

WAC 296-155-54300 Derricks—General. (1) This section contains supplemental requirements for derricks, whether temporarily or permanently mounted. All sections of this part apply to derricks unless specified otherwise. A derrick is powered equipment consisting of a mast or equivalent member that is held at, or near, the end by guys or braces, with or without a boom, and its hoisting mechanism. The mast/equivalent member and/or the load is moved by the hoisting mechanism (typically base-mounted) and operating ropes. Derricks include: A-frame, basket, breast, Chicago boom, gin pole (except gin poles used for erection of communication towers), guy, shearleg, stiffleg, and variations of such equipment.

(2) All derricks in use must meet the applicable requirements for design, construction, installation, inspection, testing, maintenance, and operation as prescribed in ANSI B30.6-2010, Safety Standard for Derricks. It is not the intent of this rule to require retrofitting of existing derricks. However, when an item is being modified, its performance needs to be reviewed by a qualified person and compared to the applicable sections of this rule. For modification requirements, see WAC 296-155-53400 (57) and (58). For derricks manufactured prior to the effective date of this rule, the design and construction criteria must meet, at a minimum, the ASME B30.6 standard effective the year of manufacture of the derrick.

(3) Derricks must be constructed to meet all stresses imposed on members and components when installed, and operated in accordance with the manufacturer's/builder's procedures and within its rated capacity.

(4) The employer must follow the manufacturer's recommendations when assembly, disassembly, reconfiguring, operating, and performing maintenance on derricks. If the manufacturer's recommendations are not available, follow the requirements in ASME B30.6-2020.

(5) When derricks are assembled/disassembled, written instructions by the manufacturer or qualified person and a list of the weights of each subassembly to be assembled/disassembled must be at the site.

(6) The employer must establish procedures before beginning derrick assembly, disassembly, or reconfiguration work to implement the instructions and adapt them to the particular needs of the site.

(7) An A/D director must supervise the assembly, disassembly, or reconfiguration of the derrick.

(8) Derricks and their crane assembly parts/components must be inspected by an accredited certifier, prior to assembly and following assembly of the derrick before placing the crane in service (see WAC 296-155-53212). Only inspected and preapproved components are allowed to be used in the assembly of a derrick.

(9) Prior to erecting a derrick on a nonstandard base/structural support, the employer must ensure that the engineering configuration of this base/structural support has been reviewed and acknowledged as acceptable by an independent RPSE, licensed under chapter 18.43 RCW.

(10) An RPSE must certify that the derrick foundation, structural supports, and underlying soil provide adequate support for the derrick with its applied torsional and overturning moments, and the horizontal and vertical forces.

(11) Derricks must be attached to bases/structural supports in compliance with the manufacturer's or an RPSE's instructions.

(12) Prior to installing a derrick that will be attached to an existing building, new construction, or structure, an RPSE must certify that the structural attachments to the building are designed to

withstand the torsional and overturning moments, and the horizontal and vertical forces created by the derrick to be installed.

(13) The employer must consult the engineer of record to verify that the host structure is capable of safely resisting the applied derrick forces. If this engineer is not available, an RPSE must perform this verification.

(14) Derrick superstructures and machine deck (counterweight jib/counter-jibs) must be arranged to receive counterweights, made in accordance with the manufacturer's specifications, for the specified jib or boom length, and to hold them in position. The employer must provide means to guard against shifting or dislodgement during derrick operation. Manufacturer's specified counterweight weights are not to be exceeded.

(15) For derricks utilizing ballast, bases must include provisions to support and position the ballast. The employer must provide means to guard against shifting or dislodgement of ballast during derrick operation.

(16) All electrical equipment must be properly grounded, and protection must be provided against lightning, per the manufacturer's recommendations, or if not available, a registered professional electrical engineer (RPEE) recommendations.

(17) Each electrically-powered derrick must have a main disconnect switch at, or near, the initial base of the derrick. This switch must have provisions for locking in the "off" position.

(18) The employer must locate or guard electrical equipment so that live parts are not exposed to inadvertent contact by personnel and equipment under normal operating conditions.

(19) The employer must protect electrical equipment from dirt, grease, oil, and moisture. Fixtures, wiring, and connections exposed to the weather must be of weather resistant type.

(20) Wiring must conform to the provisions of ANSI/NFPA 70 for temporary wiring. Motors, controls, switches, and other electrical equipment must meet applicable requirements of ANSI/NFPA 70. Hoists, slewing, trolley, and travel controllers must conform to ISO 7752-1, 2021.

(21) The employer must make provisions to guard against reversing of each motor due to reversed phase connections.

(22) Electrical circuits between the fixed and rotating portions of the derrick must pass through a slip ring assembly that will permit continuous rotation of the upper derrick structure in either direction, unless other means are provided to prevent damage to the electrical conductors.

(23) Individual overload protection must be provided for each motor.

(24) The employer must protect employees required to perform duties on the boom/jib of derricks against falling in accordance with chapter 296-880 WAC, Unified safety standards for fall protection.

(25) The employer must not install advertising signs or similar panels on the derrick unless size, design, and positioning satisfy the manufacturer's recommendations. In the absence of the manufacturer's recommendations, the employer must obtain an RPE's written approval.

(26) For night operations, lighting must be adequate to illuminate the working radius while not interfering with the operator's vision.

(27) All welding procedures and welding operator qualifications for use in repair or alteration of load sustaining members must be in accordance with ANSI/AWS D14.3 or ANSI/AWS D1.1. Where special steels

or other materials are used, the manufacturer or a qualified person must provide welding procedure instructions. The type of metal used for load sustaining members must be identified by the manufacturer. In the absence of the manufacturer procedure instructions, the employer must use an RPSE to develop such procedure instructions.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, 49.17.060, and chapter 49.17 RCW. WSR 25-16-089, s 296-155-54300, filed 8/5/25, effective 9/5/25; WSR 20-12-091, § 296-155-54300, filed 6/2/20, effective 10/1/20. Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, 49.17.060. WSR 16-09-085, § 296-155-54300, filed 4/19/16, effective 5/20/16. Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, 49.17.440, 49.17.060, and 29 C.F.R. 1926, Subpart CC. WSR 12-01-086, § 296-155-54300, filed 12/20/11, effective 2/1/12.]