

WAC 332-17-120 Blowout prevention. Blowout prevention and related control equipment shall be installed, tested immediately thereafter, and properly maintained ready for use until drilling operations are completed. Certain components, such as packing elements and ram rubbers, shall be of high temperature resistant material as necessary. All kill lines, blowdown lines, manifolds, and fittings shall be steel and have temperature derated minimum working pressure rating equivalent to the maximum anticipated wellhead surface pressure. Unless otherwise specified, blowout prevention equipment shall have manually operated gates and remotely controlled hydraulic actuating systems and accumulators of sufficient capacity to close all of the hydraulically operated equipment and have a minimum pressure of 69 bars (1,000 psi) remaining on the accumulator. Dual control stations shall be installed with a high pressure backup system. One control panel shall be located at the driller's station and one control panel shall be located on the ground at least 15 meters (50 feet) away from the wellhead or rotary table. Blowout prevention assemblies involving the use of air or other gaseous fluid drilling systems may include, but are not limited to, a rotating head, a double ram blowout preventer or equivalent, a banjo-box or an approved substitute therefore and a blind ram blowout preventer or gate valve, respectively. Exceptions to the requirements of this paragraph will be considered by the department for areas of known surface stability and low subsurface formation pressure and temperatures.

(1) **Conductor casing.** One remotely controlled hydraulically operated expansion type preventer or acceptable alternative, including a drilling spool with side outlets or equivalent, may be required before drilling below conductor casing.

(2) **Surface, intermediate and production casing.** Prior to drilling below any of these strings, blowout prevention equipment shall include a minimum of:

(a) One expansion-type preventer and accumulator or a rotating head,

(b) A manual and remotely controlled hydraulically operated double ram blowout preventer or equivalent having a temperature derated minimum working pressure rating which exceeds the maximum anticipated surface pressure at the anticipated reservoir fluid temperature,

(c) A drilling spool with side outlets or equivalent,

(d) A fillup line,

(e) A kill line equipped with at least one valve, and

(f) A blowdown line equipped with at least two valves and securely anchored at all bends and at the end.

(3) **Testing and maintenance.** Ram-type blowout preventers and auxiliary equipment shall be tested to a minimum of 69 bars (1,000 psi) or to the working pressure of the casing or assembly, whichever is the lesser. Expansion-type blowout preventers shall be tested to 70 percent of the above pressure testing requirements.

(a) The blowout prevention equipment shall be pressure tested:

(i) When installed,

(ii) Prior to drilling out plugs and/or casing shoes,

(iii) Not less than once each week, alternating the control stations, and

(iv) Following repairs that require disconnecting a pressure seal in the assembly.

(b) During drilling operations, blowout prevention equipment shall be actuated to test proper functioning as follows:

- (i) Once each trip for blind and pipe rams, but not less than once each day for pipe rams, and
- (ii) At least once each week on the drill pipe for expansion-type preventers.

All flange bolts shall be inspected at least weekly and retightened as necessary during drilling operations. The auxiliary control systems shall be inspected daily to check the mechanical condition and effectiveness and to ensure personnel acquaintance with the method of operation. Blowout prevention and auxiliary control equipment shall be cleaned, inspected and repaired, if necessary, prior to installation to assure proper functioning. Blowout prevention controls shall be plainly labeled, and all crew members shall be instructed on the function and operation of such equipment. A blowout prevention drill shall be conducted weekly for each drilling crew. All blowout prevention tests and crew drills shall be recorded on the driller's log.

(4) **Related well control equipment.** A full opening drill string safety valve in the open position shall be maintained on the rig floor at all times while drilling operations are being conducted. A kelly cock shall be installed between the kelly and the swivel.

[Statutory Authority: RCW 79.76.050(2). WSR 79-02-001 (Order), § 332-17-120, filed 1/4/79.]