Whiting

OSHA Regulations

1910.179(j)(2) – Frequent inspection (daily to monthly intervals)

The following items shall be inspected for defects at intervals as defined in paragraph (j)(1)(ii) of this section or as specifically indicated, including observation during operation for any defects which might appear between regular inspections. All deficiencies such as listed shall be carefully examined and determination made as to whether they constitute a safety hazard:

(i) All functional operating mechanisms for maladjustment interfering with proper operation. Daily.

(ii) Deterioration or leakage in lines, tanks, valves, drain pumps, and other parts of air or hydraulic systems. Daily.

(iii) Hooks with deformation or cracks. Visual inspection daily; monthly inspection with a certification record which includes the date of inspection, the signature of the person who performed the inspection and the serial number, or other identifier, of the hook inspected. For hooks with cracks or having more than 15 percent in excess of normal throat opening or more than 10° twist from the plane of the unbent hook refer to paragraph (l)(3)(iii)(a) of this section.

(iv) Hoist chains, including end connections, for excessive wear, twist, distorted links interfering with proper function, or stretch beyond manufacturer's recommendations. Visual inspection daily; monthly inspection with a certification record which includes the date of inspection, the signature of the person who performed the inspection and an identifier of the chain which was inspected.

(v) [Reserved]

(vi) All functional operating mechanisms for excessive wear of components.

(vii) Rope reeving for noncompliance with manufacturer's recommendations.

1910.179(l) – Maintenance

(i) A preventive maintenance program based on the crane manufacturer's recommendations shall be established.

1910.179(j)(3) – Periodic inspection (1 to 12-month intervals)

Complete inspections of the crane shall be performed at intervals as generally defined in paragraph (j)(1)(ii)(b) of this section, depending upon its activity, severity of service, and environment, or as specifically indicated below. These inspections shall include the requirements of paragraph (j)(2) of this section and in addition, the following items. Any deficiencies such as listed shall be carefully examined and determination made as to whether they constitute a safety hazard:

(i) Deformed, cracked, or corroded members.

(ii) Loose bolts or rivets.

(iii) Cracked or worn sheaves and drums.

(iv) Worn, cracked or distorted parts such as pins, bearings, shafts, gears, rollers, locking and clamping devices.

(v) Excessive wear on brake system parts, linings, pawls, and ratchets.

(vi) Load, wind, and other indicators over their full range, for any significant inaccuracies.

(vii) Gasoline, diesel, electric, or other powerplants for improper performance or noncompliance with applicable safety requirements.

(viii) Excessive wear of chain drive sprockets and excessive chain stretch.

(ix) [Reserved]

(x) Electrical apparatus, for signs of pitting or any deterioration of controller contactors, limit switches and pushbutton stations.

1910.179(b)(8) – Designated personnel

Only designated personnel shall be permitted to operate a crane covered by this section.

(a)(35) - Designated means selected or assigned by the employer or the employer's representative as being qualified to perform specific duties.

ASME B30.2-0.2 – Qualified person means a person who, by possession of a recognized degree or certificate of professional standing, or who by extensive knowledge, training and experience, has successfully demonstrated to solve or resolve problems relating to the subject matter and work.

1910.184(e)(3)(i) – Inspections

In addition to the inspection required by paragraph (d) of this section, a thorough periodic inspection of alloy steel chain slings in use shall be made on a regular basis, to be determined on the basis of (A) frequency of sling use; (B) severity of service conditions; (C) nature of lifts being made; and (D) experience gained on the service life of slings used in similar circumstances. Such inspections shall in no event be at intervals greater than once every 12 months.

Crane Manufacturers Association of America (CMAA) 78 – Inspectors

2.2.1 Work Experience – A crane inspector shall have a minimum of 2,000 field hours of experience relating to the maintaining, servicing, repairing, modifying and functional testing of cranes and associated hoisting equipment. This experience should provide a working knowledge of how to identify deficiencies in mechanical, structural, electrical systems and components of cranes. Under no circumstances should an individual be permitted to perform inspections who has not received appropriate training and cannot demonstrate a working knowledge of applicable codes and regulations and of the product being inspected.

2.2.4.1 Required training – The inspector should have received formal training in the areas of: safety and design codes related to cranes; Federal, State and local codes and regulations
safe operating practices of cranes; report writing and documentation; and communication skills.

2.2.4.4.2 Products – training on how to interpret wear patterns and to make recommendations for repair or replacement utilizing sound judgement and the manufacturers' guidelines.

Reference Standards

OSHA 1910.179	Overhead and Gantry Cranes
OSHA 1910.23	Toeboards and Handrails
OSHA 1910.6	Standard Safety Code for Overhead and Gantry Cranes
ANSI A14.3/ OSHA 1920.27	Safety Requirement for Fixed Ladders
ASME B30.2	Overhead and Gantry Cranes (Top Running Bridge, Single or Multiple Girder, Top Running Trolley Hoist)
ASME B30.9	Slings
ASME B30.10	Hooks
ASME B30.11	Monorail and underhung cranes
ASME B30.16	Overhead Hoists (Underhung)
ASME B30.17	Cranes and Monorails (With Underhung Trolley or Bridge)
ASME B30.18	Stacker cranes
ASME B30.20	Below-the-Hook Lifting Devices
ASME B30.21	Manually Operated Hoists
ASME MH27.1	Specs for Underhung Cranes
ASME HST-6M	Air Wire Rope Hoists
CMAA #70	Specifications for Top Running Bridge & Gantry Type Multiple Girder Electric Overhead Traveling Cranes
CMAA #74	Specifications for Top Running & Under Running Single Girder Electric Traveling Cranes Utilizing Under Running Trolley Hoist
CMAA #78	Standards and Guidelines for Professional Services Performed on Overhead and Traveling Cranes and Associated Hoisting Equipment

Note: State laws and manufacturers' specifications may mandate different safety and maintenance standards. For further clarification, contact your local authority for complete information.