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WAC 296-155-56210

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Close proximity lifting magnets.

(1) Close proximity lifting magnets must be constructed in accordance with ASME B30.20-2010, Below-the-Hook Lifting Devices.

(2) Rated load.

(a) General application magnets must have the rated load (capacity) marked either on the lifting magnet or on a tag attached to it. The marking must refer to the instruction manual for information about decreases in rating due to the loads.

- (i) Surface condition.
- (ii) Thickness.
- (iii) Percentage of contact with the magnet.
- (iv) Temperature.
- (v) Metallurgical composition.
- (vi) Deflection.

(b) Specified application magnets must have the rated load (capacity) either on the lifting magnet or on a tag attached to it, referring to the specific loads for which the capacity applies.

(3) Identification. All close proximity lifting magnets must be marked with the following information:

- (a) Manufacturer's name and address;
- (b) Model and lifting magnet unit identification;
- (c) Weight of lifting magnet;
- (d) Rated load, as required in subsection (2) of this section;
- (e) Duty cycle, if applicable;
- (f) Cold current (amps) at sixty-eight degrees Fahrenheit (twenty degrees Celsius), if applicable; and
- (g) Voltage of primary power supply or battery, if applicable.

(h) If repaired or modified, name and address of repairer or modifier and (a) through (g) of this subsection if changed.

- (4) Lifting magnets must be installed according to manufacturer's instructions.
- (5) Inspection.

(a) A qualified person must inspect all new, altered, repaired, or modified lifting magnets according to Tables 34 and 35. The inspection of altered, repaired or modified lifting magnets can be limited to the parts affected, if a qualified person determines that is all that is needed.

(b) The operator must inspect the lifting magnet before and during every lift for any indication of damage. Check all of the following items:

- (i) Lifting magnet face and surface of the load for foreign materials and smoothness;
- (ii) Condition and operation of the:
 - (A) Control handle of a manually controlled permanent magnet;
 - (B) Indicators and meters when installed.

(c) Lifting magnets must be inspected, by the operator or another competent person, according to Table 34.

- (d) A qualified person must determine whether signs of damage indicate a hazard.
- (e) Hazardous conditions must be corrected before continuing use.

Table 34
Close Proximity Lifting Magnet Frequent Inspection

| Inspect: | How often: |
|---|--------------------------------------|
| Structural and suspension members for: | |
| • Deformation. | • Normal service - Monthly. |
| • Cracks. | • Heavy service - Weekly to monthly. |
| • Excessive wear on any part of the lifting magnet. | • Severe service - Daily to weekly. |

| | |
|--|--|
| | <ul style="list-style-type: none"> Special or infrequent service - As recommended by a qualified person before and after each occurrence. |
| <hr/> The lifting magnet face for: <ul style="list-style-type: none"> Foreign materials. Smoothness. | |
| <hr/> Condition of lifting bail or sling suspension. | <ul style="list-style-type: none"> Before using, when a lifting magnet has been idle for more than one month. |
| <hr/> Condition and operation of control handle. | |
| <hr/> Condition and operation of indicators and meters, if applicable. | |
| <hr/> Electrical conductors, if applicable, that are visible without disassembly for: <ul style="list-style-type: none"> Loose connections. Continuity. Corrosion. Damage to insulation. | |
| <hr/> Battery operated electromagnets for: <ul style="list-style-type: none"> Proper level of battery electrolyte. Corrosion of battery posts or connectors. | |
| <hr/> Cracked housings, welds, and loose bolts. | |
| <hr/> Legible labels and marking. | |

- Note:**
- Normal service means service that involves operation with various weights within the rated load limit, averaging less than sixty-five percent of rated load limits.
 - Heavy service means service that involves operation within the rated load limit, that exceeds the limits of normal service.
 - Severe service means service that involves normal or heavy service with abnormal operating conditions.

- (f) A qualified person must perform periodic inspections of close proximity lifting magnets according to Table 35. Include the items in Table 34 of this section.
- (g) Dated inspection records must be kept on all critical items such as structural and suspension members, lifting magnet face, lifting bail, control handle, indicators and meters.
- (h) Hazardous conditions must be corrected before continuing use.

**Table 35
Close Proximity Lifting Magnet Periodic Inspection**

| Inspect: | How often: |
|---|---|
| Members, fasteners, locks, switches, warning labels, and lifting parts for: <ul style="list-style-type: none"> Deformation. Wear. Corrosion. | <ul style="list-style-type: none"> Normal service for equipment in place - Yearly. Heavy service, unless external conditions indicate that disassembly should be done to permit detailed inspection - |

Quarterly.

All electrical components, including controllers, battery, external power supply, power disconnects, meters, indicators, and alarms for:

- Proper operation.
- Condition.
- Severe service - Monthly.
- Special or infrequent service - As recommended by a qualified person before the first occurrence and as directed by the qualified person for any subsequent occurrences.

Lifting magnet coil must be tested for:

- Ohmic and ground readings compared to manufacturer's standards.
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- Note:**
- Normal service means service that involves operation with various weights within the rated load limit, averaging less than sixty-five percent of rated load limits.
 - Heavy service means service that involves operation within the rated load limit, that exceeds the limits of normal service.
 - Severe service means service that involves normal or heavy service with abnormal operating conditions.

(6) Operational tests.

(a) All new, altered, repaired or modified lifting magnets must be tested either by or under the direction of a qualified person before use. The qualified person can limit the testing of altered, repaired or modified lifting magnets to the parts affected.

(b) The following items must be tested:

- (i) Moving parts;
- (ii) Latches;
- (iii) Stops;
- (iv) Switches;
- (v) Control devices;
- (vi) Alarms; and
- (vii) Warning devices, including:
 - (A) Indicator lights;
 - (B) Gauges;
 - (C) Horns;
 - (D) Bells; and
 - (E) Pointers.

(c) Dated reports of all operational tests must be kept on file.

(7) Load tests.

(a) Prior to initial use, all new, altered, repaired, or modified close proximity lifting devices must be load tested and inspected by a qualified person. The qualified person can limit the test to the areas affected by the alteration, repair, or modification.

(b) The breakaway force of lifting magnets must be tested according to manufacturer's directions or ANSI B30.20-2010.

(8) Repair.

(a) Close proximity lifting magnets must be repaired as follows:

- (i) Adjustments and testing must be done by or under the direction of a qualified person;
- (ii) Replacement parts used must be at least equal to the original manufacturer's specifications;
- (iii) The magnet must be inspected before returning to service as required in subsection (5) of this section.

(b) The following precautions must be taken before repairs on a magnet are started:

- (i) Disconnect, lock out and tag all sources of power "Out of Service," if applicable; and
 - (ii) Tag any lifting magnet removed from service for repair "Out of Service."
- (9) Lifting magnets must be operated only by qualified personnel.
- (10) Operators must do the following:
- (a) Test all controls before use, each shift;

- (b) Check all meters and indicators for proper operation before making a lift;
- (c) Consult a competent person before handling the load whenever there is any doubt as to safety;
- (d) Respond only to instructions from competent persons, except for stop orders. Operators must obey a stop order at all times, no matter who gives it;
- (e) Do not load the lifting magnet in excess of its rated load or with any load that it isn't specifically designed for;
- (f) Apply the magnet to the load according to the instruction manual;
- (g) Check that:
 - (i) Lifter ropes or chains are not kinked;
 - (ii) Multiple part lines are not twisted around each other;
 - (iii) The lifting magnet face and the contact area on the load are clean.
- (h) Bring the magnet over the load in a way that minimizes swinging;
- (i) Lift the load a few inches to make sure that the lifting magnet has been correctly applied;
- (j) Keep the load or lifting magnet from contact with any obstruction;
- (k) Set down any attached load and store the lifting magnet before leaving it;
- (l) Check that all people near the lift are warned before lifting;
- (m) Using the lifter for side pulls or sliding the load is prohibited, unless specifically authorized by a qualified person; and
- (n) Riding on loads or the lifting magnet is prohibited.

[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, § 296-155-56210, filed 12/20/11, effective 2/1/12.]