

GENERAL INSTRUCTION MANUAL

ISSUING ORG. INSPECTION DEPARTMENT

ISSUE DATE
08/11/2008REPLACES
07/14/2007SUBJECT INSPECTION AND TESTING REQUIREMENTS FOR
ELEVATING/LIFTING EQUIPMENTAPPROVAL
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1 OF 12**1.0 PURPOSE**

This General Instruction (GI):

1.1 Establishes requirements and guidelines for the inspection of elevating/lifting equipment.

1.2 Improves Saudi Aramco and contractor safety performance when involved in elevating/lifting equipment activities.

2.0 REFERENCES

It shall be the responsibility of Saudi Aramco USERS and contractors to make themselves familiar with the current version of the various publications referenced below.

ANSI: American National Standards Institute
 API: American Petroleum Institute
 ASME: American Society of Mechanical Engineers
 IMO/SOLAS: International Maritime Organization/Safety of Life at Sea
 SAE: Society of Automotive Engineers
 SAES: Saudi Aramco Engineering Standard
 SAMSS: Saudi Aramco Material Supply Standard
 STD DRWGS: (Saudi Aramco) Standard Drawings

- A) ANSI A92.2 Vehicle-Mounted Elevating and Rotating Aerial Devices
- B) ANSI A92.3 Manually Propelled Elevating Work Platforms
- C) ANSI A92.5 Boom-Supported Elevating Work Platforms
- D) ANSI A92.6 Self-Propelled Elevating Work Platforms
- E) ANSI/SAE J765 Crane Load Stability Test Code
- F) API Spec 2C API Specification for Offshore Cranes
- G) API RP2D Operation and Maintenance of Offshore Cranes
- H) ASME A17.1 Safety Code for Elevators and Escalators
- I) ASME A120.1 Safety Requirements for Powered Platforms for Building Maintenance
- J) ASME B30.2 Overhead and Gantry Cranes (Top Running Bridge, Single or Multiple Girder, Top Running Trolley Hoist)
- K) ASME B30.3 Construction Tower Cranes
- L) ASME B30.4 Portal, Tower and Pillar Cranes
- M) ASME B30.5 Mobile and Locomotive Cranes
- N) ASME B30.6 Derricks
- O) ASME B30.7 Base Mounted Drum Hoists
- P) ASME B30.8 Floating Cranes and Floating Derricks
- Q) ASME B30.10 Hooks
- R) ASME B30.11 Monorails and Underhung Cranes
- S) ASME B30.13 Storage/Retrieval (S/R) Machines and Associated Equipment
- T) ASME B30.14 Side Boom Tractor
- U) ASME B30.16 Overhead Hoist (Underhung)
- V) ASME B30.17 Overhead and Gantry Cranes (Top Running Bridge, Single Girder, Underhung Hoist)
- W) ASME B30.20 Below-the-Hook Lifting Devices
- X) ASME B30.22 Articulating Boom Cranes
- Y) ASME B30.23 Personnel Lifting Systems
- Z) GI 2.702 Moving Drilling Rig, High Clearance Equipment/Loads, or Operating Cranes Under or Near Power-Lines
- AA) GI 7.024 Marine and Off-Shore Crane, Hoist and Rigging Operations

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BB)	GI 7.025	Heavy Equipment Operator Testing and Certification
CC)	GI 7.027	Crane Suspended Personnel Platform (Manbasket) Operations
DD)	GI 7.028	Crane Lifts: Types and Procedures
EE)	SAES-B-063	Aviation Obstruction Marking and Lighting
FF)	SAES-M-001	Structural Design Criteria for Non-Building Structures
GG)	12-SAMSS-007	Fabrication of Structural and Miscellaneous Steel
HH)	STD DRWGS	Spreader Beams H-Beams (sheets 001& 002)
II)	STD DRWGS	Round Man Basket 500 kg Capacity Details (sheets 001 & 002) #AA-036970
JJ)	STD DRWGS	Square Man Basket 500 kg Capacity Details (sheets 001 & 002) #AA-036971
KK)	STD DRWGS	Lifting Frames – 2 & 5 Metric Tons Safe Working Load A-Frame (sheet 001)

3.0 SCOPE

This GI covers the inspection of all elevating/lifting equipment operating within Saudi Aramco facilities, on Saudi Aramco jobsites outside of operating facilities, off Saudi Aramco property under a Saudi Aramco contract, and in applicable Saudi Aramco domestic joint venture companies. It also covers all Saudi Aramco and contractor personnel.

4.0 DEFINITIONS

- 4.1 CERTIFIED INSPECTOR – A person certified by the Saudi Aramco Inspection Department to perform inspections and certifications on elevating/lifting equipment (See Paragraph 4.10).
- 4.2 COMPETENT PERSON - A person who, by possession of a recognized pertinent degree 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.
- 4.3 CRANE (FIXED) – A crane with a non-moving, permanent base or foundation.
- 4.4 CRANE (GANTRY) – A crane with a bridge for carrying the trolley or trolleys and is rigidly supported on two (2) or more legs running on fixed rails or other runway.
- 4.5 CRANE (MOBILE) – A crane consisting of a rotating superstructure with a power plant, operating machinery, and boom, mounted on a base and equipped with crawler treads for travel or mounted on a crane carrier equipped with axles and rubber-tired wheels for travel.
- 4.6 DAILY PRE-OPERATIONAL INSPECTION – A documented (if applicable) inspection of cranes carried out by the crane operator daily, prior to use, during shift changes, or whenever operators are changed. (See paragraphs 5.1.1 and 7.1.2 for additional information.) Inspection of other elevating/lifting equipment shall be documented as per Paragraph 5.1.3.
- 4.7 ELEVATING/LIFTING EQUIPMENT – (pertains only to elevating/lifting equipment listed in Sections 6.0 – 18.0 of this GI)
- 4.7.1 Any machine used to raise, lower, and/or suspend a load or personnel (i.e. crane, elevating work platforms, etc.); and/or
- 4.7.2 Any item used to connect a load to a lifting machine (i.e. lifting beam, spreader bar, etc.); and/or

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4.7.3 Any item used to support a load (i.e. crane suspended personnel platform [manbasket], powered platforms/sky climbers, etc.), but which is not in itself capable of providing any movement to raise or lower the load.

4.8 EXTENSIVE REPAIR - Any repair, alteration, or modification to elevating/lifting equipment which is a load bearing and/or load controlling component that could affect the load.

4.9 INITIAL INSPECTION – An acceptance inspection carried out on new, extensively repaired, modified, or altered equipment.

4.10 INSPECTION DEPARTMENT – The Saudi Aramco organization responsible for approving contractor agencies to inspect and certify all elevating/lifting equipment used within Saudi Aramco facilities, on Saudi Aramco jobsites outside of operating facilities, or off Saudi Aramco property under a Saudi Aramco contract, and in applicable Saudi Aramco domestic joint venture companies. Certified inspectors include Inspection Department designees and/or all persons certified by the Inspection Department.

4.11 PERIODIC INSPECTION - A documented inspection carried out by a certified inspector (Usually quarterly, semi-annually, annually, or, in the case of crawler lattice boom cranes, after relocation or boom re-configuration).

4.12 RATED CAPACITY [LOAD] LIMITER (RCL) - A device that automatically monitors radius, load weight, and load rating and prevents movement of a crane, which would result in an overload condition.

4.13 TEST CERTIFICATION – A document required for any new elevating/lifting equipment or for any elevating/lifting equipment that has been extensively repaired, modified, or altered. This document shall state that the manufacture of the equipment, or repairs to the equipment, have been completed in compliance with the manufacturer's specifications and recommendations, applicable ASME standards, Saudi Aramco standards, and by utilizing a competent person.

4.14 USER - The Saudi Aramco proponent department or other organization authorized to act on behalf of the Saudi Aramco proponent department.

4.15 VISUAL INSPECTION – A daily walk-around of a piece of elevating/lifting by a competent person (i.e. Saudi Aramco certified operator) for the purpose of inspecting the equipment before use. If applicable, the visual inspection shall include operating the equipment (See Paragraph 5.1.2).

5.0 INSPECTION**5.1 Daily Pre-Operational Inspections**

5.1.1 Pre-operational inspections shall be performed by the crane operator daily, prior to use, during shift changes, or whenever operators are changed, using the appropriate daily inspection checklist (See Paragraph 7.1.2 and GI 7.028 for additional information).

5.1.2 The USER shall designate a competent person to carry out a daily pre-operational inspection on all other elevating/lifting equipment listed in this GI, using a checklist (if applicable) developed by the USER in accordance with the manufacturer's operator's manual and the relevant standards. The checklist could include, but is not limited to, the following:

- (a) Control functions
- (b) Safety devices
- (c) Hydraulic system
- (d) Hooks and lifting tackle

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- (e) Wire rope and reeving
- (f) Electrical system for proper operation
- (g) Tires, wheels, dollies, or tracks
- (h) Air system
- (i) Coolant system
- (j) Valid Saudi Aramco safety inspection sticker
- (k) Safety stickers recommended by the equipment manufacturer
- (l) Hour meter and/or odometer
- (m) Any other items recommended by the equipment manufacturer

5.1.3 Deficiencies for cranes shall be reported on the daily pre-operational inspection checklists. Deficiencies for other elevating/lifting equipment shall be reported immediately to the operator's supervisor in writing.

5.1.4 Deficiencies, reported in the daily pre-operational inspection that could affect the safe operation of elevating/lifting equipment, shall be corrected prior to use.

5.1.5 The USER shall establish a written preventive maintenance and repair program.

5.2 Periodic Inspections

5.2.1 The USER shall establish a schedule for periodic inspections of elevating/lifting equipment in accordance with the relevant standards.

5.2.2 The USER shall request a certified inspector to perform periodic inspections on elevating/lifting equipment operated on Saudi Aramco projects and facilities. Periodic inspections shall be carried out by a certified inspector in accordance with appropriate standards referenced in this GI. A certified inspector shall witness all proof-load tests.

5.2.3 USERS shall request periodic inspections of all elevating/lifting by notifying a certified inspector. The notification shall be at least three (3) days prior to the due date of the inspection. Remote area inspections shall also require at least three (3) days notification prior to the due date of inspection.

5.2.4 Inspection frequencies for elevating/lifting equipment shall be determined by the Inspection Department.

5.2.5 No elevating/lifting equipment shall be used unless it has been certified with a valid Saudi Aramco safety inspection sticker (See Paragraph 17.5 for equipment package information).

5.2.6 Elevating/lifting equipment that has been involved in an accident, causing damage to the elevating/lifting equipment, shall have its Saudi Aramco safety inspection sticker immediately removed by the USER. The safety inspection sticker shall be given to the accident investigation committee. The elevating/lifting equipment shall not be used until it has passed a re-inspection. A proof-load test may also be required if the damage affects a load bearing member. All slings, wire ropes, and other rigging equipment directly involved in the accident shall be carefully examined by a certified inspector to determine damage.

5.2.7 All elevating/lifting equipment inspections shall be performed by a certified inspector using an internally developed inspection checklist developed by the Inspection Department.

5.2.8 The USER shall provide the necessary test weights, equipment, rigging hardware, and at least one (1) competent person to serve as an operator for initial, periodic, and any additional proof-load tests.

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5.2.9 Elevating/lifting equipment failing the periodic inspection shall be removed from service until all deficiencies have been corrected, and the elevating/lifting equipment re-inspected and re-certified by a certified inspector. Repairs shall conform to the manufacturer's instructions and the relevant standards.

5.3 Initial Inspection

5.3.1 All new elevating/lifting equipment or extensively repaired, modified, or altered elevating/lifting equipment shall have an initial inspection and a proof-load test (if required) prior to returning to service. The proof-load test shall be conducted by the USER and witnessed by a certified inspector.

5.3.2 All new elevating/lifting equipment requires a manufacturer's proof-load test certification to be furnished by the USER to a certified inspector prior to the initial inspection.

5.3.3 The initial inspection shall be conducted according to the manufacturer's recommendations and relevant standards.

5.4 Inspection and Testing Requirements – General

5.4.1 The USER shall furnish a certified inspector with the manufacturer's assembly, operating, and maintenance instructions for the elevating/lifting equipment (in the English language) upon request. The USER of the elevating/lifting equipment shall keep copies of these instructions, along with the record of repairs or modifications for the life of the equipment.

5.4.2 Any extensive repair, modification, or alteration to any elevating/lifting equipment requires a manufacturer's test certification to be furnished by the USER to a certified inspector upon request. This certification shall state that the repairs were completed in compliance with the manufacturer's specifications and recommendations, applicable ASME standards, Saudi Aramco standards, and by utilizing a competent person.

NOTE #1: A crane jib is considered to be an extension of the main boom and repairs to a jib shall be treated in the same way.

5.4.3 Where the re-rating of elevating/lifting equipment is necessary (e.g. crawlers, truck and wheel-mounted cranes, mounting a mobile crane on an offshore structure, etc.), the elevating/lifting equipment shall be proof-load tested in accordance with SAE J765 and other relevant standards. All certification proof-load tests shall be witnessed by a certified inspector.

5.4.4 When a proof-load test is required, the USER shall develop a proof-load test procedure and submit it to the Inspection Department for review and comment. After comments have been incorporated, the test date shall be scheduled no later than three (3) days from final submittal.

5.4.5 The proof-load test shall be carried out by a competent person and witnessed by a certified inspector.

5.5 Record Keeping

5.5.1 Records of daily pre-operational inspections for all applicable elevating/lifting equipment shall be maintained by the USER for a minimum of three (3) months and made available for assessment. Random assessments to verify daily pre-operational inspections shall be performed by a certified inspector. Failure to maintain these records shall result in immediate sticker or certification invalidation.

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5.5.2 Records of periodic inspections performed by a certified inspector shall be maintained by the USER for two (2) years. Records of rejected elevating/lifting equipment shall be maintained electronically by the Inspection Department for three (3) years.

5.6 Safety

5.6.1 A copy of the manufacturer's operator's manual (in the English language) shall be made available by the USER responsible for the safe operation of any elevating/lifting equipment to the operator, upon request by the operator.

5.6.2 A sign shall be posted on each crane, warning the operator not to rely solely on any automatic device (i.e. Rated Capacity Limiter [RCL]) as a substitute for safe operating practices.

5.6.3 All warning signs required by applicable standards shall be posted in the English language.

6.0 MARINE & OFFSHORE CRANES (MOUNTED ON BARGES, BOATS, and PLATFORMS) - Inspection and Testing Requirements shall be per ASME B30.3, ASME B30.4, ASME B30.8, ASME B30.22, API Spec. 2C, &/or API RP 2D, as applicable

6.1 Inspection Of Offshore Cranes

6.1.1 Offshore cranes (including fixed tower cranes) shall receive a periodic inspection every ninety (90) days or as determined by the Inspection Department.

6.2 Classification Societies

6.2.1 Offshore barge and boat cranes shall be approved and certified by the classification society under which the vessel is registered, and shall be verified during the inspection.

6.2.2 All classification societies shall be subject to Saudi Aramco approval.

6.2.3 Where no classification society is available, the API Spec 2C (Specification for Offshore Cranes), the ASME B30.8 (Floating Cranes and Floating Derricks), or the ASME B30.22 (Articulating Boom Cranes) standards shall apply.

6.3 Pedestal Cranes

6.3.1 Pedestal cranes installed on offshore barges or boats shall be designed to comply with the requirements of the appropriate classification society or API Spec. 2C.

6.3.2 Hull structural drawings for connecting foundations of pedestal cranes shall be approved by the appropriate classification society under which the vessel is registered.

6.3.3 For unregistered vessels, a qualified naval architect shall approve foundation drawings in addition to design calculations.

6.3.4 Load test certificates shall be provided by the appropriate classification society and certified by a competent engineer.

6.3.5 Weights associated with all cranes shall be accounted for in the overall lightship displacement, and reflected in the operating manual.

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6.3.6 Trim-and-stability books (in the English language) shall be used to install and operate pedestal cranes installed on offshore barges or boats. They shall comply with the requirements of IMO SOLAS regulations showing typical loading conditions that take into account the specific crane operations.

6.4 Deck Mounted Mobile Cranes

6.4.1 Deck mounted mobile cranes shall only be installed on barges or boats with decks of sufficient strength to support wheel, fully extended outrigger, or track loading.

6.4.2 A certified inspector shall verify that the appropriate classification society has approved the deck structural drawings. The drawings shall clearly state the deck strength that is required to support mobile crane operations. The drawings shall also state the maximum permissible bearing pressure on deck plating and show the boundary of all permissible crane operating areas.

6.4.3 Deck mounted mobile cranes installed on barges or boats shall comply with GI 7.024.

6.4.4 Trim-and-stability books (in the English language) shall be used to install and operate deck mounted mobile cranes on offshore barges or boats. They shall comply with the requirements of IMO SOLAS regulations showing typical loading conditions that take into account the specific crane operations.

6.4.5 Mobile cranes and their dynamic load charts, installed on barges or boats, shall be approved by a competent engineer for offshore use.

6.4.6 All main boom sections, including power pinned section, shall be extended and inspected for corrosion, proper operation, and damage, prior to use and during periodic inspections.

7.0 MOBILE CRANES – ONSHORE - Inspection and Testing Requirements shall be per ASME B30.57.1 Inspection of Onshore Mobile Cranes

7.1.1 Mobile cranes shall receive a periodic inspection every ninety (90) days or as determined by the Inspection Department.

7.1.2 Each Saudi Aramco crane operator shall perform a daily pre-operational safety inspection, prior to operating his assigned crane, using Saudi Aramco form SA 9466. Any hazardous safety deficiency shall require corrective maintenance prior to the crane being used. Records of daily pre-operational inspections shall be maintained by the USER for a minimum of three (3) months and made available for assessment (See Paragraph 5.5.1 and GI 7.028 for more information).

Each contractor crane operator shall perform a daily pre-operational safety inspection, prior to operating his assigned crane, using the crane manufacturer's daily inspection checklist or Saudi Aramco form SA 9466. Any hazardous safety deficiency shall require corrective maintenance prior to the crane being used. Records of daily pre-operational inspections shall be maintained by the USER for a minimum of three (3) months and made available for assessment (See Paragraph 5.5.1 and GI 7.028 for more information).

NOTE #2: Form SA 9466 can be obtained from the USER, found as Attachment #2 in GI 7.028, and/or located on the Saudi Aramco website.

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- 7.1.3 The USER shall furnish a certified inspector representative the appropriate manufacturer's assembly, operating, and maintenance instructions for the crane (in the English language) upon request.
- 7.1.4 All main boom sections, including power pinned sections, shall be extended and inspected for corrosion, proper operation, and damage, prior to use and during the periodic inspections.
- 7.1.5 If equipped, swingaway boom sections shall be inspected for corrosion and damage, prior to use and during the periodic inspections.
- 7.1.6 Any assembling, disassembling, or change of lattice boom configuration requires re-inspection by a certified inspector before the crane can be re-mobilized to perform any crane lifts.

7.2 Load Charts and Signs

- 7.2.1 All cranes shall have load charts available in the cabs stating lift capacity based on boom length, attachments, boom angle, outrigger configuration, radius, and lift quadrant. Load charts, if permanently attached to the crane cab wall, shall be positioned for easy visibility to the operator while he is seated at his control station. Environmentally protected load chart manuals may be approved as an alternate to plaques (All plaques and manuals shall be in the English language).
- 7.2.2 A sign warning of the danger of overhead power-lines shall be mounted on each crane where it can be easily seen by the operator. This sign shall warn that the crane shall not be operated if any part of the crane will come within the following minimum distances of energized power-lines:

Line Voltage	Absolute Limit of Approach
Up to 50,000 volts	3.0 meters/10 feet
50,000 to 250,000 volts	6.1 meters/20 feet
Over 250,000 volts	7.6 meters/25 feet

7.3 Safety Devices

- 7.3.1 All cranes working for Saudi Aramco (Company-owned and contractor cranes), with the exception of articulating boom cranes (boom trucks), shall be equipped with properly working Rated Capacity [load] Limiters (RCLs) and anti-two-block devices or two-block damage prevention features for all points of two-blocking (i.e., jibs, extensions, etc.).
- 7.3.2 All cranes shall be equipped with an accurate level indicator
- 7.3.3 All cranes shall be equipped with the following safety items: fire extinguisher, back-up alarm, spark arrestor (for cranes that are without an emission controlled engine system), and, if applicable, seat belts for highway driving.
- 7.3.4 Cranes extending more than 60 meters (197 feet) above ground level shall have a permanently mounted aircraft warning light operating 24 hours a day. This light shall be a medium intensity, flashing white obstruction light during daytime hours with automatically selected reduced intensities for twilight and nighttime hours. The warning light shall be placed at the highest point of the crane.

8.0 FIXED CRANES AND HOISTS – ONSHORE - Inspection and Testing Requirements shall be per ASME B30.2, B30.3, B30.4, B30.6, B30.7, B30.11, B30.16, & B30.17

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8.1 Onshore fixed cranes and hoists, covered by ASME Standards, shall receive a periodic annual inspection or as determined by the Inspection Department.

** 8.2 Onshore tower cranes (fixed or on rails) shall receive a periodic inspection every ninety (90) days or as determined by the Inspection Department.

** 8.3 Onshore cranes and hoists (fixed or on rails), including, but not limited to, tower cranes, gantry cranes, derrick cranes, pedestal cranes, and overhead cranes, shall meet all Saudi Aramco specifications/requirements for the supporting steel frames and foundations. The USER shall submit the design package to Saudi Aramco Consulting Services Department for review, prior to certification by a certified inspector.

8.4 Any onshore fixed crane that is relocated, repaired, modified, or altered shall be retested prior to use in accordance with this GI.

8.5 A visual inspection shall be performed by a competent person designated by the USER prior to each use.

NOTE #3: See Section 6.0 for marine and offshore cranes.

9.0 **SIDE BOOM TRACTORS** - Inspection and Testing Requirements shall be per ASME B30.14

9.1 Side boom tractors shall receive a periodic inspection every ninety (90) days or as determined by the Inspection Department.

9.2 A visual inspection shall be performed by a competent person designated by the USER prior to each use.

10.0 **ELEVATORS/ESCALATORS** - Inspection and Testing Requirements shall be per ASME A17.1

10.1 Elevators and escalators shall receive a periodic annual inspection or as determined by the Inspection Department.

10.2 Car braking system safeties shall be tested at three (3) year intervals or as determined by the Inspection Department.

10.3 Counterweight braking system safeties shall be tested at five (5) year intervals or as determined by the Inspection Department.

10.4 The USER shall furnish a certified inspector with the appropriate manufacturer's assembly, operating, and maintenance instructions (in the English language) upon request.

11.0 **POWERED PLATFORMS/SKY CLIMBERS** - Inspection and Testing Requirements shall be per ASME A120.1

11.1 Powered platforms/sky climbers shall receive a periodic inspection every ninety (90) days or as determined by the Inspection Department.

11.2 The initial inspection and proof-load test shall be carried out whenever a powered platform/sky climber is installed or relocated. The proof-load test shall be conducted by the USER and witnessed by a certified inspector.

11.3 Powered platforms for permanent installations shall be used according to the requirements of ASME A120.1.

11.4 A visual inspection shall be performed by a competent person designated by the USER prior to each use.

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AFWPAGE NO.
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12.1 Elevating work platforms shall receive a periodic inspection every six (6) months or as determined by the Inspection Department.

12.2 A visual inspection shall be performed by a competent person designated by the USER prior to each use.

13.0 VEHICLE MOUNTED ELEVATING AND ROTATING AERIAL DEVICES - Inspection and Testing Requirements shall be per ASME 92.2

13.1 Vehicle mounted elevating and rotating aerial devices shall receive a periodic inspection every six (6) months or as determined by the Inspection Department.

13.2 The USER is solely responsible for developing a periodic inspection and testing program on the electrical insulating components and systems per ASME. The results of the electrical testing and inspection shall be made available to a certified inspector for review prior to performing the periodic mechanical inspection.

13.3 A visual inspection shall be performed by a competent person designated by the USER prior to each use.

14.0 ARTICULATING BOOM CRANES - Inspection and Testing Requirements shall be per ASME B30.22

14.1 Articulating boom cranes shall receive a periodic inspection every ninety (90) days or as determined by the Inspection Department.

14.2 Articulating boom cranes, adapted for marine and offshore use, shall meet the stationary installation requirements referenced above.

14.3 A visual inspection shall be performed by a competent person designated by the USER prior to each use.

15.0 STORAGE/RETRIEVAL MACHINES - Inspection and Testing Requirements shall be per ASME B30.13

15.1 Storage/retrieval machines shall receive a periodic annual inspection or as determined by the Inspection Department.

15.2 A visual inspection shall be performed by a competent person designated by the USER prior to each use.

16.0 CRANE SUSPENDED PERSONNEL PLATFORMS (MANBASKETS) - Inspection and Testing Requirements shall be per ASME B30.5 & B30.23

16.1 Crane suspended personnel platforms (manbaskets) shall receive a periodic inspection every six (6) months, when dedicated rigging has changed, or as determined by the Inspection Department (See GI 7.027 for additional information).

* 16.2 Crane suspended personnel platforms (manbaskets) shall meet all Saudi Aramco fabrication specifications/requirements (See Section 2.0, (II) and (JJ), and GI 7.027 for additional information). The USER

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may also be required to submit additional design to the Saudi Aramco Consulting Services Department for review, prior to certification by a certified inspector.

16.3 Daily pre-operational inspections shall be carried out by a Rigger-I or Rigger-II in accordance with GI 7.027.

17.0 LIFTING/SPREADER BEAMS - Inspection and Testing Requirements shall be per ASME B30.20

17.1 Lifting/spreader beams shall receive a periodic inspection every six (6) months, or as determined by the Inspection Department.

17.2 Lifting/spreader beams require an initial proof-load test of 125% of the rated safe working load. This test shall be witnessed by a certified inspector.

* 17.3 Lifting/spreader beams shall meet all Saudi Aramco fabrication specifications/requirements (See Section 2.0, (HH), for additional information). The USER may also be required to submit additional design to the Saudi Aramco Consulting Services Department for review, prior to certification by a certified inspector.

17.4 A visual inspection shall be performed by a Saudi Aramco certified rigger prior to each lift.

17.5 Lifting/spreader beams, custom made to fit and provided by the manufacturer as part of a specialized equipment package, shall not be required to be Saudi Aramco certified while lifting that piece of equipment. Proof-load test certificates shall accompany all such lifting/spreader beams and shall be maintained at the site by the USER. However, all Saudi Aramco inspection requirements shall be followed if the lifting/spreader beam is used to lift material not included as part of the package.

18.0 A-FRAMES/GANTRIES - Inspection and Testing Requirements shall be per ASME B30.11 & B30.16

18.1 A-frames/gantries shall receive a periodic annual inspection or as determined by the Inspection Department.

* 18.2 A-frames/gantries shall meet all Saudi Aramco fabrication specification/requirements (See Section 2.0 (KK) for additional information). The USER may also be required to submit additional design to the Saudi Aramco Consulting Services Department for review, prior to certification by a certified inspector.

18.3 A visual inspection shall be performed by a competent person designated by the USER prior to each use.

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ISSUING ORG. INSPECTION DEPARTMENT

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ELEVATING/LIFTING EQUIPMENTAPPROVAL
AFWPAGE NO.
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Recommended by: _____
Manager
Inspection Department

Concurred by: _____
Manager
Loss Prevention Department

Concurred by: _____
Manager
Roads & Heavy Equipment Department

Concurred by: _____
Director
Industrial Training Department

Concurred by: _____
Executive Director
Industrial Services

Approved by: _____
Senior Vice President
Operations Services