedestrian lanes are provided.

(a) Railroad tracks and other hazardous crossings shall be plainly posted.

(b) Restricted overhead clearance. All areas of restricted side or overhead clearance shall be plainly marked.

(c) Pickup and unloading points. Pickup and unloading points and paths for lumber packages on conveyors and transfers and other areas where accurate spotting is required, shall be plainly marked and wheel stops provided where necessary.

(d) Aisles, passageways, and roadways. Aisles, passageways, and roadways shall be sufficiently wide to provide safe side clearance. One-way aisles may be used for two-way traffic if suitable turnouts are provided.

(9) Where an operator's vision is impaired by the vehicle or load it is carrying, he shall move only on signal from someone so stationed as to have a clear view in the direction the vehicle is to travel.

(10) Reserved.

(11) Load limits. No vehicle shall be operated with loads exceeding its safe load capacity.

(12) Vehicles with internal combustion engines shall not be operated in enclosed buildings or buildings with ceilings less than sixteen feet high unless the buildings have ventilation adequate to maintain air quality as required by the general occupational health standard, chapter 296-62 WAC.

(13) Vehicles shall not be refueled while motor is running. Smoking or open flames shall not be allowed in the refueling area.

(14) No employee other than trained operators or mechanics shall start the motor of, or operate any log or lumber handling vehicle.

(15) All vehicles shall be equipped with brakes capable of holding and controlling the vehicle and capacity load upon any grade or incline over which they may operate.

(16) Unloading equipment and facilities.

(a) Machines used for hoisting, unloading, or lowering logs shall be equipped with brakes capable of controlling or holding the maximum load in midair.

(b) The lifting cylinders of all hydraulically operated log handling machines, or where the load is lifted by wire rope, shall be equipped with a positive device for preventing the uncontrolled lowering of the load or forks in case of a failure in the hydraulic system.

(c) A limit switch shall be installed on powered log handling machines to prevent the lift arms from traveling too far in the event the control switch is not released in time.

(d) When forklift-type machines are used to load trailers, a means of securing the loading attachment to the fork shall be installed and used.

(e) A-frames and similar log unloading devices shall have adequate height to provide safe clearance for swinging loads and to provide for adequate crotch lines and spreader bar devices.

(f) Log handling machines used to stack logs or lift loads above operator's head shall be equipped with overhead protection.

(g) Unloading devices shall be equipped with a horn or other plainly audible signaling device.

(h) Movement of unloading equipment shall be coordinated by audible or hand signals when operator's vision is impaired or operating in the vicinity of other employees.

Lift trucks regularly used for transporting peeler blocks or cores shall have tusks or a similar type hold down device to prevent the blocks or cores from rolling off the forks.

(17) Where spinners are used on steering wheels, they shall be of the automatic retracting type or shall be built into the wheel in such a manner as not to extend above the plane surface of the wheel. Vehicles equipped with positive anti-kickback steering are exempted from this requirement.

(18) Mechanical stackers and unstackers shall have all gears, sprockets and chains exposed to the contact of workers, fully enclosed by guards as required by WAC 296-78-710 of this chapter.

(19) Manually operated control switches shall be properly identified and so located as to be readily accessible to the operator. Main control switches shall be so designed that they can be locked in the open position.

(20) Employees shall not stand or walk under loads being lifted or moved. Means shall be provided to positively block the hoisting platform when employees must go beneath the stacker or unstacker hoist.

(21) No person shall ride any lift truck or lumber carrier unless a suitable seat is provided, except for training purposes.

(22) Unstacking machines shall be provided with a stopping device which shall at all times be accessible to at least one employee working on the machine.

(23) Floor of unstacker shall be kept free of broken stickers and other debris. A bin or frame shall be provided to allow for an orderly storage of stickers.

(24) Drags or other approved devices shall be provided to prevent lumber from running down on graders.

(25) Liquified petroleum gas storage and handling. Storage and handling of liquified petroleum gas shall be in accordance with the requirements of WAC 296-24-475 through 296-24-47517 of the general safety and health standards.

(26) Flammable liquids. Flammable liquids shall be stored and handled in accordance with WAC 296-24-330 through 296-24-33019 of the general safety and health standards.

(27) Guarding side openings. The hoistway side openings at the top level of the stacker and unstacker shall be protected by enclosures of standard railings.

(28) Guarding hoistway openings. When the hoist platform or top of the load is below the working platform, the hoistway openings shall be guarded.

(29) Guarding lower landing area. The lower landing area of stackers and unstackers shall be guarded by enclosures that prevent entrance to the area or pit below the hoist platform. Entrances should be protected by electrically interlocked gates which, when open, will disconnect the power and set the hoist brakes. When the interlock is not installed, other positive means of protecting the entrance shall be provided.

(30) Lumber lifting devices. Lumber lifting devices on all stackers shall be designed and arranged so as to minimize the possibility of lumber falling from such devices.

(31) Inspection. At the start of each work shift, equipment operators shall inspect the equipment they will use for evidence of failure or incipient failure. Equipment found to have defects which might affect the operating safety shall not be used until the defects are corrected.

(32) Cleaning pits. Safe means of entrance and exit shall be provided to permit cleaning of pits.

(33) Preventing entry to hazardous area. Where the return of trucks from unstacker to stacker is by mechanical power or gravity, adequate signs, warning devices, or barriers shall be erected to prevent entry into the hazardous area.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, 49.17.060. 07-03-163, § 296-78-835, filed 1/24/07, effective 4/1/07; 06-05-027, § 296-78-835, filed 2/7/06, effective 4/1/06; 03-06-076, § 296-78-835, filed 3/4/03, effective 8/1/03. Statutory Authority: Chapter 49.17 RCW. 96-17-056, § 296-78-835, filed 8/20/96, effective 10/15/96. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-835, filed 8/27/81.]

WAC 296-78-840 Loading, piling, storage and conveying.

[Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-840, filed 8/27/81.]

WAC 296-78-84001 Loading, piling, storage and conveying—General. (1) Units or loads of lumber built up for transportation by overhead cranes, lift trucks, auto trucks, or manually or mechanically operated transfers shall be provided with at least one set of stickers for each eighteen inches in height of unit or load. One set of stickers shall be not more than six inches from the top of units of lumber up to three inch dimension. Where dimension of material is greater than three inches, a set of stickers shall be placed under the top layer. Stickers shall extend the full width of the package, shall be uniformly spaced, and shall be aligned one above the other. Stickers may be lapped with a minimum overlapping of twelve inches. Stickers shall not protrude more than two inches beyond the sides of the package.

(2) Lumber loading. Loads shall be built and secured to insure stability in transit.

(3) Units or loads of lumber shall not be lifted or moved until all workers are in the clear.

(4) Gradient of roll sets or roll cases over which units of lumber are to be moved shall not exceed three percent. The movement of units shall be under control at all times.

(5) Stacking of lumber in yards, either by units or in block piles, shall be conducted in a safe and orderly manner.

(6) Foundations for piling lumber in yards shall be capable of supporting the maximum applied load without tipping or sagging.

(7) The height of stacked units in storage areas shall not exceed seven of the usual four foot units, subject to the following qualifications:

(a) Units of lumber shall not be stacked more than four high unless two or more stacks of units are tied together with ties.

(b) Long units of lumber shall not be stacked upon shorter packages except where a stable pile can be made with the use of package separators.

(c) In unit package piles, substantial polsters or unit separators shall be placed between each package directly over the stickers.

(8) Wooden horses used for loading preformed loads of lumber shall be of material not less than four by six inches in cross section net measure.

(9) Unstable piles. Piles of lumber which have become unstable shall be immediately made stable or removed.

(10) Lift boards or pallets shall be loaded in such a manner as to prevent material from spilling or the material shall be secured with a binder.

(11) Packing rooms shall be kept free of debris and chutes shall be equipped with a means of slowing down the materials.

(12) Sorting chains shall be provided with a stopping device which shall at all times be readily accessible to at least one employee working on the chain.

(13) The inside of the walkway of all green chains and sorting tables shall be provided with a standard toeboard.

(14) Rollers or other devices shall be provided for removing heavy dimension lumber from the cabin or table.

(15) Roll casings and transfer tables shall be cleaned regularly and shall be kept reasonably free from debris.

(16) In all permanent installations, green chains and sorting tables shall be roofed over to provide protection from inclement weather. Normal work stations shall be provided with a drained work surface which is evenly floored of nonslip material.

(17) Power driven rolls shall be operated in a manner to prevent end collisions.

(18) The space between live rolls shall be filled in on either side of crosswalks with material of structural strength to withstand the load imposed with a four to one safety factor.

(19) The driving mechanism of live rolls shall be guarded wherever exposed to contact.

(20) Live rolls shall be replaced when their surface develops a break or hole.

(21) Guarding. Spiked live rolls shall be guarded.

(22) Ramps or skidways used to transfer lumber or materials from one level to another shall be provided with all safeguards necessary for the protection of workers.

(23) Landings on a lower level where lumber or timbers are discharged over ramps or skidways shall be provided with a solid bumper not less than six inches in height at the outer edge. Such landing shall be maintained in good repair at all times.

(24) Ramps or skidways shall be so arranged that the person putting lumber down shall have a clear view of the lower landing. Lumber or timbers shall not be put down until all workers are in the clear.

(25)(a) The under face of all ramp or skidway landings shall be fenced off or other positive means provided to prevent persons from walking out under dropping timber.

(b) Return strands of sorting table ramp chains shall be supported by troughs of sufficient strength to support the weight of a broken chain.

[Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-84001, filed 8/27/81.]

WAC 296-78-84003 Conveyors. (1) Construction, operation, and maintenance of conveyors shall be in accordance with American National Standard B20.1 - 1957, Safety Code for Conveyors, Cableways and related equipment.

(2) Conveyor troughs in which the working strands of a conveyor operate shall be of ample dimension and strength to carry a broken chain and shall afford effective protection to all employees.

(3) When the return strand of a conveyor operates within seven feet of the floor there shall be a trough provided of suf-

ficient strength to carry the weight resulting from a broken chain.

(4) When the return strands of a conveyor pass over passageways or work areas such guards shall be placed under them as will effectively protect workers.

(5) When the working strand of a conveyor crosses within three feet of the floor level in passageways, the trough in which it works shall be bridged the full width of the passageway.

(6) Where conveyor, idler pulleys or other equipment is located over or dangerously near burning refuse, any worker going to such location shall use a safety line which shall be securely fastened to his body and tended by a helper.

(7) Conveyors shall be provided with an emergency panic-type stopping device which can be reached by a person in a sitting position on the conveyor. Such device shall be located near the material entrance to each barker, chipper, hog, saw, or similar type of equipment except where the conveyor leading into such equipment is under constant control of an operator who has full view of the material entrance and is located or restrained where he/she cannot possibly fall onto the conveyor. The device shall stop the conveyor a sufficient distance away from the hazard to prevent injury or further injury by the hazard.

(8) Screw or auger type conveyor troughs and boxes shall be equipped with covers. If it is not practical to cover the troughs or boxes, other equivalent type guards shall be provided.

[Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-84003, filed 8/27/81.]

WAC 296-78-84005 Dry kilns. (1) Transfer, kiln and dolly tracks shall be properly maintained at all times and shall have a grade of not more than one and one-fourth percent. Bumpers or stops shall be installed at the ends of all tracks capable of stopping a normal load for which the track is installed. A means shall be provided for chocking or blocking cars.

(2) Doors.

(a) Main kiln doors. Main kiln doors shall be provided with a method of holding them open while kiln is being loaded.

(b) Counterweights on vertical lift doors shall be boxed or otherwise guarded.

(c) Means shall be provided to firmly secure main doors, when they are disengaged from carriers and hangers, to prevent toppling.

(3) Kilns whose operation requires inside inspection shall be maintained with not less than eighteen inches clearance between loaded cars and the walls of the kiln. The requirements for personal protective equipment specified in WAC 296-800-160, safety and health core rules, and chapter 296-842 WAC, Respirators, shall be complied with.

(4) Kiln loads shall be equipped or arranged for easy attachment and detachment of transfer cables. Means for stopping kiln cars shall be available at all times.

(5) Cars shall not be moved until tracks are clear and workers are out of the bight of transfer lines.

(6) When kiln or dolly loads of lumber are permitted to coast through or adjacent to any work area, audible warning shall be given.

(7) Stickers shall not be allowed to protrude more than two inches from the sides of kiln stacks.

(8) Yards and storage areas shall be kept reasonably free of debris and unnecessary obstruction. Warning signs shall be conspicuously posted wherever there is danger from moving vehicles or equipment.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, 49.17.060. 05-20-055, § 296-78-84005, filed 10/3/05, effective 12/1/05; 05-03-093, § 296-78-84005, filed 1/18/05, effective 3/1/05. Statutory Authority: RCW 49.17.010, [49.17].040, and [49.17].050. 01-11-038, § 296-78-84005, filed 5/9/01, effective 9/1/01. Statutory Authority: Chapter 49.17 RCW. 96-17-056, § 296-78-84005, filed 8/20/96, effective 10/15/96; 94-20-057 (Order 94-16), § 296-78-84005, filed 9/30/94, effective 11/20/94. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-84005, filed 8/27/81.]

WAC 296-78-84007 Chippers and hogs. (1) Chippers. The feed system to the chipper shall be arranged so the operator does not stand in direct line with the chipper spout (hopper). The chipper spout shall be enclosed to a height or distance of not less than forty inches from the floor or the operator's station. A safety belt and lifeline shall be worn by workers when working at or near the spout unless the spout is guarded. The lifeline shall be short enough to prevent workers from falling into the chipper.

(2) Hog mills shall be provided with feed chutes so designed and arranged that from no position on the rim of the chute shall the distance to the knives or feed roll be less than forty inches. Baffles shall be provided which shall effectively prevent material from being thrown from the mill.

(3) Employees feeding hog mills shall be provided with safety belts and lines, which they shall be required to use at all times, unless otherwise protected from any possibility of falling into the mill.

[Statutory Authority: Chapter 49.17 RCW. 96-17-056, § 296-78-84007, filed 8/20/96, effective 10/15/96. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-84007, filed 8/27/81.]

WAC 296-78-84009 Bins and bunkers. (1) Bins, bunkers, hoppers, and fuel houses. Guarding. Open bins, bunkers, and hoppers whose upper edges extend less than three feet above working level shall be equipped with standard handrails and toeboards, or have their tops covered by a substantial grill or grating with openings small enough to prevent a person from falling through.

(2) Fuel hoppers shall be provided with doors that may be remotely operated.

(3) Fuel hoppers shall be provided with platforms with standard railings and adequately lighted for the protection of workers taking out fuel.

(4)(a) Fuel bins shall be provided with an approved railed platform or walkway near the top or other approved means, for the use of employees engaged in dislodging congested fuel. No employee shall enter any fuel bin except where adequately safeguarded.

(b) Recognizing however, the varying designs of fuel storage vaults and the type of fuel handled and certain peculiar local conditions, the adequacy of safety devices shall be determined by a duly authorized representative of the department of labor and industries, division of industrial safety and health.

(c) During operations when the flow of normal fuel is interrupted but dust from operating sanders is received in the bin, workers shall not enter the fuel bin until the flow of sander dust has been discontinued and the dust has settled.

(d) Use of wheeled equipment to load bins. Where automotive or other wheeled equipment is used to move materials into bins, bunkers, and hoppers, adequate guard rails shall be installed along each side of the runway, and a substantial bumper stop provided when necessary.

[Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-84009, filed 8/27/81.]

WAC 296-78-84011 Burners. (1) Burners and smoke stacks other than the self-supporting type shall be adequately guyed. Buckle guys shall be installed if burner or stack is more than fifty feet in height.

(2) Runway. The conveyor runway to the burner shall be equipped with a standard handrail. If the runway crosses a roadway or thoroughfare, standard toeboards shall be provided in addition.

[Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. 81-18-029 (Order 81-21), § 296-78-84011, filed 8/27/81.]