

2600SEG124
SAFETY STANDARD FOR CRANE OPERATIONS

APPENDIX A SAFETY PROCEDURES

1- Operators.

- 1.1 Only the following personnel shall operate cranes:
 - 1.1.1. Persons certified by the RHSI Section as crane operators.
 - 1.1.2. Apprentice workers under the direct supervision of a certified operator.
 - 1.1.3. Trained and qualified maintenance and testing personnel (when necessary to carry out their duties, and in no case shall the equipment be loaded).
 - 1.1.4. Trained and qualified crane inspectors.

2- Requirements of the Operators:

- 2.1 The operators shall comply with the following requirements:
 - 2.1.1 Pass a written exam, and a practical one of the specific type of equipment that he/she shall operate.
 - 2.1.2 The operator shall have at least a 20/30 vision in one eye, and a 20/50 in the other eye, with or without glasses.
 - 2.1.3 Distinguish between red, green, and yellow colors.
 - 2.1.4 No hearing problems or history of heart condition, epilepsy, or diabetes.
 - 2.1.5 Signs of physical handicap or emotional instability that could cause danger to the operator or to others or that, in the opinion of the examiner, could interfere with the operator's performance shall be sufficient cause to disqualify him/her. In such cases, medical opinions and clinical or specialized medical testing may be required.

3- Conduct of the Operators:

- 3.1 The operator shall not incur in any practice whatsoever that shall distract his/her attention while operating the crane.
- 3.2 The operator shall refrain from using the cell phone while operating the equipment. Includes stopping the operation to answer the cell phone.
- 3.3 The crane operator shall utilize personal protection equipment that corresponds to the task.
- 3.4 The established speed limits for the area shall be observed.
- 3.5 An operator who is physically or mentally disabled shall not operate the equipment.
- 3.6 If the equipment has a RED warning sign of "DANGER, DO NOT OPERATE," such equipment shall not be operated for work until whoever posted the sign or a person authorized by (RHSI) removes it, except when the equipment is operated by qualified operators and/or mechanics during its repair. Administrative measures shall be taken against employees who violate this procedure.
- ~~3.7~~ The operator shall respond to the signals made to him/her by the person leading the hoisting operation or by designated signaling person. When a signalman or a person is not required to follow the operation, the operator shall then be responsible for the hoisting. However, the operator shall at all times obey the signals to stop the operation.
- 3.8 Before leaving the crane unattended, the operator shall:
 - 3.8.1 Lower any load, basket, hoisting magnet, or other device to the ground.
 - 3.8.2 Deactivate the master clutch.
 - 3.8.3 Set the devices for travel, for oscillation or swinging, the boom brakes, or others.
 - 3.8.4 Place controls in off or neutral position.
 - 3.8.5 Apply the corresponding brakes to avoid any movement or accidental motion.
 - 3.8.6 Stop the motor.

2600SEG124 SAFETY STANDARD FOR CRANE OPERATIONS

There can be an exception to the preceding point if the crane operation is frequently interrupted during a shift, and the operator has to abandon the crane. In these circumstances, the motor must be kept running and the following conditions shall apply:

- 3.8.6.1 The operator shall be situated where he can observe if someone enters the crane without authorization.
- 3.8.6.2 The crane shall be positioned within an area where it is protected against people entering it without authorization.
- 3.8.6.3 When there is a local alarm due to storm or bad weather, the manufacturer's recommendations to protect the crane shall be followed.
- 3.8.7 Before shutting off or starting the motor, the operator shall ensure that all controls are in off or neutral position, and that all personnel is at a distance.
- 3.8.8 If there is a power failure during the operations, the operator shall:
 - 3.8.8.1 If practical, place the suspended load on the ground.
 - 3.8.8.2 Set all brakes or shutdown devices.
 - 3.8.8.3 Move all clutches or other power controls to off or neutral position.
- 3.8.9 The operator shall know the equipment and how to properly care for it. If it is necessary to make adjustments or repairs, the operator shall promptly advise the designated person, and also the following operator.
- 3.8.10 All controls shall be tested by the operator at the beginning of a new shift. If one of the controls is not properly functioning, it must be adjusted or repaired before commencing operations.

4- General Provisions:

- 4.1 To assemble and disassemble the boom, the procedures stipulated by the manufacturer shall be followed. If at any moment there is a need to deviate from the manufacturer's procedures, blocks must be located on the boom or sections of the boom to avoid its inadvertent fall.
- 4.2 Each outrigger shall be in the view of the operator or signalmen during its extension.
- 4.3 All cranes shall have a fire extinguisher available that is at least 10 lb., type BC or ABC; the operator shall assure that it has the correct load and the safety pin. The supervisor shall ascertain that the operators are knowledgeable in the use of the extinguishers.
- 4.4 When working close to energized lines of 50KV or less, the minimum distance between the line and the part of the crane closest to the line shall be 10 feet. When such condition exists, a safe work analysis shall be performed.

5- Hoisting and Handling of Load:

- 5.1 No crane shall be loaded with more weight than that specified in the nominal load capacity charge, except for testing purposes.
- 5.2 Loads shall only be handled in accordance with the equipment capacity chart.
- 5.3 When a hoist is performed, the surface over which the crane is operated shall be stable and firm. The crane shall not have more than a 1 degree inclination.
- 5.4 Before performing a critical hoist, the operator shall be responsible for planning the procedures to be followed, and shall document them in a hoisting plan format.

2600SEG124
SAFETY STANDARD FOR CRANE OPERATIONS

- 5.5 The operator shall not abandon the controls while the load is suspended.
- 5.6 If the load must remain suspended for a considerable period of time, the operator shall avoid the hoisting drum to rotate in descending direction, activating the brake. The hoisting brakes of the boom shall be secured, and the dog applied, if appropriate.
- 5.7 The operator shall test the brakes each time he/she handles a critical load, hoisting it a few inches and applying the brakes.
- 5.8 The cables shall be in good condition. When dealing with multiple lines, the lines shall not be wound one on top of the others.
- 5.9 Never allow a person to stand or walk under the hooks.
- 5.10 Loads shall not be handled over the crane cabin, except when specified by the crane manufacturer.
- 5.11 The hook shall be brought over the center of the load gravity in such a manner as to minimize swinging
- 5.12 In no case shall cranes be utilized to drag or free (unjam) loads.
- 5.13 Under no circumstance shall the drum have l(RHSH) than three cable turns.
- 5.14 The unloaded crane shall travel with the boom at low level and aligned with the motion direction.
- 5.15 When a crane is in motion with load, it shall be assigned a person to guide the position of the load and the boom, the route, the velocity, and the motions. To control the load motion, a safety line shall be utilized, except when the use of one constitutes a danger.
- 5.16 Use a horn to warn others of its presence, especially when circulating with load.
- 5.17 When two or more cranes are used to hoist a load, a designated person shall be responsible for the operation. Such person shall analyze the operation and instruct all personnel participating in the operation.

6. Fuel Load

- 6.1 Smoking is not allowed when handling fuel.
- 6.2 The use of cell phones, radios or other equipment that could produce sparks or open flame is prohibited.
- 6.3 When fuel loading, the crane motor shall be turned off.
- 6.4 When there is a need to fuel load the crane using a portable container, a container with an automatic shutoff cap shall be used.