

Inspection and Maintenance of Cranes and Derricks

Contents

Introduction and Purpose	1
Definitions	1
Inspection Intervals	1
Inspection Records	2
Maintenance Procedure	2
Adjustments and Repairs—General Precautions	3
As Necessary	4
Frequent Inspections (Daily to Monthly Depending on Severity of Use)	5
Periodic Inspections (Monthly to Annually Depending on Severity of Use)	8
Cranes or Derricks Not in Regular Use	10
Testing	10

Introduction and Purpose

The basic document for inspection and maintenance of cranes and derricks is the corresponding current publication of

- *American National Standard for Portal, Tower, and Pedestal Cranes, ANSI/ASME B30.4, Chapter 4-2, "Inspection, Testing, and Maintenance"*
- *American National Standard for Derricks, ANSI/ASME B30.6, Chapter 6-2, "Inspection, Testing, and Maintenance"*
- *American National Standard for Floating Cranes and Floating Derricks, ANSI/ASME B30.8, Chapter 8-2, "Inspection, Testing, and Maintenance"*

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The purpose of AmClyde Technical Information 156, Inspection and Maintenance of Cranes and Derricks is to supplement the above basic documents, to provide additional detailed information where deemed helpful and/or necessary to help assure the complete and thorough inspection and maintenance of all crane and derrick equipment parts.

Definitions

Appointed person—A person assigned specific responsibilities by the employer or the employer's representative.

Designated person—A person selected or assigned by the employer or the employer's representative as being competent to perform specific duties.

Qualified person—A person who, by possession of a recognized degree in an applicable field or certificate of professional standing, or who, by extensive knowledge, training, and experience, has successfully demonstrated the ability to solve or resolve problems relating to the subject matter and work.

Standby crane or derrick—A crane or derrick that is not in regular service, but one that is used occasionally or intermittently as required.

Inspection Intervals

Inspections must be done at regular intervals. The intervals are dependent on the degree of exposure of the crane or derrick equipment parts to critical and/or severe loads, wear, deterioration, or malfunction. The usage of the crane or derrick, both in hours and severity, must be considered when determining inspec-

tion intervals. Detailed observation of the equipment parts over time by experienced maintenance personnel will help establish a pattern of required maintenance and inspection.

1. As Necessary—These items must be done as necessary (see manufacturer's information if applicable).
2. Frequent Inspections—These items must be done daily to monthly depending on severity of use, or as specifically recommended by the manufacturer of a particular crane or derrick part.
3. Periodic Inspections—These items must be done in one to twelve month intervals depending on severity of use, or as specifically recommended by the manufacturer of a particular crane or derrick part.

Inspection Records

Dated records must be made on critical items such as hoisting machinery, brakes, clutches, sheaves, hooks, wire ropes, and other lifting devices. Records must be maintained and available to appointed personnel. For wire rope inspection record requirements, see "Inspection Records," in the corresponding ANSI/ASME publication section:

- B30.4-1996, 4-2.4.3 (f)
- B30.6a-1998, 6-2.4.1 (e)
- B30.8-1999, 8-2.4.5

Maintenance Procedure

⚠ WARNING

- **Failure to do the necessary maintenance can result in damage or failure of the crane or derrick.**
- **Permit only qualified service personnel who have received training in the maintenance, inspection, and adjustment of the equipment to do the maintenance, inspection, and adjustment procedures.**
- **Use caution when doing maintenance on or near electrical equipment. Electrical equipment must be maintained and operated according to applicable standards.**

Do not permit any maintenance or adjustment to the equipment before taking the following precautions:

1. Equipment shut down (see Operation and Maintenance Manual for procedure):
 - Load removed from the equipment.
 - Crane or derrick positioned where it will cause the least interference with other equipment or operations in the area and secured from movement.
 - Boom lowered to the boom rest, if possible, or otherwise secured against inadvertent lowering.
 - All hoist drum pawls (dogs) and all brakes engaged.
 - All controls in the shutdown position.
2. Starting means rendered inoperative, or main or emergency switch locked in open position for electric cranes and derricks.
3. "Do Not Use" signs or tags placed on the crane or derrick including on the control console, at the entrance to the operator's cab, at the entrance to the machinery cab, at the main electrical switches and on the hoist. Lockouts must be installed by each maintenance person at each electrical power area following industry-standard lockout procedures.
4. Power plant stopped or disconnected at takeoff, and tagged.
5. For traveling cranes, where other cranes are in operation on the same railway, rail stops or other suitable means must be provided to prevent interference with the idle crane. Where temporary protective rail stops are not available or practical, a signalperson must be placed at a visual vantage point for observing the approach of an active crane and warning its operator.
6. Procedures for repairs by welding must be approved by a qualified person with guidance as necessary from the AmClyde Service Department. Do not weld on hooks or shackles.

7. Release hydraulic oil pressure from all hydraulic circuits and equipment parts before loosening or removing hydraulic system parts.
8. Release air pressure from all air circuits and equipment parts before loosening or removing air system parts.
9. After adjustments and repairs have been made, the crane or derrick must not be put back in operation until all guards have been reinstalled, safety devices reactivated, and maintenance equipment removed.

Adjustments and Repairs—General Precautions

⚠ WARNING

- **Always look for equipment damage or abnormal functioning during operation. If found, safely shut down the equipment and correct the problem before continuing operation.**
- **Correct any condition that is not safe before operating the equipment.**
- **After making a repair or adjustment check the functioning of the equipment parts before putting the equipment into operation.**
- **Do not make modifications to the equipment unless approved in writing by AmClyde.**

1. Any hazardous conditions observed must be corrected before operation is resumed. Adjustments and repairs must be done only by designated personnel.
2. Adjustments must be maintained to ensure correct functioning of all equipment parts. Examples include but are not limited to: functional operating mechanisms, control systems, braking systems, clutch systems, pawl (dog) system, power plants, foundations or other anchorages, guys, vang lines, safety devices, and signal systems.

3. Repairs or replacements must be provided as needed for operation. Examples include but are not limited to:
 - critical parts of functional operating mechanisms that are cracked, bent, broken, corroded, or excessively worn
 - critical parts of the structure that are cracked, bent, broken, or excessively corroded
 - hooks showing indications must be discarded if examination determines they constitute a hazard. Welding or reshaping on hooks or shackles is not permitted.
 - pitted or burned electrical contacts should be corrected only by replacement in sets. Controller parts must be lubricated only as recommended by the manufacturer.
4. All replacement and repaired parts must meet the manufacturer's current specifications.

As Necessary

Interval	Item
As necessary or as recommended by the manufacturer, whichever is more frequent	<input type="checkbox"/> Paint any damaged paint surfaces to prevent corrosion. Damaged paint can indicate an underlying structural hazard (see "structural members and welds" in "Periodic Inspection")—determine whether further inspection is required before repairing paint damage. Notify appropriate inspection personnel if necessary.
	<input type="checkbox"/> Ventilation filters (on electrical panels, motor blowers, ventilation fans, air conditioning, etc.)—clean or replace filters.
	<input type="checkbox"/> Shutters or louvers (machinery cab louvers, etc.)—remove debris.
	<input type="checkbox"/> Air reservoir and filters (if provided)—drain water condensation.
	<input type="checkbox"/> Fuel tank (if provided)—drain sediment and water condensation. Fill the fuel tank.
	<input type="checkbox"/> Air filters (if provided)—clean or replace the elements as applicable. See manufacturer's information.
	<input type="checkbox"/> Air system desiccant dryer (if provided)—replace the desiccant.
	<input type="checkbox"/> Hydraulic reservoir breather (if provided)—replace the breather.
	<input type="checkbox"/> See the manufacturer's information for additional maintenance information for items not manufactured by AmClyde. If the information is not in the Vendor Data Manual, contact the AmClyde Service Department. Examples include but are not limited to:
	<ul style="list-style-type: none"> • Diesel engine • Generator • Resistor bank • Electric motor • Hydraulic pumps and motors • Gearbox • Air compressor • Refrigerated air dryer
	<ul style="list-style-type: none"> • Air system lubricator • Air system anti-freezer • Slew ring bearing • Electronic drive control system • Air conditioning • Hydraulic bolt tensioner • Overhead chain hoist
	<input type="checkbox"/> Radiators and similar equipment (diesel engine radiator, air system aftercooler, hydraulic oil heat exchanger, etc.)—remove debris from the intake side.
	<input type="checkbox"/> Hydraulic oil reservoir (if provided)—check for the correct oil level.
	<input type="checkbox"/> Hydraulic filters (if provided)—check visual bypass indicators with the hydraulic system operating and the hydraulic oil at normal operating temperature. If an indicator is activated, replace the filter element.
	<input type="checkbox"/> Pressure-compensated lubrication systems (if provided) on load blocks and hooks—check piping for damaged, loose, or missing parts and for leaks. Check for correct pressure.
	<input type="checkbox"/> Lower blocks and hooks after sub-sea operation —clean using fresh water.
	<input type="checkbox"/> Lower blocks and hooks after sub-sea operation —clean using fresh water.

Frequent Inspections (Daily to Monthly Depending on Severity of Use)

Item	ANSI/ASME Reference (publication, paragraph) (B30.4-1996, 6-2.3.1 (a) B30.6a-1998 6-2.3.1 (a) B30.8-1999 8-3.2.1 (a) unless otherwise noted)
<input type="checkbox"/> Hooks —visually check before and during operation for: <ul style="list-style-type: none"> • distortion, such as bending, twisting, or increased throat opening • wear • cracks, nicks, or gouges (see ANSI/ASME B30.10-1.2.3 (e) for repair guidelines) • safety latch for engagement, damage, and proper functioning (if provided) • hook attachment and securing means • check self-locking hooks for proper operation and locking If a problem is found, a designated person must determine whether it or a combination of problems found constitute a hazard and whether a more detailed inspection is required.	B30.10-1999, 10-1.2.1.2
<input type="checkbox"/> Bucket (if provided)—check for correct operation, damage, distortion, cracks, and wear.	Similar to B30.25-1998, 25-2.1.3 (j)
<input type="checkbox"/> Mast of derrick —visually check plumb of mast, mast fittings, and connections. Visually check guys of guy derricks.	B30.6a-1998, 6-2.1.2 (3), (4) B30.8-1999, 8-2.1.2 (9), (10)
<input type="checkbox"/> Reeving —check for correct wire rope reeving.	B30.6a-1998, 6-2.1.2 (7) B30.8-1999, 8-2.1.2 (a) (7)
<input type="checkbox"/> Chords and lacing (including boom chords and lacing)—visually check all for damage, distortion, cracks, corrosion, and loose or missing parts.	B30.6a-1998, 6-2.1.2 (a) (2) B30.8-1999, 8-2.1.2 (a) (2)
<input type="checkbox"/> Lighting —check for correct operation.	B30.4-1996, 4-2.1.3 (g) B30.6a-1998, 6-2.1.2 (9) B30.8-1999, 8-2.1.2 (a) (8)
<input type="checkbox"/> Machinery house and operator's cab —check for damage, corrosion, leaks, broken glass, and cleanliness including proper storage of tools and equipment. Check for correct operation of doors, vents, windows, and window wipers.	
<input type="checkbox"/> Fire protection equipment —check that adequate fire protection equipment is available, suitable for application, and in satisfactory operating condition.	B30.8-1999, 8-2.1.2 (a) (4)
<input type="checkbox"/> Safety guards —check that the safety guards are in place. Replace all damaged or missing safety guards.	B30.8-1999, 8-2.1.2 (a) (4)
<input type="checkbox"/> Electrical equipment (wiring, panels, junction boxes, motors, motor brakes, collector rings, anti-condensation and other heaters, etc.)—check for malfunctioning, signs of excessive deterioration, dirt or moisture accumulation, signs of excessive heating or arcing, and legibility of labels.	B30.4-1996, 4-2.1.3 (g) B30.8-1999, 8-2.1.2 (a) (8)
<input type="checkbox"/> Batteries (if provided)—check for correct electrolyte level, dirt, damage, and loose terminals or holders. Check battery cables for loose connections and deterioration.	B30.4-1996, 4-2.1.3 (g) B30.8-1999, 8-2.1.2 (a) (8)

Item	ANSI/ASME Reference (publication, paragraph) B30.4-1996, 6-2.3.1 (a) B30.6a-1998 6-2.3.1 (a) B30.8-1999 8-3.2.1 (a) unless otherwise noted)
<input type="checkbox"/> Fuel system (if provided)—check for dirt, for damaged, loose, or missing parts, and for leaks. Check the fuel tank for damage, dirt, water condensation, and leaks.	
<input type="checkbox"/> Hydraulic systems and air systems (if provided)—check for visible deterioration or leakage.	B30.4-1996, 4-2.1.3 (f) B30.6a-1998, 6-2.1.2 (a) (5) B30.8-1999, 8-2.1.2 (a) (5)
<input type="checkbox"/> Hoist brakes and brake operating levers (if provided)—check for proper functioning before beginning operation. Check daily when the crane or derrick is in use.	B30.6a-1998, 6-2.1.2 (a) (8) B30.8-1999, 8-2.1.2 (a) (11)
<input type="checkbox"/> Hoist motor brake and swing motor brake —see manufacturers' recommendations for adjustment check intervals and procedures. Check the motor brakes daily for correct operation and visually inspect as in "electrical equipment" item above.	B30.4-1996, 4-2.1.3 (g) B30.8-1999, 8-2.1.2 (a) (8)
<input type="checkbox"/> Hoist clutches and clutch operating levers (if provided)—check for proper functioning before beginning operation. Check daily when the crane or derrick is in use.	B30.6a-1998, 6-2.1.2 (a) (8) B30.8-1999, 8-2.1.2 (a) (11)
<input type="checkbox"/> Hoist pawls (dogs) and mating drum flange—check for damage, distortion, and excessive wear. Check for correct operation and adjustment.	B30.8-1999, 8-2.1.2 (a) (4)
<input type="checkbox"/> Capacity chart —check daily when crane or derrick is in use for presence of durable capacity chart viewable from operator's seat.	B30.4-1996, 4-1.2.3 B30.6a-1998, 6-1.1.2 B30.8-1999, 8-1.1.3
<input type="checkbox"/> Load monitoring system (LMS) and other operator's cab safety devices such as horn, communication devices, anemometer, etc.—check for correct operation. Check daily when the crane or derrick is in use. See "Periodic Inspection" for LMS calibration check.	B30.8-1999, 8-2.1.2 (a) (4)
<input type="checkbox"/> Operator's control mechanisms —check daily when crane or derrick is in use for: <ul style="list-style-type: none"> • maladjustment interfering with proper operation • excessive wear of parts and contamination by lubricants or other foreign matter • indicator light function using LAMP TEST push button or push-to-test feature as applicable • missing or damaged control labels 	B30.4-1996, 4-2.1.3 (a), (b) B30.6a-1998, 6-2.1.2 (1) B30.8-1999, 8-2.1.2 (a)(1),(3)
<input type="checkbox"/> Limit switches —check for correct operation and check the electrical and mechanical parts and mountings.	B30.8-1999, 8-2.1.2 (a) (4)
<input type="checkbox"/> Wire rope —make an inspection per the corresponding ANSI/ASME publication section: <ul style="list-style-type: none"> • B30.4-1996, 4-2.4.2 (a) • B30.6-1995, 6-2.4.1 (a) • B30.8-1999, 8-2.4.1 	B30.4-1996, 4-2.4.2 (a) B30.6-1995, 6-2.4.1 (a) B30.8-1999, 8-2.4.1

Periodic Inspections (Monthly to Annually Depending on Severity of Use)

Item	ANSI/ASME Reference (publication, paragraph) (B30.4-1996, 6-2.3.1 (a) B30.6a-1998 6-2.3.1 (a) B30.8-1999 8-3.2.1 (a) unless otherwise noted)
<p><input type="checkbox"/> Wire rope—make an inspection per the corresponding ANSI/ASME publication section:</p> <ul style="list-style-type: none"> • B30.4-1996, 4-2.4.2 and 3 • B30.6-1995, 6-2.4.1 (a) and (c) • B30.8-1999, 8-2.4.2 and 3 <p>For the replacement criteria (broken-wire, etc.) of rotation-resistant wire ropes, contact the wire rope manufacturer. Refer to the Parts Manual for wire rope specifications (size, grade, construction, strength rating, etc.). The specifications are usually on a separate wire rope specification drawing for each wire rope, otherwise on a Wire Rope List which includes the specifications for all the wire ropes.</p>	<p>B30.4-1996, 4-2.4.2 and 3 B30.6-1995, 6-2.4.1 (b) and (c) B30.8-1999, 8-2.4.2 and 3</p>
<p><input type="checkbox"/> Railways of traveling cranes—check for damage, distortion, cracks, corrosion, and loose or missing parts. Survey for correct elevation and level (see AmClyde T.I. 141, Travel Rail Gauge and Elevation Tolerance).</p>	<p>B30.4-1996, 4-2.1.4 (a) (10)</p>
<p><input type="checkbox"/> Travel mechanisms of traveling cranes (trucks, equalizers, swivel trunnions, etc.)—check for damage, distortion, cracks, corrosion, and loose or missing parts.</p>	<p>B30.4-1996, 4-2.1.4 (a) (10)</p>
<p><input type="checkbox"/> Crane tie-downs or rail clamps (if provided)—check for wear, corrosion, and tightness.</p>	<p>B30.4-1996, 4-2.1.4 (a) (10) B30.8-1999, 8-2.1.3 (a) (10)</p>
<p><input type="checkbox"/> Gudgeon pin of derricks (pin connecting mast cap to mast, permitting rotation of mast)—visually check for damage, cracks, and wear.</p>	<p>B30.8-1999, 8-2.1.3 (a) (11) B30.6a-1998, 6-2.1.3 (4)</p>
<p><input type="checkbox"/> Hooks—A designated person must make a visual inspection with records kept of apparent external conditions to provide a basis for continuing evaluation. Inspection items include the same inspection items as in “Frequent Inspection” for hooks. Hooks having any of the following conditions must be removed from service until repaired or replaced:</p> <ul style="list-style-type: none"> • cracks, nicks, or gouges (see ANSI/ASME B30.10-1.2.3 (e) for repair guidelines) • distortion—any bending or twisting exceeding 10 degrees (or as otherwise recommended by the hook manufacturer) from the plane of the unbent hook • throat opening—any distortion causing an increase in throat opening exceeding 15 percent (or as otherwise recommended by the hook manufacturer) • wear—any wear exceeding 10 percent (or as otherwise recommended by the hook manufacturer) of the original section dimension of the hook or its load pin • inability to lock—any self-locking hook that does not lock • inoperative latch—any latch that does not close the throat of the hook. 	<p>B30.10-1999, 10-2.2.1.3</p>

Item	ANSI/ASME Reference (publication, paragraph) (B30.4-1996, 6-2.3.1 (a) B30.6a-1998 6-2.3.1 (a) B30.8-1999 8-3.2.1 (a) unless otherwise noted)
<input type="checkbox"/> Structural members and welds including boom, A-frame, backlegs, turntable, rotating frame, gantry, etc.—check for damage, distortion, cracks, corrosion, and loose or missing parts.	B30.4-1996, 4-2.1.4 (a) (1) B30.6a-1998, 6-2.1.3 (1) B30.8-1999, 8-2.1.3 (a) (1)
<input type="checkbox"/> Foundations and supports —check for continued ability to support the imposed loads (examples for cranes: rail circle, pedestal, machinery foundations, elevated boom support structure, etc.).	B30.6a-1998, 6-2.1.3 (b) B30.8-1999, 8-2.1.3 (a) (12)
<input type="checkbox"/> Handrails, stairs, ladders, walkways, and safety guards —check for damage, distortion, cracks, corrosion, and loose or missing parts.	
<input type="checkbox"/> Fasteners —check for tightness, corrosion, etc.	B30.4-1996, 4-2.1.4 (a) (2) B30.6a-1998, 6-2.1.3 (a) (2) B30.8-1999, 8-2.1.3 (a) (2)
<input type="checkbox"/> Sheaves and hoist drums —check for cracked or worn surfaces.	B30.4-1996, 4-2.1.4 (3) B30.6a-1998, 6-2.1.3 (a) (3) B30.8-1999, 8-2.1.3 (a) (3)
<input type="checkbox"/> Chain drive sprockets —check for excessive wear and chain for stretch.	B30.4-1996, 4-2.1.4 (a) (4) B30.6a-1998, 6-2.1.3 (a) (3) B30.8-1999, 8-2.1.3 (a) (8)
<input type="checkbox"/> Pins, bearings, bushings, shafts, gears, couplings, rollers, locking devices (spud lock, etc.), and clamping devices —check for wear, cracks, and distortion, and for excessive noise and vibration.	B30.4-1996, 4-2.1.4 (a) (4) B30.6a-1998, 6-2.1.3 (a) (3) B30.8-1999, 8-2.1.3 (a) (4)
<input type="checkbox"/> Safety labels (see Safety Label Installation drawing or Operation and Maintenance Manual for label locations)—clean the labels for good legibility. Replace all damaged or missing safety labels.	Z535.4-1998 (<i>Product Safety Signs and Labels</i>), 10.2.1 and 10.2.2
<input type="checkbox"/> Holsts serial number and load rating nameplate —replace all damaged or missing nameplates.	B30.7-1994, 7-1.1.3
<input type="checkbox"/> Power plant (diesel, gasoline, electric, or other)—check for proper performance and compliance with applicable safety requirements.	B30.4-1996, 4-2.1.4 (a) (7) B30.6a-1998, 6-2.1.3 (a) (5) B30.8-1999, 8-2.1.3 (a) (7)
<input type="checkbox"/> Electrical equipment (control contactors, limit switches, push button stations, etc.)—check for contact pitting or any deterioration.	
<input type="checkbox"/> Hydraulic and air hose, fittings, and tubing (if provided)—check for: <ul style="list-style-type: none"> • evidence of leakage at the surface of the flexible hose or its junction with the end fittings • blistering or abnormal deformation of the outer covering of the hydraulic or air hose • leakage at threaded or clamped joints that cannot be eliminated by normal tightening or recommended procedures • evidence of excessive abrasion or scrubbing on the outer surface of a hose, rigid tube, or fitting. Means must be taken to eliminate the interference of elements in contact or otherwise protect the components. 	B30.4-1996, 4-2.1.4 (a) (11) B30.8-1999, 8-2.1.3 (a) (13)

Item	ANSI/ASME Reference (publication, paragraph) (B30.4-1996, 6-2.3.1 (a) B30.6a-1998 6-2.3.1 (a) B30.8-1999 8-3.2.1 (a) unless otherwise noted)
<input type="checkbox"/> Hydraulic and air pumps and motors (if provided) (including air compressor unless manufacturer information gives different guidelines)—check for: <ul style="list-style-type: none"> • loose fasteners • leaks at joints between sections • shaft seal leaks • unusual noises or vibration • loss of operating speed • excessive heating of the fluid • loss of pressure 	B30.4-1996, 4-2.1.4 (a) (11) B30.8-1999, 8-2.1.3 (a) (14)
<input type="checkbox"/> Hydraulic oil heat exchanger (if provided)—check for correct operation, leaks, air blockage, damage, and corrosion.	B30.4-1996, 4-2.1.4 (a) (11) B30.8-1999, 8-2.1.3 (a) (14) through (17)
<input type="checkbox"/> Hydraulic and air valves (if provided)—check for: <ul style="list-style-type: none"> • cracks in valve housing • improper return of spool to neutral position • leaks at spools or joints • sticking spools • failure of relief valves to attain correct pressure setting • check relief valve pressures as specified on hydraulic drawings • check automatic drain valves (if provided) of air reservoir and air filters for correct operation 	B30.4-1996, 4-2.1.4 (a) (11) B30.8-1999, 8-2.1.3 (a) (15)
<input type="checkbox"/> Hydraulic and air cylinders (if provided)—check for: <ul style="list-style-type: none"> • drifting caused by fluid leaking across the piston • rod seal(s) leakage • leaks at welded joints • scored, nicked, or dented cylinder rods • dented cylinder barrel • loose or deformed rod eyes or connecting joints 	B30.4-1996, 4-2.1.4 (a) (11) B30.8-1999, 8-2.1.3 (a) (16)
<input type="checkbox"/> Analyze hydraulic oil (if provided) every six months for cleanliness, viscosity, proper additives, and water content (see Operation and Maintenance Manual), and replace hydraulic filter elements and hydraulic reservoir breather .	B30.4-1996, 4-2.1.4 (a) (11) B30.8-1999, 8-2.1.3 (a) (17)
<input type="checkbox"/> Hoist drum clutches —check for correct adjustment and for excessive wear of clutch system parts including clutch linings.	B30.4-1996, 4-2.1.4 (a) (5) B30.8-1999, 8-2.1.3 (a) (5)
<input type="checkbox"/> Hoist drum brakes —check for correct adjustment and for excessive wear of brake system parts including brake linings.	B30.4-1996, 4-2.1.4 (a) (5) B30.8-1999, 8-2.1.3 (a) (5)
<input type="checkbox"/> Wire rope remaining on hoist drums. Check for correct amount when corresponding boom or load block is lowered to lowest possible position (boom) or extreme lower position (load blocks). For most cranes and derricks, AmClyde requires that at least one-half layer of wire rope must remain on the each boom hoist drum at all times during operation, and at least three wraps of wire rope on each of the other hoist drums. See Operation and Maintenance Manual, Safety section, to verify this requirement for your crane or derrick.	B30.4-1996, 4-1.4.2 and 4-1.5.2 B30.6c-2001, 6-1.3.3 and 6-1.3.4 B30.8-1999, 8-1.6.1 and 8-1.6.2
<input type="checkbox"/> Load, boom angle, and other indicators including control console pressure gauges—check these devices over their full range, for any significant inaccuracies. Annually check calibration.	B30.4-1996, 4-2.1.4 (a) (6) B30.8-1999, 8-2.1.3 (a) (6)

Item	ANSI/ASME Reference (publication, paragraph) (B30.4-1996, 6-2.3.1 (a) B30.6a-1998 6-2.3.1 (a) B30.8-1999 8-3.2.1 (a) unless otherwise noted)
<input type="checkbox"/> Load testing. Although not required by the ANSI/ASME crane and derrick standards except for new or reinstalled machines and sometimes repaired, altered, or modified machines, some regulatory authorities (ABS, DNV, API etc. if applicable) may specify periodic load testing.	Check applicable specifications or regulations.

Cranes or Derricks Not in Regular Use

A crane or derrick that has been idle for a period of one month or more, but less than six months, must be given an inspection conforming with the requirements of "As Necessary," "Frequent Inspections," and "Periodic Inspections" before being placed in service. The wire rope must be inspected following "Ropes Not in Regular Use," per the corresponding ANSI/ASME publication section:

- B30.4-1996, 4-2.4.2 (e)
- B30.6-1995, 6-2.4.1 (d)
- B30.8-1999, 8-2.4.4

A crane or derrick that has been idle for a period of over six months must be given a complete inspection conforming with the requirements of "As Necessary," "Frequent Inspections," and "Periodic Inspections" before being placed in service. The wire rope must be inspected following "Ropes Not in Regular Use," per the corresponding ANSI/ASME publication section:

- B30.4-1996, 4-2.4.2 (e)
- B30.6-1995, 6-2.4.1 (d)
- B30.8-1999, 8-2.4.4.

Standby cranes or derricks must be inspected at least twice a year in accordance with the requirements of "As Necessary" and "Frequent Inspections." The wire rope must be inspected at least twice a year as in "Frequent Wire Rope Inspection." Cranes or derricks exposed to adverse environments and/or severe use should be inspected more frequently.

Testing

The ANSI/ASME B30.4, B30.6, and B30.7 standards require an operational test prior to initial use for new or reinstalled cranes or derricks and provides guidelines for the procedure (contact AmClyde if you desire the AmClyde procedure for your crane or derrick). Prior to use, repaired, altered, or modified cranes or derricks must also be tested (testing may be limited to the function(s) affected by the repair).

The ANSI/ASME B30.4, B30.6, and B30.7 standards also require a load test prior to initial use for new or reinstalled cranes or derricks and provides guidelines for the procedure (contact AmClyde if you desire the AmClyde load test procedure for your crane or derrick). The need for load testing a repaired, altered, or modified crane or derrick must be determined by a qualified person.