875—62.5 (88A) Maintenance of covered equipment. An operator shall conduct periodic inspections, repairs, tests, and maintenance as set forth in this rule, the manufacturer's recommendations, ANSI B77.1-2011 and ANSI B77.1A-2012 and ASTM F770-15, F1159-15a, F1193-14, F2007-12, F2137-15, F2374-10, F2375-09, F2376-13, F2460-11, F2959-14, and F2960-15, as applicable. ASTM F2374-10 shall apply to all air-supported structures notwithstanding the definition and use of the phrase "inflatable amusement device" in ASTM F2374-10. An operator shall make a written record of all inspections, maintenance, tests, and repairs of covered equipment, and the records shall be available to the commissioner.

62.5(1) *Pressure equipment.* The operator shall inspect and maintain all air and gas compressors, tanks, piping and equipment pursuant to the manufacturer's recommendations.

62.5(2) *Wire rope rollers, drums and sheaves.* The operator shall periodically inspect and maintain for cleanliness and safety the mechanical devices, such as rollers, drums and sheaves, that brake, control, or come into contact with wire rope. The operator shall immediately replace mechanical devices that have broken or damaged parts, missing pieces, undue roughness or uneven wear.

62.5(3) *Mechanical members.* The operator shall periodically inspect pinions, frames, sweeps, eccentrics and other mechanical members for wear, cracks and other signs of deterioration. The operator shall make necessary repairs.

62.5(4) *Bearings.* The operator shall periodically inspect, lubricate, clean and repair bearing surfaces, ball joints and other single or multiple direction mechanical surfaces.

62.5(5) *Gears.* The operator shall keep gears properly aligned and in good repair.

62.5(6) *Nondestructive testing.* The operator shall ensure that appropriate nondestructive testing (NDT) is conducted and that documentation is available for review. NDT shall be performed at the following times:

a. At intervals recommended by the manufacturer;

b. When required by the commissioner due to a welded repair;

c. When required by the commissioner due to a visual indication of a potentially hazardous condition; and

d. When recommended by a bulletin prepared according to ASTM F1193-14.

62.5(7) *Electrical wiring.* Electrical wiring shall meet the requirements of National Electrical Code, NFPA 70-2014. The operator shall regularly inspect wiring for wear, cracks, or other signs of deterioration and shall replace worn wiring.

62.5(8) *Patron restraint.* The operator shall inspect retaining, restraining and containing devices daily before use and shall immediately repair or replace worn or damaged areas.

62.5(9) *Hydraulic systems.* The operator shall inspect each hydraulic system for leaks, damaged pipes, and worn or deteriorated hoses. Material that hinders visible inspection is prohibited. The operator shall make appropriate repairs.

62.5(10) *Relief devices.* The operator shall periodically exercise pressure relief valves or devices to ensure that they operate properly. The operator shall periodically inspect pressure relief devices to ensure that they are set at appropriate limits.

62.5(11) *Wire rope inspection.* The operator shall regularly inspect the entire length of each wire rope according to the manufacturer's recommendations. At a minimum, wire rope shall be inspected each time covered equipment is set up.

62.5(12) *Wire rope replacement.* The operator shall replace a wire rope if:

a. There are six or more distributed broken wires in one rope lay or three broken wires in one strand in one rope lay;

b. There is more than one broken wire in one rope lay and one of the following conditions exists:

(1) The wire rope is subject to constant pressure during operation, assembly, or disassembly of covered equipment;

(2) The wire rope is subject to surge shocks; or

(3) The wire rope could cause serious injuries by its failure; or

c. At least one of the following conditions exists on at least one location on the wire rope:

(1) Abrasion, nicking, scrubbing or peening causing loss of more than one-third of the original diameter of the outside wires;

(2) Severe corrosion or rust;

(3) Severe kinking, crushing, bird-caging or other damage resulting in distortion of the rope structure;

(4) Heat damage;

(5) For a rope with an original diameter of 3/4 inch or less, a loss in diameter of more than 3/64 inch;

(6) For a rope with an original diameter of 7/8 inch to 1 1/8 inch, a loss in diameter of more than 1/16 inch; or

(7) For a rope with an original diameter of 1 1/4 inches to 1 1/2 inches, a loss in diameter of more than 3/32 inch.

62.5(13) *Wire rope repair.* Without lengthening or splicing, the operator shall replace the entire length of a wire rope that is damaged in one location with new rope of equivalent design and capacity. However, if feasible, wire rope that is worn near an attachment point may be repaired by shortening the length of the wire rope, rather than by replacing the entire rope; and wire ropes on tramways may be lengthened or repaired by splicing in accordance with the applicable ANSI code.

62.5(14) *Rope-fastening devices.* The operator shall inspect couplings, sockets and fittings to ensure that they are in accordance with the instructions and specifications of the designer, engineer or manufacturer.

62.5(15) *Wood components.* The operator shall inspect footings, splices, uprights, track timbers, ledgers, sills, laps, bracing, flooring and all other wood components of covered equipment for deterioration, cracks, or fractures. The operator shall replace defective wood members with material of equal or greater strength and capacity.

The operator shall remove a sufficient amount of soil around piling or wood members embedded in dirt to check for deterioration. When a wood piling requires replacement, the operator shall install a concrete pier. The top of the pier shall be installed so that the attached wood member is not exposed to dirt or water accumulation.

62.5(16) *Welding, cutting, or brazing.* Welding, cutting, or brazing shall not be performed where the point of operation is more than 4 feet above grade if patrons are on site. Where the point of operation is less than 4 feet above grade, welding, cutting or brazing may be performed if at least one of the following applies:

a. Patrons are not on site.

b. Patrons are separated from the point of operation by a solid barrier.

c. A fence or similar barrier is erected to keep the public at least 150 feet from an arc welding operation that uses an electrode with a diameter of 3/16 inch or less.

d. A fence or similar barrier is erected to keep the public at least 35 feet from gas welding, soldering, cutting or brazing of materials 1/2 inch thick or less.

e. A fence or similar barrier is erected to keep the public at least 50 feet from gas welding, soldering, cutting or brazing of materials more than 1/2 inch thick.

62.5(17) *Fasteners.* The operator shall inspect nails, bolts, lag bolts and other fasteners for tightness, torque, and deterioration. The operator shall follow the manufacturer's recommendations for torque, replacement intervals, and fastener types.

62.5(18) *Brakes and rollback devices.* Brakes and rollback devices shall be inspected and maintained according to the manufacturer's recommendations.

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