



MOC Bulletin 2012-04



April 30, 2012

Maintenance – Immediate Action Required

Background

A recent incident occurred while recovering a small boat from a National Oceanic and Atmospheric Administration (NOAA) ship using a cargo deck crane. A catastrophic failure of the crane's wire rope caused the unmanned vessel to fall approximately 12 feet into the water. No injuries were reported, and the small boat sustained minimal damage. The investigation of this incident is ongoing, but crucial information gathered from the initial investigation requires notice and immediate action by all ships that could have similar conditions.

Immediate Investigative Actions Required by Ship's Personnel, and where applicable, Shoreside Commands that use Weight Lifting Apparatus

1. Locate manufacturers' technical manuals for all weight lifting apparatus aboard ship; these manuals should be stored aboard the ship at first opportunity if they are currently stored ashore. These manuals should be referenced when scheduling and performing preventive maintenance; performing repairs and/or replacing any crane parts or wire rope.
2. All commands are instructed to inspect all lifting apparatus to ensure the correctly sized wire rope is installed per manufacturers' recommendations (diameter, number of strands, number of wires per strand, and grade) including correct configuration. The Safe Working Load (SWL) of the wire rope should equal or exceed the maximum SWL stenciled on the lifting apparatus.
3. Ensure the Overhaul ball (headache ball) attached to any lifting apparatus is appropriately sized in accordance with manufacturer recommendations. The size of the headache ball should be stamped on the ball and is essential in keeping the wire rope at a constant tension throughout the wire ropes travel and therefore reducing the possibility of wire deformation and kinking.
4. Ensure accurate records of previous weight testing and inspections are kept on board and recorded in the ship's machinery history records, or retained on site for shore side facilities. Retain all certificates of inspection and weight testing provided by a third party. Newly purchased or refitted wire rope should be tested to 125% of the SWL prior to placing the crane back in service. Contact your port engineer to accomplish any tests or schedule during next repair period.
5. Ensure crane operators and maintainers are trained in the inspection, testing, and preventive maintenance of all weight handling devices. Recommend at least one crew member onboard, who is responsible for operation of lifting equipment, attend formal crane and rigging training that is accredited by the American Bureau of Shipping or Occupational Safety and Health Administration; contact Safety Training and Environmental Management (STEM), Kevin Fleming, for training.
6. Ships shall provide copies of documentation for their small boats weight-tested within the past 12 months. If small boats carried aboard have not been weight tested within the past 12 months, a weight test is required to be performed upon the first opportunity. When conducting the weight test, an inventory of the boat's contents, including any liquid amounts in tanks (fuel and water), shall be included in records for future weight comparison. Records of previous tests shall be compared to determine weight growth. Any deviation from the previous weight test must be investigated and explained. Contact the small boat engineer for assistance if unable to determine the cause of weight deviation.
7. Ships' crew shall review crane securing procedures and remove any language that requires a load on the wire rope in excess of the Overhaul Ball. Cranes secured for sea should be stowed to minimize lateral movement within their respective cradle, and the wire rope should be stored with the least amount of tension to ensure a taut wire.

8. If a crane is used to launch and recover a small boat, review procedures to ensure personnel are located out of danger zones while the boat is in the air. This includes snap back areas for tag lines and sea painter if attached. Tag lines should be controlled through a cleat or fixed object to maximize control throughout the boat's travel on and off the ship.
9. No weight lifting apparatus shall be used to lift a load if the weight of the load exceeds the Safe Working Load (SWL) of the lifting apparatus in its current configuration.

Confirmation Required

Please accomplish the above actions immediately and send a confirming e-mail to **Doug Smith** with a copy to **CDR Debora Barr** and **your port engineer** by (May 11, 2012) containing the following information:


1. Are all relevant technical manuals on board the ship?
2. Is the wire rope on each crane the recommended size per manufacturer's specifications?
3. Is the headache ball on each crane the recommended size per manufacturer's specifications?
4. Attach copies of any documentation for the last time each small boat was weight tested.

If all actions cannot be accomplished immediately, provide a planned completion date for all items.

1. Outstanding action Items will be added to the ship's corrective action plan (CAP) for tracking.

If small boats have not been weight-tested in the past year, schedule weight test at next in port opportunity through your port engineer.

As the investigation of this incident is completed, further information will be forthcoming.



RDML Michael S. Devany, NOAA
Director, Marine and Aviation Operations Centers

Bulletin Expiration Date: April 30, 2013

Responsible Position: Chief, Safety and Environmental Compliance Division