Chapter 296-78 WAC
SAFETY STANDARDS FOR SAWMILLS AND WOODWORKING OPERATIONS

Last Update: 7/21/26

WAC

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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 Repealed by WSR 81-18-029 (Order 81-21), filed 8/27/81.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 Repealed by WSR 81-18-029 (Order 81-21), filed 8/27/81.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 Repealed by Order 74-28, filed 5/7/74 and Order 76-7, filed 3/1/76.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 Repealed by Order 74-28, filed 5/7/74 and Order 76-7, filed 3/1/76.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 Repealed by Order 74-28, filed 5/7/74 and Order 76-7, filed 3/1/76.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 Repealed by Order 74-28, filed 5/7/74 and Order 76-7, filed 3/1/76.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 Repealed by WSR 81-18-029 (Order 81-21), filed 8/27/81.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 Repealed by WSR 81-18-029 (Order 81-21), filed 8/27/81.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 Repealed by WSR 81-18-029 (Order 81-21), filed 8/27/81.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 Repealed by WSR 81-18-029 (Order 81-21), filed 8/27/81.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 WSR 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 WSR 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 WSR 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 WSR 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 WSR 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 WSR 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 WSR 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 WSR 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 WSR 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 WSR 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 WSR 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 WSR 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 WSR 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 WSR 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 WSR 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 WSR 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 WSR 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 WSR 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 WSR 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 WSR 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 WSR 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 WSR 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 WSR 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 WSR 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 WSR 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 WSR 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 WSR 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 WSR 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 WSR 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 WSR 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 WSR 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 WSR 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 WSR 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 WSR 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 WSR 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 WSR 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 WSR 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 WSR 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 WSR 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 WSR 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 WSR 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 WSR 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 WSR 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 WSR 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 WSR 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 WSR 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 WSR 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 WSR 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 WSR 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 WSR 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 WSR 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. WSR 81-18-029 (Order 81-21), § 296-78-555, filed 8/27/81.] Repealed by WSR 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 will 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 will 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 will 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, will 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, and 49.17.060. WSR 17-16-132, § 296-78-500, filed 8/1/17, effective 9/1/17; WSR 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. WSR 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. WSR 81-18-029 (Order 81-21), § 296-78-500, filed 8/27/81.]

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

Annealing. Heating then cooling to soften and render less brittle.

Binder. A hinged lever assembly used to connect the ends of a wrapper to tighten the wrapper around the load of logs or materials.

Boom. Logs or timbers fastened together end to end and used to contain floating logs. The term includes enclosed logs.

Brow log. A log placed parallel to a roadway at a landing or dump to protect vehicles while loading or unloading.

Bunk. A cross support for a load.

Cant. A log slabbed on one or more sides.

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.

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.

Chipper. A machine which cuts material into chips.

Chock, bunk block, and cheese block. A wedge that prevents logs or loads from moving.

Cold deck. A pile of logs stored for future removal.

Crotch lines. Two short lines attached to a hoisting line by a ring or shackle, the lower ends being attached to loading hooks.

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.

Drag saw. A power-driven, reciprocating cross-cut saw mounted on suitable frame and used for bucking logs.

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.

Head rig. A combination of head saw and log carriage used for the initial breakdown of logs into timbers, cants, and boards.

Hog. A machine for cutting or grinding slabs and other coarse residue from the mill.

Husk. A head saw framework on a circular mill.

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.

Kiln tender. The operator of a kiln.

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.

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.

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.

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.

Log deck. A platform in the sawmill on which the logs remain until needed for sawing.

Log haul. A conveyor for transferring logs to mill.

Lumber dimensions. The nominal size of surfaced lumber, unless otherwise stated.

Lumber hauling truck. An industrial truck, other than a lift truck or a carrier, used for the transport of lumber.

Package. A unit of lumber.

Peavy. A stout wooden handle fitted with a spike and hook and used for rolling logs.

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.

Pike pole. A long pole whose end is shod with a sharp pointed spike.

Pitman rod. Connecting rod.

Resaw. Band, circular, or sash gang saws used to break down slabs, cants, or flitches into lumber.

Running line. Any moving rope as distinguished from a stationary rope such as a guyline.

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.

Saw guide. A device for steadying a circular or bandsaw.

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

Sorting gaps. The areas on a log pond enclosed by boom sticks into which logs are sorted.

Spreader wheel. A metal wheel that separates the board from the log in back of circular saws to prevent binding.

Splitter. A knife-type, nonrotating spreader.

Sticker. A strip of wood or other material used to separate layers of lumber.

Stiff boom. The anchored, stationary boom sticks which are tied together and on which boom persons work.

Swifter. The tying of boom sticks together to prevent them from spreading while being towed.

Telltale. A device used to serve as a warning for overhead objects.

Top saw. The upper of two circular saws on a head rig, both being on the same husk.

Tramway. A way for trams, usually consisting of parallel tracks laid on wooden beams.

Trestle. A braced framework of timbers, piles or steelwork for carrying a road or railroad over a depression.

Wrapper. A chain, strap or wire rope assembly used to contain a load of logs or materials.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-505, filed 8/1/17, effective 9/1/17. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. WSR 81-18-029 (Order 81-21), § 296-78-505, filed 8/27/81.]

WAC 296-78-510 Education and first-aid standards. It must be the duty of every employer to comply with such standards and systems of education for safety as must 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 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-510, filed 8/1/17, effective 9/1/17. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. WSR 81-18-029 (Order 81-21), § 296-78-510, filed 8/27/81.]

WAC 296-78-515 Management's responsibility. (1) It must 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 must 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) You must develop and maintain a hazard communication program as required by WAC 296-901-140, 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 must 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 must be conducted. The investigation must be conducted by a person designated by you, 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 must be documented by you for reference at any following formal investigation.

(5) Reporting and recording requirements. You must comply with chapter 296-27 WAC for recording work-related injuries and illnesses and reporting to the department any work-related fatality, inpatient hospitalization, amputation, or the loss of an eye.

(6) You must comply with the accident investigation requirements in WAC 296-800-320.

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

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-515, filed 8/1/17, effective 9/1/17. Statutory Authority: RCW 49.17.010, 49.17.040, and 49.17.050. WSR 15-11-066, § 296-78-515, filed 5/19/15, effective 7/1/15. Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, 49.17.060 and 29 C.F.R. 1910 Subpart Z. WSR 14-07-086, § 296-78-515, filed 3/18/14, effective 5/1/14. Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, 49.17.060. WSR 09-05-071, § 296-78-515, filed 2/17/09, effective 4/1/09; WSR 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. WSR 01-11-038, § 296-78-515, filed 5/9/01, effective 9/1/01. Statutory Authority: Chapter 49.17 RCW. WSR 94-20-057 (Order 94-16), § 296-78-515, filed 9/30/94, effective 11/20/94; WSR 91-24-017 (Order 91-07), § 296-78-515, filed 11/22/91, effective 12/24/91; WSR 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. WSR 81-18-029 (Order 81-21), § 296-78-515, filed 8/27/81.]

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

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

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

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

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

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-520, filed 8/1/17, effective 9/1/17. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. WSR 81-18-029 (Order 81-21), § 296-78-520, filed 8/27/81.]

WAC 296-78-525 Accident-prevention programs. Each employer must 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 employer's 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 must be outlined in written format.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-525, filed 8/1/17, effective 9/1/17. Statutory Authority: Chapter 49.17 RCW. WSR 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. WSR 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 must have a designated safety committee composed of employer and employee elected members.

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

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

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

(3) The safety committee must 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 must be responsible for determining the date, hour and location of the meetings.

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

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

(5) Safety and health committee meetings must 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 must be documented.

(e) The subject(s) discussed must 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 semimonthly meetings must be held to discuss safety problems as they arise.

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

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-530, filed 8/1/17, effective 9/1/17. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. WSR 81-18-029 (Order 81-21), § 296-78-530, filed 8/27/81.]

WAC 296-78-535 Safety bulletin board. There must 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 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-535, filed 8/1/17, effective 9/1/17. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. WSR 81-18-029 (Order 81-21), § 296-78-535, filed 8/27/81.]

WAC 296-78-540 First-aid training and certification. You must ensure that first-aid trained personnel are available to help employees who are injured or who become acutely ill on the job. You must meet this requirement by maintaining first-aid trained staff on the job site. You 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. WSR 17-16-132, § 296-78-540, filed 8/1/17, effective 9/1/17; WSR 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. WSR 01-11-038, § 296-78-540, filed 5/9/01, effective 9/1/01; WSR 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. WSR 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. WSR 01-11-038, § 296-78-545, filed 5/9/01, effective 9/1/01; WSR 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. WSR 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 296-800 WAC.

[Statutory Authority: RCW 49.17.010, 49.17.040, and 49.17.050. WSR 15-23-084, § 296-78-550, filed 11/17/15, effective 12/18/15; WSR 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. WSR 81-18-029 (Order 81-21), § 296-78-550, filed 8/27/81.]

WAC 296-78-560 Safe place standards. (1) Each employer must 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 must furnish and use safety devices and safeguards, and adopt and use practices, means, methods, operations, and processes which are reasonably adequate to render such employment and place of employment safe. Every employer must do every other thing reasonably necessary to protect the life and safety of employees.

(3) Employers must not require any employee to go or be in any employment or place of employment which is not safe.

(4) No employer must 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 must construct or cause to be constructed any place of employment that is not safe.

(6) No person must 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 must not be permitted or used in or around work sites. Workers under the influence of alcohol or narcotics must 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 does not endanger the worker or others.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-560, filed 8/1/17, effective 9/1/17. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. WSR 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. WSR 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, must be illuminated in accordance with the requirements of WAC 296-800-210, safety and health core rules.

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

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

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

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

(d) At no time will 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, must be actuated by circuits operating at less than 50 volts to ground.

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

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

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

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

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

(b) Stakes and chocks which trip must 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.

(c) Binders must 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.

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

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

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

(7) Unloading lines must 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.

(8) All log dumps must be kept reasonably free of bark and other debris.

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

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

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

(12) 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 must be inspected for defects which would reduce their designed effectiveness. Defective personal flotation devices must not be used.

(c) To meet the approved criteria required by this subsection (12), a personal flotation device must 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.

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

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

(15) Walkways and floats must be provided and security anchored to provide safe passage for workers.

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

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

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

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

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

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

(b) Boom sticks must be fastened together with crossties or couplings.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-56501, filed 8/1/17, effective 9/1/17. Statutory Authority: RCW 49.17.010, [49.17].040, and [49.17].050. WSR 02-03-124, § 296-78-56501, filed 1/23/02, effective 3/1/02; WSR 01-11-038, § 296-78-56501, filed 5/9/01, effective 9/1/01. Statutory Authority: Chapter 49.17 RCW. WSR 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. WSR 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 must have at least one walkway with standard railing to enable workers to stand clear of the logs in the chute. Cleats must be installed to provide safe footing on sloping walkways.

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

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

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

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

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

(4) Log haul controls must be arranged to operate from a position where the operator will at all times be in the clear of logs, machi-

nery lines and rigging. Such controls must operate mechanism only when moved toward the log slip or deck.

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

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

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

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

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-56503, filed 8/1/17, effective 9/1/17. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. WSR 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, must be complied with. Prior to starting the boat motor, any spilled fuel must be removed and vapors must be exhausted from any area in which they may accumulate.

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

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

(4) Adequate ventilation equipment must 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 must 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, must display navigation lights as required by the United States Coast Guard. Searchlights or floodlights must be provided to facilitate safe navigation and to illuminate working or boarding areas adjacent to the craft.

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

(7) Each boat must 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) 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, must be provided. The life rings must be spaced at intervals not to exceed two hundred feet and kept in easily visible and readily accessible locations.

(a) 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, must be provided in the immediate vicinity of the work assigned.

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

(c) Lines attached to life rings on fixed locations must 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 must be at least fifty feet in length.

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

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

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

(g) Boats must not be operated at an excessive speed or handled recklessly.

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

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-56505, filed 8/1/17, effective 9/1/17; WSR 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. WSR 02-03-124, § 296-78-56505, filed 1/23/02, effective 3/1/02; WSR 01-17-033, § 296-78-56505, filed 8/8/01, effective 9/1/01. Statutory Authority: Chapter 49.17 RCW. WSR 96-17-056, § 296-78-56505, filed 8/20/96, effective 10/15/96; WSR 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. WSR 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 must be kept orderly and must be maintained in a condition which is conducive to safe operation of mobile equipment.

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

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

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

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

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

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

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

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

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

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

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

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

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

(9) Moving parts or equipment on or about log decks must be guarded.

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

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

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-56507, filed 8/1/17, effective 9/1/17. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. WSR 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 must be guarded so as to protect employees from flying chips, bark, or other extraneous material.

(2) Elevating ramp. If an elevating ramp or gate is used, it must 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 must be fenced off or posted as a prohibited area for unauthorized persons.

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

(5) Holddown rolls must 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 must be installed to contain the logs or chunks.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-56509, filed 8/1/17, effective 9/1/17. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. WSR 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 must be provided along the upper side of the log deck and around the head rig unless an overhead walkway is provided.

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

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

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

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

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

(7) A shield of lexan, makrolon, merlon, plestar, or equivalent transparent material, must 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.

(8) Safety glasses, safety shields or other suitable eye protection must 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. WSR 17-16-132, § 296-78-56511, filed 8/1/17, effective 9/1/17; WSR 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. WSR 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 must be solidly decked over.

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

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

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

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

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

(a) Where the clearance is thirty inches or more the floor between the back side of the setter's platform and the wall must be raised to the level of the platform. The clearance between the floor edge and the platform must not be more than two inches.

(b) Barriers and warning signs. A barrier must 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 must be posted at possible entry points to this area.

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

(8) No roof truss or roof timber or other obstruction must 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 must be provided with a handrail opposite such doorway. Handrail must not be less than eighteen inches from the carriage run. A warning sign must be posted on the entrance side of such doorways.

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

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

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

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

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

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

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-56513, filed 8/1/17, effective 9/1/17. Statutory Authority: Chapter 49.17 RCW. WSR 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. WSR 81-18-029 (Order 81-21), § 296-78-56513, filed 8/27/81.]

WAC 296-78-570 Band saws—Saws. (1) Band head rigs must 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 must 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 must 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, must be worn by employees while changing band saws.

(5) All head band saw wheels must 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 must be made for alerting and warning employees before starting band head saws, and measures must be taken to ensure that all persons are in the clear.

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

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

(9) All band wheels must be completely encased or guarded on both sides. The exposed part of the saw blade on the uptravel between the two wheels must 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 must 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 must not exceed 2 x 4 inches in size. Openings necessary for lubrication or repair of the saw must have doors or gates of equivalent strength to the remainder of the guard, and such doors or gates must be securely closed during operation.

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

(12) All band saws other than head mills must 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 must be adjusted with the guide.

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

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-570, filed 8/1/17, effective 9/1/17. Statutory Authority: Chapter 49.17 RCW. WSR 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. WSR 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 must not be operated at speeds in excess of those specified by the manufacturer. Maximum speed must 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 must be at least one inch greater than the clear vertical distance between the collars of the top and bottom saws.

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

(4) The upper saw of a double circular mill must be provided with a hood or guard. A screen or other suitable device must 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, must be equipped with an effective spreader or splitter.

In any mill where the head saw is used for edging lumber, the splitter must be solid and stationary and must extend above the head blocks.

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

(7) All employees must 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 scragg saws, must meet the specifications for single circular head saws in subsection (1) of this section, where applicable.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-575, filed 8/1/17, effective 9/1/17. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. WSR 81-18-029 (Order 81-21), § 296-78-575, filed 8/27/81.]

WAC 296-78-580 Edgers. (1) Edgers must 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 must 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 must 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 must be located and guarded so an employee cannot contact any part of the edger saws from his normal operating position.

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

(6) All edgers must be equipped with pressure feed rolls. The controls must 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 must 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 must be guarded against accidental contact by means of roll covers, bars or strips. The pressure rolls must 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 must not raise feed rolls and reach between saws while edger is in operation.

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

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

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

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-580, filed 8/1/17, effective 9/1/17. Statutory Authority: Chapter 49.17 RCW. WSR 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. WSR 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., must have the saws encased, except that portion immediately adjacent to the feeding device.

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

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-585, filed 8/1/17, effective 9/1/17. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. WSR 81-18-029 (Order 81-21), § 296-78-585, filed 8/27/81.]

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

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

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

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

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

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

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

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

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

(10) Circular gang resaws.

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

(b) Circular gang resaws must be provided with safety fingers or other anti-kickback devices.

(c) Circular gang resaws must not be operated at speeds exceeding those recommended by the manufacturer.

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

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

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-590, filed 8/1/17, effective 9/1/17; WSR 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. WSR 81-18-029 (Order 81-21), § 296-78-590, filed 8/27/81.]

WAC 296-78-595 Jump saws. (1) Jump saws must have guards below the top of the table or roll case. A guard must 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 must be arranged so the saws are fully enclosed when not in actual use.

(3) A positive stop must 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 must 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 must be placed in front of jump saw trimmers. Stops must be installed to prevent timber from being thrown off the roll case.

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

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-595, filed 8/1/17, effective 9/1/17. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. WSR 81-18-029 (Order 81-21), § 296-78-595, filed 8/27/81.]

WAC 296-78-600 Trimmer and slasher saws. (1) Trimmer and slasher saws must 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 must not be run at peripheral speeds in excess of those recommended by the manufacturer.

(2) Front guards for a series of saws must 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 must be guarded or fenced off.

(3) The rear of a series of saws must 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 must be provided with safety stops or hangers to prevent saws from dropping on table.

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

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

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-600, filed 8/1/17, effective 9/1/17. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. WSR 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 must be set up, guarded and operated in accordance with chapter 296-806 WAC, Machine safety:

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

(b) Saws on which the cutting stroke is propelled by hand pressure; and/or

(c) 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 must 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) must be set up, guarded and operated in accordance with the following:

(a) Overhead swing cut-off saws must be guarded by a hood, which must 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, must be provided with guards as required by WAC 296-78-71505.

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

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

(e) All swing saws must be equipped with a counter balance which must 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 must not be used for attaching counter balance.

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

(g) Swing limit stops must be provided and so adjusted that at no time the forward swing of the saw extends 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 must be designed so they can be locked or rendered inoperative.

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

(j) Swing saws on log decks must 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 must be provided with stops or lineup rail to prevent material being pushed off on opposite side.

(4) Operators of hand operated swing saws must 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. WSR 17-16-132, § 296-78-605, filed 8/1/17, effective 9/1/17; WSR 04-14-028, § 296-78-605, filed 6/29/04, effective 1/1/05. Statutory Authority: Chapter 49.17 RCW. WSR 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. WSR 81-18-029 (Order 81-21), § 296-78-605, filed 8/27/81.]

WAC 296-78-610 Circular saws, speeds, repairs. (1) Circular saws must not be operated at speeds in excess of that specified by the manufacturer. Speeds must 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 must be etched on the saw. These etched speeds must not be exceeded.

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

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

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-610, filed 8/1/17, effective 9/1/17. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. WSR 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 must be kept free from material and equipment at all times.

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

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

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

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

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

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

(8) Filing room employees must 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 must 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. WSR 17-16-132, § 296-78-615, filed 8/1/17, effective 9/1/17; WSR 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. WSR 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 must 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 must be not less than one-sixteenth inch in thickness, and if cast iron is used, it must be not less than three-sixteenths inch in thickness.

(2) Planers, stickers, molding, sticking and matching machines must 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 must 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 must 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) Levers or controls must be arranged or guarded so as to prevent accidental operation of machines.

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

(b) Locks, blocks, or other devices must be provided for positive immobilization of machine controls while repairs or adjustments are being made.

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

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

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

(9) All universal joints must be enclosed.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-620, filed 8/1/17, effective 9/1/17. Statutory Authority: Chapter 49.17 RCW. WSR 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. WSR 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) must have all cutting heads, and saws if used, covered by a solid metal guard.

(2) Stave and heading planers must 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) must be provided to prevent kickbacks.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-625, filed 8/1/17, effective 9/1/17. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. WSR 81-18-029 (Order 81-21), § 296-78-625, filed 8/27/81.]

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

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

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-630, filed 8/1/17, effective 9/1/17. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. WSR 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 must 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 must be equipped with a cylindrical cutting head, the throat of which must not exceed three-eighths inch in depth or one-half inch in width. The knife projection must not exceed one-eighth inch beyond the cylindrical body of the head.

(3) The opening in the table must be kept as small as possible. The clearance between the edge of the rear table and the cutter head must be not more than one-eighth inch. The table throat opening must 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 must be guarded by an exhaust hood or other approved device which completely encloses the revolving head except for a slot sufficiently wide to permit the application of material. The guard must effectively protect the operator's hand from coming in contact with the revolving knives. The guard must automatically adjust itself to cover the unused portion of the head and must remain in contact with the material at all times.

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

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-635, filed 8/1/17, effective 9/1/17. Statutory Authority: Chapter 49.17 RCW. WSR 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. WSR 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 must 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 must have the knife effectively guarded to prevent the operator's fingers from coming in contact with it.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-640, filed 8/1/17, effective 9/1/17. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. WSR 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, must 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 will a warning device of leather or other material attached to the spindle be acceptable. Cylindrical heads must be used wherever the nature of the work permits. The diameter of circular shaper guards must be not less than the greatest diameter of the cutter.

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

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-645, filed 8/1/17, effective 9/1/17. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. WSR 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 must be provided with safety bit chucks without projecting set screws. Automatic machines must be provided with point of operation guards. When necessary to prevent material from revolving with the bit, clamps or stops must 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, must be applicable to boring and mortising machines.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-650, filed 8/1/17, effective 9/1/17; WSR 04-14-028, § 296-78-650, filed 6/29/04, effective 1/1/05. Statutory Authority: Chapter 49.17 RCW. WSR 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. WSR 81-18-029 (Order 81-21), § 296-78-650, filed 8/27/81.]

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

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

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 must be constructed of metal of a thickness not less than that specified herein.

(3) Feed chains and sprockets of all double end tenoning machines must 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 must 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 must 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, must 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 must be fastened to the lever.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-655, filed 8/1/17, effective 9/1/17. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. WSR 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 must have all cutting heads covered by a solid metal guard.

(2) If sheet metal is used, it must be not less than ten U.S. gauge in thickness. If cast metal is used, it must be not less than three-sixteenths inch thick, or if aluminum is used, it must not be 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 must be constructed of metal of a thickness not less than that specified above.

(3) Pail and barrel lathes must 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, must be applicable to pail and barrel lathes.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-660, filed 8/1/17, effective 9/1/17; WSR 04-14-028, § 296-78-660, filed 6/29/04, effective 1/1/05. Statutory Authority: Chapter 49.17 RCW. WSR 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. WSR 81-18-029 (Order 81-21), § 296-78-660, filed 8/27/81.]

WAC 296-78-665 Sanding machines. (1) Each belt sanding machine must 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 must be enclosed or otherwise guarded from contact by employees.

(2) Each drum sanding machine must 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 must conform to the specifications as given under exhaust systems in WAC 296-78-710.

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

(4) All portable sanding machines must be provided with means of removing excessive dust, or employees using equipment must 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, must be applicable to sanding machines.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-665, filed 8/1/17, effective 9/1/17; WSR 05-20-055, § 296-78-665, filed 10/3/05, effective 12/1/05; WSR 05-03-093, § 296-78-665, filed 1/18/05, effective 3/1/05; WSR 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. WSR 99-10-071, § 296-78-665, filed 5/4/99, effective 9/1/99. Statutory Authority: Chapter 49.17 RCW. WSR 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. WSR 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, must 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 must be enclosed on the in-running side, leaving only sufficient space to insert the stock.

(3) All glue spreaders must 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 must 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 must have water tight floors.

(5) All glue rooms must 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, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-670, filed 8/1/17, effective 9/1/17. Statutory Authority: RCW 49.17.010, [49.17].040, and [49.17].050. WSR 01-11-038, § 296-78-670, filed 5/9/01, effective 9/1/01. Statutory Authority: Chapter 49.17 RCW. WSR 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. WSR 81-18-029 (Order 81-21), § 296-78-670, filed 8/27/81.]

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

(2) Bolters and lath machines must 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 must have all feed rolls, belts, gears and moving parts provided with approved guards. Feed chains must be guarded to as low a point as the maximum height of the stock will permit.

(4) Lath bolters and lath mill saws must 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.

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

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

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

(8) The lath trimmer must 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 must be provided with guards as required by WAC 296-78-710.

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

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-675, filed 8/1/17, effective 9/1/17. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. WSR 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 must not be moved over workers.

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

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

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

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-680, filed 8/1/17, effective 9/1/17. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. WSR 81-18-029 (Order 81-21), § 296-78-680, filed 8/27/81.]

WAC 296-78-685 Veneer lathe. (1) The elevating ramp (gate) must 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 must 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 must 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 must be locked out or must 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 must be provided and used while such blades are being transported about premises.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-685, filed 8/1/17, effective 9/1/17. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. WSR 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 must have all revolving and other moving knives provided with guards.

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

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-690, filed 8/1/17, effective 9/1/17; WSR 04-14-028, § 296-78-690, filed 6/29/04, effective 1/1/05. Statutory Authority: Chapter 49.17 RCW. WSR 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. WSR 81-18-029 (Order 81-21), § 296-78-690, filed 8/27/81.]

WAC 296-78-695 Veneer clipper. (1) Each veneer clipper must have either automatic feed or must be provided with a guard that will make it impossible to place any portion of the hand under the knife while feeding stock. Where practicable, such guard must be of the vertical finger type.

(2) The rear of each manually operated clipper must be guarded either by a screen or vertical finger guard which must make it impossible for any portion of the hand to be placed under the knife while removing clipped stock.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-695, filed 8/1/17, effective 9/1/17. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. WSR 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 must be enclosed, leaving only sufficient space to insert stock. A guard must be provided to prevent the veneer from overriding the top roll and kicking back.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-700, filed 8/1/17, effective 9/1/17. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. WSR 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 will apply only in the manufacturing of shakes and shingles and these requirements will take precedence over other sawmill and woodworking standards.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-705, filed 8/1/17, effective 9/1/17. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. WSR 81-18-029 (Order 81-21), § 296-78-705, filed 8/27/81.]

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

Block(s) and bolt(s). May be considered to be synonymous.

Clipper saw. A circular saw used to trim manufactured shingles.

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

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

Johnson bar. A shaft used to control the feed of the carriage.

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).

Log haul. A power conveyor used to move logs to mill.

Packers. Employees who pack the manufactured shakes or shingles into bundles.

Panagraph power splitter. A hydraulically operated wedge, manually positioned into place, used to split blocks.

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).

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

Shake machine. A band saw used to cut shake blanks into manufactured shakes.

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

Shim saw. A circular saw used to recut manufactured shingles into narrow widths.

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.

Shingle saw. A circular saw used to cut shingles from blocks.

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

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.

Track or swing cutoff saw. A circular saw used to cut blocks from a log.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-70501, filed 8/1/17, effective 9/1/17. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. WSR 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 must be set up, guarded and operated in accordance with chapter 296-806 WAC, Machine safety:

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

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

(iii) 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, must be set up, guarded and operated in accordance with the following:

(i) A power operated track or swing cutoff circular saw must 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 must 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 must 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 must be guarded in accordance with chapter 296-806 WAC, Machine safety.

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

(2) Overhead deck splitter - Panagraph.

(a) Panagraph splitters must have a shroud incorporated on the upper pressure plate to eliminate the possibility of the splitter moving from the operating area. This shroud must 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 must 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 must be two inches.

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

(4) Knee bolter circular saw.

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

(b) Bolter saws must 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 must completely enclose the rear portion of the saw. It must 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 must be provided with wipers of belting or other suitable material. These wipers must 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 must 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 must 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. WSR 17-16-132, § 296-78-70503, filed 8/1/17, effective 9/1/17; WSR 04-14-028, § 296-78-70503, filed 6/29/04, effective 1/1/05. Statutory Authority: Chapter 49.17 RCW. WSR 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. WSR 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 must be provided within ready reach of each shake splitter operator.

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

(c) All splitters must 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 must have a friction surface to reduce kick out of the material being split.

(e) Shake splitters must 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 must be provided with protection to prevent unintended operation from falling or moving objects or by accidental stepping onto the pedal.

(i) The pedal must have a nonslip surface.

(ii) The pedal return spring must 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 must be enclosed.

(2) Shake saw guards.

(a) Every shake band saw must 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 must 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 must be fifteen inches.

(3) Shake saw band wheel guards.

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

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

(4) Shake saw band wheel speeds and maintenance.

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

(b) Each band wheel must 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 must be immediately discontinued from service until properly repaired.

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

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-70505, filed 8/1/17, effective 9/1/17. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. WSR 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 must be equipped with a hand guard which:

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

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

(b) Shingle saw guards must have a rim guard designed and installed to prevent chips and knots from flying from the saws. Such guards must 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 must be guarded to prevent contact.

(d) Every part of a clipper saw blade, except the part which is exposed to trim shingles, must be enclosed by a guard designed and installed to prevent contact with the clipper saw. An additional guard must 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 must be equipped with a finger guard to effectively protect the operator's fingers. The guard must 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, must be guarded where exposed to contact.

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

(3) Carriage feed works.

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

(b) Each shingle machine clutch treadle must 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 must not be installed or used. The carriage must have a brake to hold it in a neutral position.

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

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-70507, filed 8/1/17, effective 9/1/17. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. WSR 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 must 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 must be guarded with a hood-like device. This guard must 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, must 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 must be guarded. All shim stock saw power transmission mechanism must be guarded.

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

(5) Circular saws, speeds and repairs.

(a) Maximum allowable speeds.

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

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

(b) Repairs and reconditions.

(i) Shingle saws, when reduced in size to less than forty inches in diameter, must 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 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-70509, filed 8/1/17, effective 9/1/17. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. WSR 81-18-029 (Order 81-21), § 296-78-70509, filed 8/27/81.]

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

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

(b) Shingle blocks must 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 must 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 must be barricaded.

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

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

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

(2) Jointers (shingle). Shingle jointers must 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 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-70511, filed 8/1/17, effective 9/1/17. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. WSR 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. WSR 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, must 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 must be designed, constructed, and maintained to provide a safety factor of four. This means that all members must 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 must 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 must be equipped with standard safeguards for the protection of workers.

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

(6) Flooring of buildings, ramps, docks, trestles and other structures required to support motive equipment must not be of 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 must be constructed and maintained in accordance with the requirements of WAC 296-24-735, WAC 296-800-270, and in accordance with chapter 296-880 WAC.

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

(c) Where elevated platforms are used, they must 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, and chapter 49.17 RCW. WSR 20-12-091, § 296-78-71001, filed 6/2/20, effective 10/1/20. Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-71001, filed 8/1/17, effective 9/1/17; WSR 06-16-020, § 296-78-71001, filed 7/24/06, effective 12/1/06; WSR 04-18-080, § 296-78-71001, filed 8/31/04, effective 11/1/04; WSR 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. WSR 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. WSR 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, must be protected in accordance with chapter 296-880 WAC.

(2) The area under floor openings must, where practical, be fenced off. When this is not practical, the areas must be plainly marked with yellow lines and telltails must 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 must 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, 49.17.050, 49.17.060, and chapter 49.17 RCW. WSR 20-12-091, § 296-78-71003, filed 6/2/20, effective 10/1/20. Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-71003, filed 8/1/17, effective 9/1/17. Statutory Authority: RCW 49.17.010, [49.17].040, and [49.17].050. WSR 01-11-038, § 296-78-71003, filed 5/9/01, effective 9/1/01. Statutory Authority: Chapter 49.17 RCW. WSR 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. WSR 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 must 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 must 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 must be kept free from unnecessary obstruction and debris.

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

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-71005, filed 8/1/17, effective 9/1/17. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. WSR 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 must be provided with nonslip surfaces.

(2) Walkways in accordance with WAC 296-78-71001(7) must be provided over roll casings, transfer tables, conveyors or other moving parts except when stepping over such equipment is not in connection with usual and necessary traffic.

(3) Walkways alongside of sorting tables must be of sufficient width to provide a safe working area. Such walkways must be evenly floored and kept in good repair at all times. They must 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 must 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, must be provided and used at all times.

(5) Walkways and stairways with standard hand rails must 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 must be provided.

(b) Protection, as required by chapter 296-806 WAC, Machine safety, must 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. WSR 26-15-109 (Order 26-05), s 296-78-71007, filed 7/21/26, effective 8/21/26; WSR 17-16-132, § 296-78-71007, filed 8/1/17, effec-

tive 9/1/17; WSR 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. WSR 81-18-029 (Order 81-21), § 296-78-71007, filed 8/27/81.]

WAC 296-78-71009 Stairways and ladders. (1) Stairways must be used in preference over ladders wherever possible. Stairways or ladders, whichever is used, must 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 must not open directly on a flight of stairs.

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

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

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

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

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-71009, filed 8/1/17, effective 9/1/17; WSR 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. WSR 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. WSR 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 must be provided in accordance with the provisions of WAC 296-800-310.

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

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

(4) At least two fire escapes or substantial outside stairways must 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 must 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 must 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, must be complied with in providing the necessary fire protection for sawmills.

(d) Fire drills must be held at least quarterly and must 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 must be placed to prevent workers from stepping directly into moving traffic.

(6) Tramways and trestles must be substantially supported by piling or framed bent construction, which must be frequently inspected and maintained in good repair at all times. Tramways or trestles used both for vehicular and pedestrian traffic must have a walkway with standard hand rail at the outer edge and shear timber on the inner edge, and must provide three feet clearance to vehicles. When walkways cross over other thoroughfares, they must 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 must have a vertical clearance of twenty-two feet above the top of the rails. When constructed over carrier docks or roads, they must have a vertical clearance of not less than six feet above the drivers foot rest on the carrier, and in no event must this clearance be less than twelve feet from the surface of the lower roadway or dock.

(8) Walkways (either temporary or permanent) must 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 must not be greater than twenty degrees from horizontal.

(9) Walkways from the shore or dock to floats or barges must 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 must 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, and 49.17.060. WSR 17-16-132, § 296-78-71011, filed 8/1/17, effective 9/1/17; WSR 06-01-073, § 296-78-71011, filed 12/20/05, effective 3/1/06; WSR 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. WSR 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. WSR 81-18-029 (Order 81-21), § 296-78-71011, filed 8/27/81.]

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

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

(3) Employees must not ride on or stand below the cars on an inclined cableway.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-71013, filed 8/1/17, effective 9/1/17. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. WSR 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 must 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 must be accessible for inspections. When the tank platform is more than five feet above the ground a stairway or ladder must be permanently attached.

(3) Every open tank over five feet in height must 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, must 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 must 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 must be controlled to protect employees from harmful exposure to toxic materials. Where necessary, employees must be provided with and are required to wear such protective equipment that will afford adequate protection against harmful exposure as required by WAC 296-800-160, and chapter 296-842 WAC, Respirators.

(5) Means must 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.

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

(b) An evacuation plan must be developed and implemented for all employees working in the vicinity of dip tanks using flammable liquids. A copy of the plan must be available at the establishment for inspection at all times. Every employee must 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 must be reviewed with employees at least quarterly and documented.

(c) When automatic foam, automatic carbon dioxide or automatic dry chemical extinguishing systems are used, an alarm device must 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.

(d) The automatic water spray extinguishing systems, automatic foam extinguishing systems, and dip tank covers must 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 must 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 must be provided with, at no cost to the worker, and required to use such protective equipment that 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), must govern sanitation practices.

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

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

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

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

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-71015, filed 8/1/17, effective 9/1/17. Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, 49.17.060 and 29 C.F.R. 1910 Subpart Z. WSR 14-07-086, § 296-78-71015, filed 3/18/14, effective 5/1/14. Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, 49.17.060. WSR 07-05-062, § 296-78-71015, filed 2/20/07, effective 4/1/07; WSR 05-20-055, § 296-78-71015, filed 10/3/05, effective 12/1/05; WSR 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. WSR 02-15-102, § 296-78-71015, filed 7/17/02, effective 10/1/02; WSR 01-11-038, § 296-78-71015, filed 5/9/01, effective 9/1/01. Statutory Authority: Chapter 49.17 RCW. WSR 96-17-056, § 296-78-71015, filed 8/20/96, effective 10/15/96; WSR 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. WSR 81-18-029 (Order 81-21), § 296-78-71015, filed 8/27/81.]

WAC 296-78-71017 Dry kilns. (1) Dry kilns must be constructed upon solid foundations so that tracks will not sag. Dry kilns must be provided with suitable walkways. Each kiln must 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 must be located in or near the main door. Escape doors must swing in the direction of the exit. Kiln doors and door carriers must 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 must be provided to permit access to the roof. Where controls and machinery are mounted on the roof, a permanent stairway with standard handrail must be installed in accordance with the requirements of WAC 296-800-250.

(3) A heated room must be provided for the use of the kiln operator in inclement weather. They 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 must be well ventilated, drained and lighted. Substantial gratings must be installed at the kiln floor line. Steam lines must be provided with insulation wherever exposed to contact by employees. Fans must be enclosed by standard safeguards.

(5) Mechanical equipment. All belts, pulleys, blowers, and other exposed moving equipment used in or about kilns must be guarded 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. WSR 17-16-132, § 296-78-71017, filed 8/1/17, effective 9/1/17; WSR 06-16-020, § 296-78-71017, filed 7/24/06, effective 12/1/06; WSR 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. WSR 01-11-038, § 296-78-71017, filed 5/9/01, effective 9/1/01. Statutory Authority: Chapter 49.17 RCW. WSR 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. WSR 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, must 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 must 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, must 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 must 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 must 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 must be of ample capacity, as evidenced by the performance schedules of the manufacturers, and must be guarded when exposed to contact. Hoods, dust conveyors, dust collectors and other accessary equipment must be large enough to insure free intake and discharge.

(7) The outlet or discharge of all ventilating equipment must be arranged so 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 must be constructed of no less than ten U.S. gauge sheet metal, or if of cast iron it must not be less than three-sixteenths inches in thickness.

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

(10) All exhaust pipes must empty into settling or dust chambers which must effectively prevent the dust or refuse from entering any work area. Such settling or dust chambers must 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, you must furnish approved respiratory and visual equipment: Provided, however, That the exposure to such hazard must not be for more than two hours duration. Protective measures and equipment must meet the requirements of chapter 296-842 WAC, Respirators.

(13) Provisions for the daily removal of refuse must 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, and 49.17.060. WSR 17-16-132, § 296-78-71019, filed 8/1/17, effective 9/1/17; WSR 07-03-163, § 296-78-71019, filed 1/24/07, effective 4/1/07; WSR 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. WSR 01-11-038, § 296-78-71019, filed 5/9/01, effective 9/1/01; WSR 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. WSR 81-18-029 (Order 81-21), § 296-78-71019, filed 8/27/81.]

WAC 296-78-71021 Spray painting. All spray painting operations must 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 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-71021, filed 8/1/17, effective 9/1/17. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. WSR 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, must apply.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-71023, filed 8/1/17, effective 9/1/17. Statutory Authority: RCW 49.17.010, [49.17].040, and [49.17].050. WSR 01-11-038, § 296-78-71023, filed 5/9/01, effective 9/1/01. Statutory Authority: RCW 49.17.040 and 49.17.050. WSR

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. WSR 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 must be installed in accordance with the American National Standard Requirements for Gas Appliances and Gas Piping Installations, Z21.30 - 1964.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-71025, filed 8/1/17, effective 9/1/17. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. WSR 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. WSR 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, must be provided and maintained with approved standard safeguards, irrespective of ownership.

(2) Machines must be located so 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 must 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 must be provided in all work areas and stock or storage rooms.

(5) All metal decking around machinery must 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 must 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 must 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 must 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, must 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 must be located and protected so they cannot be shifted or tripped accidentally.

(10) All power driven machinery must 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 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-71501, filed 8/1/17, effective 9/1/17. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. WSR 81-18-029 (Order 81-21), § 296-78-71501, filed 8/27/81.]

WAC 296-78-71503 Lock out—Tag out. While performing service and maintenance on machines or equipment, including piping systems where employees could be injured by the unexpected energization or startup of the machine or equipment, or the release of stored energy, the requirements of chapter 296-803 WAC, Lockout/tagout (control of hazardous energy) must be followed.

Note: Energy sources include mechanical, hydraulic, pneumatic, chemical, thermal, or other energy, including gravity.

[Statutory Authority: RCW 49.17.010, 49.17.040, and 49.17.050. WSR 15-23-084, § 296-78-71503, filed 11/17/15, effective 12/18/15. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. WSR 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 must 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 must be made to ensure 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 must be served by a ladder or other means of safe access.

(4) Running belts under power on or off pulleys must 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 must be provided with enclosures. Overhead counterweights must 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 must be in accordance with chapter 296-806 WAC, Machine safety.

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

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

(9) Hydraulic systems. Means must 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. WSR 17-16-132, § 296-78-71505, filed 8/1/17, effective 9/1/17; WSR 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. WSR 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 must 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 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-720, filed 8/1/17, effective 9/1/17. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. WSR 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 must be assigned to install, operate, adjust, and maintain laser equipment. Proof of qualification of the laser equipment operator must 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, must be provided with antilaser eye protection devices specified in WAC 296-62-09005, general occupational health standards.

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

(4) Beam shutters or caps must 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 must be turned off or shutters or caps must be utilized.

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

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

(7) The laser equipment must 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., must 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 must be kept out of range of the area of source and target during such weather conditions.

(9) Employees must 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; or

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

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

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

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

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-725, filed 8/1/17, effective

9/1/17. Statutory Authority: Chapter 49.17 RCW. WSR 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. WSR 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 must 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 must be made only by authorized and qualified personnel.

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

(4) Protective equipment. Rubber protective equipment must 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 must be open and must be locked out.

(6) Concealed conductors. Where electrical conductors are known to be concealed, no work must be performed until such conductors are located.

(7) Overload relays. Overload relays must be reset by authorized qualified personnel only.

(8) Passageways to panels. Passageways to switch centers or panels must be kept free from obstruction at all times. Not less than three feet of clear space must be maintained in front of switch centers or panels at all times.

(9) Bridging fuses. Fuses must not be doubled or bridged.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-730, filed 8/1/17, effective 9/1/17; WSR 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. WSR 01-11-038, § 296-78-730, filed 5/9/01, effective 9/1/01. Statutory Authority: Chapter 49.17 RCW. WSR 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. WSR 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 must 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, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-735, filed 8/1/17, effective 9/1/17. Statutory Authority: RCW 49.17.010, [49.17].040, and [49.17].050. WSR 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. WSR 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 must 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 must be placed on every crane and hoist showing the maximum allowable load in pounds or tons. This notice must be placed in such a manner as to be clearly legible from the floor.

(3) Cranes must be of what is known as "all steel construction." No cast iron will be used in parts subject to tension except in drums, trolley sides, bearings, brackets and brake shoes.

(4) The construction of cranes must be such that all parts may be safely lubricated and inspected when cranes are not in operation.

(5) Bolts subject to stress must be of the through type and all bolts must be equipped with approved protection so that the bolt will not work loose or nuts work off.

(6) Outside crane cages must be enclosed. There must be windows on three sides of the cage and windows in the front, and the side opposite the door must 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 must 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 must be constructed of metal.

(8) All gears on cranes must be provided with standard guards.

(9) Keys projecting from revolving shafts must be guarded.

(10) A braking apparatus must be provided on every type of crane and must 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 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-740, filed 8/1/17, effective 9/1/17. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. WSR 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 must be isolated, insulated, or guarded so that no employee can come in contact with them. Exposed parts less than 300 volts must be protected in some suitable way against possible accidental contact. Exposed metallic parts of conduit armored cable or molding must 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 must 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, must be isolated or guarded

so 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 must 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 must be provided with an effective protective ground, where operated in the vicinity of supply lines.

(6) Readily accessible means must 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 must be provided to prevent the starting and operation of equipment by unauthorized persons.

(8) The control levers of traveling cranes must be located so that the operator can readily face the direction of travel.

(9) A hoist limiting device must be provided for each hoist.

(10) All fuses must be of the enclosed arcless type.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-745, filed 8/1/17, effective 9/1/17. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. WSR 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 must 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.

(b) Work by qualified persons. Installation, inspection, maintenance, repair, and testing of ropes, cables, slings, and chains must be done only by persons qualified to do such work.

(c) Proof testing. You must ensure that before use, each new, repaired, or reconditioned alloy steel chain sling, including all welded components in the sling assembly, is 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). You must retain the certificate of the proof test and must 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 must not be used in excess of the rated capacity of the weakest component.

(d) Slings and their fittings and fastenings, when in use, must be inspected daily for evidence of overloading, excessive wear, or damage. Slings found to be defective must be removed from service.

(2) Proper storage must be provided for slings while not in use.

(3) Protection must be provided between the sling and sharp unyielding surfaces of the load to be lifted.

(4) Hooks. No open hook must 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 must be inspected when installed and once each day thereafter, when in use. It must 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 must 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 must be discontinued.

(6) Wire rope removed from service due to defects must 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 must be such that the rope will adjust itself to the bend without excessive wear, deformation, or injury. In no case must 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 must be smooth and free from surface defects liable to injure rope. Drums, sheaves, or pulleys having eccentric bores or cracked hubs, spokes, or flanges must be removed from service.

(9) Connections, fittings, fastenings, and other parts used in connection with ropes and cables must be of the quality, size and strength recommended by the manufacturer for the use intended. These connections must be installed in accordance with the manufacturer's recommendations.

(10) Socketing, splicing, and seizing.

(a) Socketing, splicing, and seizing of cables must be performed only by qualified persons.

(b) All eye splices must be made in a manner recommended by the manufacturer and wire rope thimbles of proper size must be fitted in the eye, except that in slings the use of thimbles will be optional.

(11) Wire rope clips attached with U-bolts must have these bolts on the dead or short end of the rope. The U-bolt nuts must be retightened immediately after initial load carrying use and at frequent intervals thereafter. The number and spacing of clips must 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 must 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 must be removed from service.

(12) Running lines. Running lines of hoisting equipment located within six feet six inches of the ground or working level must be boxed off or otherwise guarded, or the operating area must be restricted.

(13) Preventing abrasion. The reeving of a rope must be so arranged as to minimize chafing or abrading while in use.

(14) Sheave guards. Bottom sheaves must be protected by close fitting guards to prevent cable from jumping the sheave.

(15) There must not be 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 must have a flange at each end to prevent the cables from slipping off the drum.

(17) Chains used in load carrying service must 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 must be discarded.

(18) Chains must 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 must be done in properly equipped annealing furnaces and under the direct supervision of a competent person thoroughly versed in heat treating.

Chains must be normalized or annealed periodically as recommended by the manufacturer.

(20) Fiber rope.

(a) Frozen fiber rope must not be used in load carrying service.

(b) Fiber rope that has been subjected to acid must not be used for load carrying purposes.

(c) Fiber rope must be protected from abrasion by padding where it is fastened or drawn over square corners or sharp or rough surfaces.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-750, filed 8/1/17, effective 9/1/17. Statutory Authority: Chapter 49.17 RCW. WSR 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. WSR 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 must 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 must 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 must be followed.

(3) Splicing. Spliced fiber rope slings must 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 must consist of at least three full tucks, and short splices must consist of at least six full tucks, three on each side of the splice center line.

(b) In synthetic fiber rope, eye splices must consist of at least four full tucks, and short splices must consist of at least eight full tucks, four on each side of the center line.

(c) Strand end tails must 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 must project at least six rope diameters beyond the last full tuck. For fiber rope one inch in diameter and larger, the tail must project at least six inches beyond the last full tuck. Where a projecting tail interferes with the use of the sling, the tail must 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 must have a minimum clear length of rope between eye splices equal to ten times the rope diameter.

(e) Knots must not be used in lieu of splices.

(f) Clamps not designed specifically for fiber ropes must not be used for splicing.

(g) For all eye splices, the eye must 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 must 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 must 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 must be used. Use of repaired or reconditioned fiber rope slings is prohibited.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-755, filed 8/1/17, effective 9/1/17. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. WSR 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 must be marked or coded to show the rated capacities for each type of hitch and type of synthetic web material.

(2) Webbing. Synthetic webbing must be of uniform thickness and width and selvage edges must not be split from the webbing's width.

(3) Fittings must 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 must be the only method used to attach end fittings to webbing and to form eyes. The thread must 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 must 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 must be used only in accordance with the manufacturer's recommendations.

(6) Environmental conditions. When synthetic web slings are used, the following precautions must be taken:

(a) Nylon web slings must not be used where fumes, vapors, sprays, mists or liquids of acids or phenolics are present.

(b) Polyester and polypropylene web slings must not be used where fumes, vapors, sprays, mists or liquids of caustics are present.

(c) Web slings with aluminum fittings must 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 must not be used at temperatures in excess of 180°F. Polypropylene web slings must not be used at temperatures in excess of 200°F.

(8) Repairs.

(a) Synthetic web slings which are repaired must not be used unless repaired by a sling manufacturer or an equivalent entity.

(b) Each repaired sling must be proof tested by the manufacturer or equivalent entity to twice the rated capacity prior to its return to service. You must 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 must not be used.

(9) Removal from service. Synthetic web slings must 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 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-760, filed 8/1/17, effective 9/1/17. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. WSR 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 must 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, must automatically return to the "off" position when released by the operator.

(3) Pushbuttons in pendant stations must be returned to the "off" position when pressure is released by the crane operator.

(4) All pushbuttons must be marked to indicate their purpose.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-765, filed 8/1/17, effective 9/1/17. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. WSR 81-18-029 (Order 81-21), § 296-78-765, filed 8/27/81.]

WAC 296-78-770 Operators. (1) Cranes must 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 will be permitted to operate a crane.

(3) Operators will be required to pass a practical examination limited to the specific type of equipment to be operated. Operators must 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 must be cause for a doctor decision to determine qualifications to operate a crane.

(4) Hands must be kept free when going up and down ladders. Articles which are too large to go into pockets or belts must be lifted to or lowered from the crane by hand line. (Except where stairways are provided.)

(5) Cages must be kept free of clothing and other personal belongings. Tools, extra fuses, oil cans, waste and other articles necessary in the crane cage must be stored in a tool box and not left loose on or about the crane.

(6) The operator(s) must familiarize themselves fully with all crane rules and with the crane mechanism and its proper care. If adjustments or repairs are necessary, they must report the same at once to the proper authority.

(7) The operator must not eat, smoke or read while actually engaged in the operation of the crane.

(8) The operator or someone especially designated must lubricate all working parts of the crane.

(9) Cranes must be examined for loose parts or defects each day on which they are in use.

(10) Sawdust, oil or other debris must not be allowed to accumulate to create a fire, health or slipping hazard.

(11) Operators must avoid, as far as possible, carrying loads over workers. Loads must not be carried over employees without sounding an audible warning alarm.

(12) Whenever the operator finds the main or emergency switch open, they must not close it, even when starting on regular duty, until they have made sure that no one is on or about the crane. They must not oil or repair the crane unless the main switch is open.

(13) If the power goes off, the operator must immediately throw all controllers to the "off" position until the power is again available.

(14) Before closing the main switch the operator must make sure that all controllers are in the "off" position until the power is again available.

(15) The operator must pay special attention to the block, when long hitches are made, to avoid tripping the limit switch.

(16) The operator must recognize signals only from the person who is supervising the lift except for emergency stop signals. Operating signals must 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 must have audible warning device which must be sounded in event of emergency.

(17) Before starting to hoist, the operator must place the trolley directly over the load to avoid swinging it when being hoisted.

(18) The operator must 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 must test the hoist brakes after the load has been lifted a few inches. If the brakes do not hold, the load must be lowered at once and the brakes adjusted or repaired.

(20) Bumping into runway stops or other cranes must be avoided. When the operator is ordered to engage with or push other cranes, they must do so with special care for the safety of persons on or below cranes.

(21) When lowering a load, the operator must proceed carefully and make sure they have the load under safe control.

(22) When leaving the cage, the operator must throw all controllers to the "off" position and open the main switch.

(23) If the crane is located out of doors, the operator must 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 must not be pulled along the tracks with sidepulls on an overhead crane.

(25) Operators must not move the crane or a load unless floor signals are clearly understood.

(26) The rated lifting capacity of a crane must 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 must determine that the

load is within the rated capacity of the crane or the load must not be lifted.

(27) Crane operators and floorpersons must coordinate their activities on every lift or movement of the crane. Both the operator and signalperson must clearly understand any problem a movement might create with regard to surrounding materials, structures, equipment or personnel.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-770, filed 8/1/17, effective 9/1/17. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. WSR 81-18-029 (Order 81-21), § 296-78-770, filed 8/27/81.]

WAC 296-78-775 Signalpersons. (1) Signalpersons must 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 must 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 must be placed on the hook.

(4) Signalpersons, where necessary, must walk ahead of the moving load and warn people to keep clear of it. They must see that the load is carried high enough to clear all obstructions.

(5) Signalpersons must notify the person in charge in advance when an extra heavy load is to be handled.

(6) No person will be permitted to stand or pass under an electric magnet in use.

(7) The electrical circuit for electric magnets must be maintained in good condition. Means for taking up the slack cable must be provided.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-775, filed 8/1/17, effective 9/1/17. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. WSR 81-18-029 (Order 81-21), § 296-78-775, filed 8/27/81.]

WAC 296-78-780 Repairpersons. (1) When repairs are necessary, repairpersons must 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 must see that all controllers are thrown to the "off" position, and that main or emergency switches are opened; one of these must be locked out in compliance with WAC 296-78-715(11) of this chapter.

(3) Repairpersons must 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 must also place rail stops at a safe distance or make other safe provisions.

(4) When repairing runways, repairpersons must place rail stops and warning signs or signals so as to protect both ends of the section to be repaired.

(5) Repairpersons must take care to prevent loose parts from falling or being thrown upon the floor beneath.

(6) Repairs will 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 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-780, filed 8/1/17, effective 9/1/17. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. WSR 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 must be based on not less than 30 pounds per square foot of exposed surface.

(2) No overhung gears must be used unless provided with an effective means of keeping them in place, and keys must be secured to prevent gears working loose.

(3) Safety lugs or brackets must 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.

(4) 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 must be provided.

(5) Outside overhead traveling cranes must be equipped with wind indicators and rail clamps as required by the general safety and health standards, WAC 296-24-23503.

(6) Foot brakes, or other effective means must be provided to control the bridge travel of all overhead traveling cranes.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-785, filed 8/1/17, effective 9/1/17. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. WSR 81-18-029 (Order 81-21), § 296-78-785, filed 8/27/81.]

WAC 296-78-790 Crane platforms and footwalks. (1) Platforms must be provided when changing and repairing truck wheels on end trucks.

(2) A platform or footwalk must be located on a crane or crane runway to give access to the crane cage, and it must be accessible from one or more stairways or fixed ladders. This platform or footwalk must be not less than eighteen inches in width.

(3) Where stairways are used to give access to platforms, they must make an angle of not more than fifty degrees with the horizontal and must be equipped with substantial railing. If ladders are used to give access to platforms they must 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 must be located at either or both ends.

(4) A footwalk must 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 must there be less than four

feet clearance. For hand operated cranes the footwalk must not be required to be installed on the bridge of the crane, but there must 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 must not be less than eighteen inches except around the bridge motor where it may be reduced to fifteen inches.

(6) Footwalks must be of substantial construction and rigidly braced. Footwalks for outside service must be constructed so as to provide proper drainage, but the cracks between the boards must not be wider than one-fourth inch.

(7) Every footwalk must have a standard railing and toeboard at all exposed edges. Railings and toeboards must conform in construction and design with the following requirements:

(a) Railings must 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 must 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 must be at least equal in strength to that of one and one-half by three-sixteenths inch angle and must be supported by uprights of equal strength.

(d) Posts or uprights must be spaced not more than eight feet center to center.

(e) Toeboards must be not less than four inches in height.

(f) Toeboards must be constructed in a permanent and substantial manner of metal, wood, or other material equivalent thereto in strength. Where of wood, toeboards must 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 must be permitted between the bridge footwalk and the crane girders. Where wire mesh is used to fill this opening the mesh openings must not be greater than one-half inch.

(9) All footwalks and platforms must be designed to be capable of sustaining a concentrated load of one hundred pounds per lineal foot.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-790, filed 8/1/17, effective 9/1/17. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. WSR 81-18-029 (Order 81-21), § 296-78-790, filed 8/27/81.]

WAC 296-78-795 Crane cages. (1) Safe means of escape must be provided for operators of all cranes in all operating locations. Rope ladders must 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 must be located at a place from which signals can be clearly distinguishable, and must be securely fastened in a place and well braced to minimize vibration. It must be large enough to allow ample room for the control equipment and the operator.

The operator must not be required to step over an open space of more than eighteen inches when entering the cage.

(3) Cab operated cranes must 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 must be installed on cranes or one or more employees must 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 must be of noncombustible construction and must 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 must be enclosed. There must be windows on three sides of the cage. The windows in the front and the side opposite the door must be the full width of the cage.

(7) The floor of the cage on outdoor cranes must be extended to form an entrance landing which must 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 must be permanently posted in the cages of all cage-operated cranes.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-795, filed 8/1/17, effective 9/1/17. Statutory Authority: RCW 49.17.010, [49.17].040, and [49.17].050. WSR 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. WSR 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 must 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 must be provided to prevent collision of trolleys.

(2) Bumpers and rail stops must extend at least as high as the centers of the wheel.

(3) Rail stops must 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 must not be used as permanent rail stops.

(4) Rail stops must be built up of plates and angles or be made of cast steel.

(5) Fenders must be installed which extend below the lowest point of the treads of gantry type crane wheels. They must 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: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-800, filed 8/1/17, effective 9/1/17. Statutory Authority: Chapter 49.17 RCW. WSR 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. WSR 81-18-029 (Order 81-21), § 296-78-800, filed 8/27/81.]

WAC 296-78-805 Crawler locomotive and truck cranes. Crawler locomotives and truck cranes must 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 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-805, filed 8/1/17, effective 9/1/17. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. WSR 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 must be of what is known as "all steel construction." No cast iron must be used in parts subject to tension except drums, bearings or brake shoes.

(2) The chains must be made of the best quality steel or iron with welded links.

(3) Chain and electric hoists must have a factor of safety of at least five.

(4) Chain and electric hoists must be equipped with a device which will automatically lock the load when hoisting is stopped.

(5) Electric hoists must 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 must not ride the load of any chain or electric hoist. If necessary to balance the load manually, it must be done from a safe distance.

(7) The rated capacity of the hoist must be posted on both the hoist and the jib or rail.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-810, filed 8/1/17, effective 9/1/17. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. WSR 81-18-029 (Order 81-21), § 296-78-810, filed 8/27/81.]

WAC 296-78-815 Monorail hoists. (1) No attempt must be made with a monorail hoist to lift or move an object by a side pull, unless designed for that purpose.

(2) A stop must 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 must be equipped with one or more safety catches which will support the load should a suspension pin fail. All trolley frames must be safeguarded against spreading.

(4) Rail stops must be provided at the ends of crane runways. Such rail stops must extend at least as high as the centers of the wheels.

(5) All monorail hoists must have the rated capacity posted on both the hoist and the rail.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-815, filed 8/1/17, effective 9/1/17. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. WSR 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 rods to drop when supporting a load, lock nuts must be secured to piston rods by a castellated nut and cotter-pin.

(2) A clevis, "D" strap or other means must be used to prevent the hoist cylinder becoming detached from the hanger.

(3) All air hoists must have their rated capacity posted on both the hoist and the jib or rail.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-820, filed 8/1/17, effective 9/1/17. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. WSR 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 must not be made with jib or pillar cranes. The arm or boom must be directly over the load when making a lift.

(2) The gears of all cranes must be enclosed, and if hand operated by means of a crab or winch, a locking dog must be provided to hold load when the handle is released.

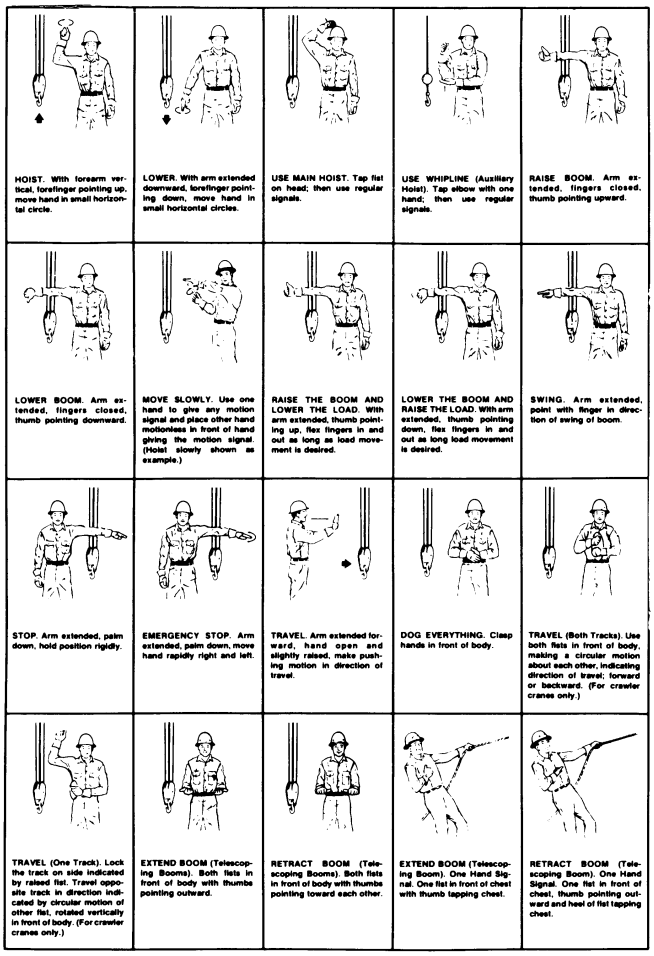
(3) Some form of brake or safety lowering device must be provided on all crabs, winches, and jib cranes.

(4) A hoist limiting device must be provided on all jib cranes of ten or more tons capacity.

(5) The rated capacity of the hoisting device must be posted on the hoist and the arm or boom.

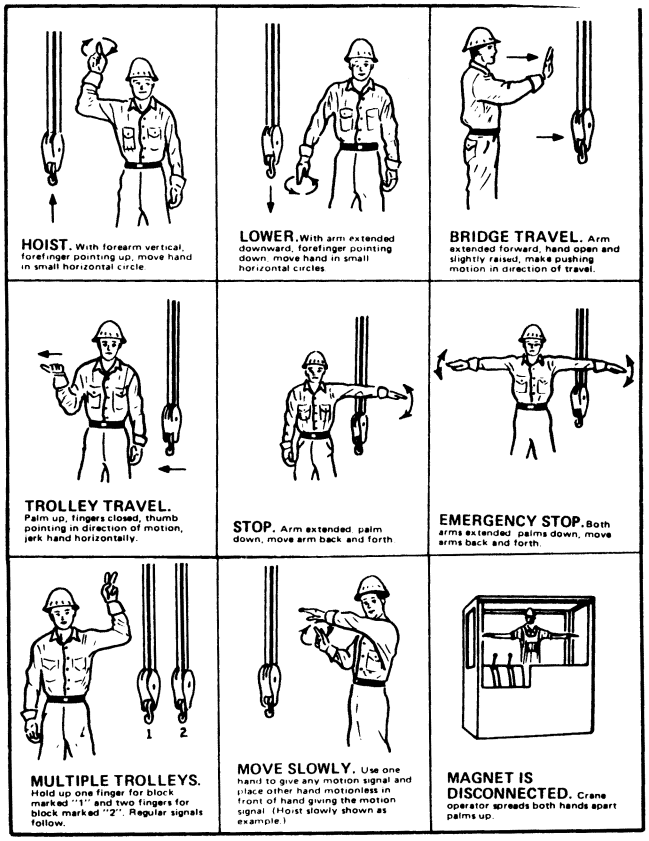
[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-825, filed 8/1/17, effective 9/1/17. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. WSR 81-18-029 (Order 81-21), § 296-78-825, filed 8/27/81.]

WAC 296-78-830 Standard crane hand signals—Illustrations. (1) The following hand signals must be used for crawler, locomotive, and truck cranes and a copy must be posted in the cab at the operator's station.



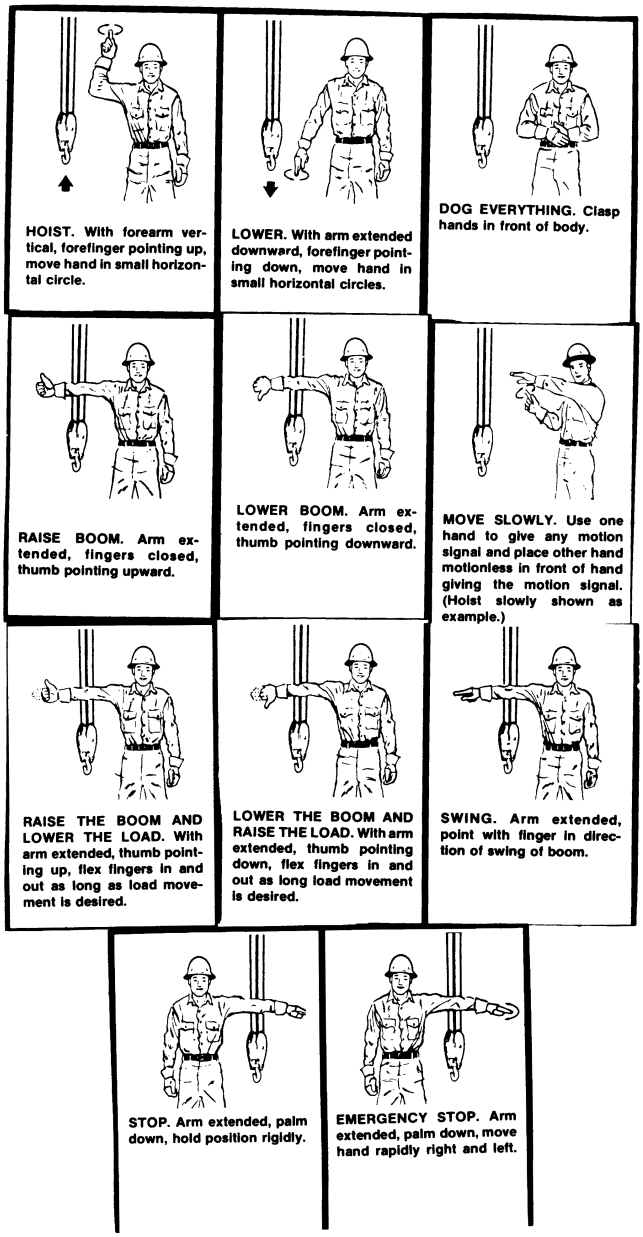
(2) The following hand signals must be used for overhead and gantry cranes and a copy must be posted in the cab at the operator's station.

STANDARD HAND SIGNALS FOR CONTROLLING OVERHEAD AND GANTRY CRANES



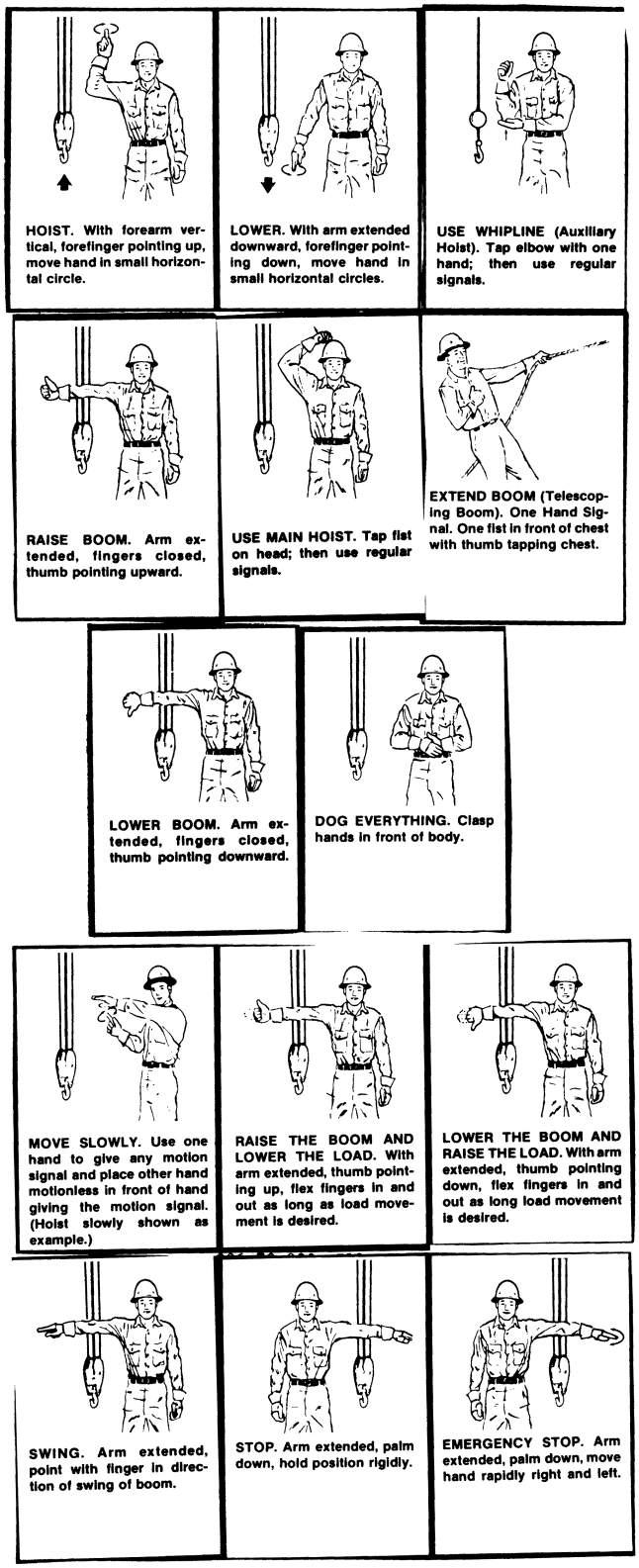
(3) The following hand signals must be used for derricks and a copy must be posted in the cab at the operator's station.

STANDARD HAND SIGNALS FOR CONTROLLING DERRICKS



(4) The following hand signals must be used for portal, tower, and pillar cranes and a copy must be posted in the cab at the operator's station.

STANDARD HAND SIGNALS FOR CONTROLLING PORTAL, TOWER AND PILLAR CRANES



[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-830, filed 8/1/17, effective

9/1/17. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. WSR 81-18-029 (Order 81-21), § 296-78-830, filed 8/27/81.]

WAC 296-78-835 Vehicles. (1) Vehicles.

(a) Scope. Vehicles must include all mobile equipment normally used in sawmill, planing mill, storage, shipping, and yard operations, including log sorting yards.

(b) Lift trucks must be designed, constructed, maintained and operated in accordance with the requirements of chapter 296-863 WAC, Forklifts and other powered industrial trucks.

(c) Carriers. Drive chains on lumber carriers must be adequately guarded to prevent contact at the pinch points.

(d) Lumber carriers must be designed and constructed so that the operator's field of vision will not be unnecessarily restricted.

(e) Carriers must be provided with ladders or equivalent means of access to the operator's platform or cab.

(f) Lumber hauling trucks.

On trucks where the normal operating position is ahead of the load in the direction of travel, the cab must be protected by a barrier at least as high as the cab. The barrier must 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 must be constructed in such a manner that individual pieces of a normal load will not go through openings in the barrier.

(i) Stakes, stake pockets, racks, tighteners, and binders must provide a positive means to secure the load against any movement during transit.

(ii) Where rollers are used, at least two must be equipped with locks which shall be locked when supporting loads during transit.

(2) Warning signals and spark arrestors. All vehicles must be equipped with audible warning signals and where practicable must have spark arrestors.

(3) Flywheels, gears, sprockets and chains and other exposed parts that constitute a hazard to workers must be enclosed in standard guards.

(4) All vehicles operated after dark or in any area of reduced visibility must 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 must 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 must 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 must be provided and so arranged as not to hinder the exit of the driver.

(7) Trucks, lift trucks and carriers must 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 must be limited to a speed of not more than twelve miles per hour. When approaching blind corners they must be limited to four miles per hour.

(8) Vehicles must 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 must be plainly posted.

(b) Restricted overhead clearance. All areas of restricted side or overhead clearance must 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, must be plainly marked and wheel stops provided where necessary.

(d) Aisles, passageways, and roadways must 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, they must 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 must be operated with loads exceeding its safe load capacity.

(12) Vehicles with internal combustion engines must 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 must not be refueled while motor is running. Smoking or open flames must not be allowed in the refueling area.

(14) No employee other than trained operators or mechanics must start the motor of, or operate any log or lumber handling vehicle.

(15) All vehicles must 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 must 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, must 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 must 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 must be installed and used.

(e) A-frames and similar log unloading devices must 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 must be equipped with overhead protection.

(g) Unloading devices must be equipped with a horn or other plainly audible signaling device.

(h) Movement of unloading equipment must 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 must 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 must be of the automatic retracting type or must be built into the wheel in such a manner as not to extend above the plane surface of the wheel. Vehicles equipped with positive antikickback steering are exempted from this requirement.

(18) Mechanical stackers and unstackers must 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 must be properly identified and so located as to be readily accessible to the operator. Main control switches must be designed so they can be locked in the open position.

(20) Employees must not stand or walk under loads being lifted or moved. Means must be provided to positively block the hoisting platform when employees must go beneath the stacker or unstacker hoist.

(21) No person must ride any lift truck or lumber carrier unless a suitable seat is provided, except for training purposes.

(22) Unstacking machines must be provided with a stopping device which must be accessible at all times to at least one employee working on the machine.

(23) Floor of the unstacker must be kept free of broken stickers and other debris. A bin or frame must be provided to allow for an orderly storage of stickers.

(24) Drags or other approved devices must be provided to prevent lumber from running down on graders.

(25) Liquified petroleum gas storage and handling. Storage and handling of liquified petroleum gas must 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 must 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 must 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 must be guarded.

(29) Guarding lower landing area. The lower landing area of stackers and unstackers must 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 must be provided.

(30) Lumber lifting devices on all stackers must 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 must inspect the equipment they will use for evidence of failure or incipient failure. Equipment found to have defects which might affect the operating safety must not be used until the defects are corrected.

(32) Cleaning pits. Safe means of entrance and exit must 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 must be erected to prevent entry into the hazardous area.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 18-04-096, § 296-78-835, filed 2/6/18, effective 3/9/18; WSR 17-16-132, § 296-78-835, filed 8/1/17, effective 9/1/17; WSR 07-03-163, § 296-78-835, filed 1/24/07, effective 4/1/07; WSR 06-05-027, § 296-78-835, filed 2/7/06, effective 4/1/06; WSR 03-06-076, § 296-78-835, filed 3/4/03, effective 8/1/03. Statutory Authority: Chapter 49.17 RCW. WSR 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. WSR 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. WSR 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 must be provided with at least one set of stickers for each eighteen inches in height of unit or load. One set of stickers must 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 must be placed under the top layer. Stickers must extend the full width of the package, must be uniformly spaced, and must be aligned one above the other. Stickers may be lapped with a minimum overlapping of twelve inches. Stickers must not protrude more than two inches beyond the sides of the package.

(2) Lumber loading. Loads must be built and secured to insure stability in transit.

(3) Units or loads of lumber must 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 must not exceed three percent. The movement of units must be under control at all times.

(5) Stacking of lumber in yards, either by units or in block piles, must be conducted in a safe and orderly manner.

(6) Foundations for piling lumber in yards must be capable of supporting the maximum applied load without tipping or sagging.

(7) The height of stacked units in storage areas must not exceed seven of the usual four foot units, subject to the following qualifications:

(a) Units of lumber must not be stacked more than four high unless two or more stacks of units are tied together with ties.

(b) Long units of lumber must 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 must be placed between each package directly over the stickers.

(8) Wooden horses used for loading preformed loads of lumber must 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 must be immediately made stable or removed.

(10) Lift boards or pallets must be loaded in such a manner as to prevent material from spilling or the material must be secured with a binder.

(11) Packing rooms must be kept free of debris and chutes must be equipped with a means of slowing down the materials.

(12) Sorting chains must be provided with a stopping device which must be readily accessible at all times 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 must be provided for removing heavy dimension lumber from the cabin or table.

(15) Roll casings and transfer tables must be cleaned regularly and kept reasonably free from debris.

(16) In all permanent installations, green chains and sorting tables must be roofed over to provide protection from inclement weather. Normal work stations must be provided with a drained work surface which is evenly floored of nonslip material.

(17) Power driven rolls must be operated in a manner to prevent end collisions.

(18) The space between live rolls must 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 must be guarded wherever exposed to contact.

(20) Live rolls must be replaced when their surface develops a break or hole.

(21) Guarding. Spiked live rolls must be guarded.

(22) Ramps or skidways used to transfer lumber or materials from one level to another must 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 must be provided with a solid bumper not less than six inches in height at the outer edge. Such landing must be maintained in good repair at all times.

(24) Ramps or skidways must be arranged so that the person putting lumber down has a clear view of the lower landing. Lumber or timbers must not be put down until all workers are in the clear.

(25) The under face of all ramp or skidway landings must be fenced off or other positive means provided to prevent persons from walking out under dropping timber.

(26) Return strands of sorting table ramp chains must be supported by troughs of sufficient strength to support the weight of a broken chain.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-84001, filed 8/1/17, effective 9/1/17. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. WSR 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 must 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 must be of ample dimension and strength to carry a broken chain and must afford effective protection to all employees.

(3) When the return strand of a conveyor operates within seven feet of the floor there must be a trough provided of sufficient 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 must be placed under them as they 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 must 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 must use a safety line which must be securely fastened to his body and tended by a helper.

(7) Conveyors must be provided with an emergency panic-type stopping device which can be reached by a person in a sitting position on the conveyor. Such devices must 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 must 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 must be equipped with covers. If it is not practical to cover the troughs or boxes, other equivalent type guards must be provided.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-84003, filed 8/1/17, effective 9/1/17. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. WSR 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 must be properly maintained at all times and must have a grade of not more than one and one-fourth percent. Bumpers or stops must be installed at the ends of all tracks capable of stopping a normal load for which the track is installed. A means must be provided for chocking or blocking cars.

(2) Doors.

(a) Main kiln doors must be provided with a method of holding them open while kiln is being loaded.

(b) Counterweights on vertical lift doors must be boxed or otherwise guarded.

(c) Means must 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 must 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, must be complied with.

(4) Kiln loads must be equipped or arranged for easy attachment and detachment of transfer cables. Means for stopping kiln cars must be available at all times.

(5) Cars must 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, an audible warning must be given.

(7) Stickers must not be allowed to protrude more than two inches from the sides of kiln stacks.

(8) Yards and storage areas must be kept reasonably free of debris and unnecessary obstruction. Warning signs must be conspicuously posted wherever there is danger from moving vehicles or equipment.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-84005, filed 8/1/17, effective 9/1/17; WSR 05-20-055, § 296-78-84005, filed 10/3/05, effective 12/1/05; WSR 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. WSR 01-11-038, § 296-78-84005, filed 5/9/01, effective 9/1/01. Statutory Authority: Chapter 49.17 RCW. WSR 96-17-056, § 296-78-84005, filed 8/20/96, effective 10/15/96; WSR 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. WSR 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 must be arranged so the operator does not stand in direct line with the chipper spout (hopper). The chipper spout must 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 must be worn by workers when working at or near the spout unless the spout is guarded. The lifeline must be short enough to prevent workers from falling into the chipper.

(2) Hog mills must be provided with feed chutes designed and arranged so that from no position on the rim of the chute will the distance to the knives or feed roll be less than forty inches. Baffles must be provided which must effectively prevent material from being thrown from the mill.

(3) Employees feeding hog mills must be provided with safety belts and lines, which they are required to use at all times, unless otherwise protected from any possibility of falling into the mill.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-84007, filed 8/1/17, effective 9/1/17. Statutory Authority: Chapter 49.17 RCW. WSR 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. WSR 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 must 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 must be provided with doors that may be remotely operated.

(3) Fuel hoppers must be provided with platforms with standard railings and adequately lighted for the protection of workers taking out fuel.

(4) Fuel bins must 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 must enter any fuel bin except where adequately safeguarded.

(a) 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 must be determined by a duly authorized representative of the department of labor and industries, division of industrial safety and health.

(b) During operations when the flow of normal fuel is interrupted but dust from operating sanders is received in the bin, workers must not enter the fuel bin until the flow of sander dust has been discontinued and the dust has settled.

(c) 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 must be installed along each side of the runway, and a substantial bumper stop provided when necessary.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-84009, filed 8/1/17, effective 9/1/17. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. WSR 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, must be adequately guyed. Buckle guys must be installed if a burner or stack is more than fifty feet in height.

(2) Runway. The conveyor runway to the burner must be equipped with a standard handrail. If the runway crosses a roadway or thoroughfare, standard toeboards must be provided in addition.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-84011, filed 8/1/17, effective 9/1/17. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. WSR 81-18-029 (Order 81-21), § 296-78-84011, filed 8/27/81.]