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TO MEMBERS OF THE ASSOCIATION

Dear Member:

LOSS PREVENTION: SLIPS, TRIPS AND FALLS

Your Managers are pleased to announce a new initiative aimed at preventing injuries caused by slips, trips and falls, the leading source of injuries on board ships.

A greater awareness of the hazards which can lead to slips, trips and falls, and the implementation of effective measures to prevent them, are key to reducing their frequency.

The first two case studies are presented as attached. Members are recommended to refer to the Club's new website section on slips, trips and falls at:

<http://www.american-club.com/page/slips-trips-falls>

This section of the Club's website will be periodically updated with new case studies and other relevant information concerning the prevention of slips, trips and falls. Members will henceforward be advised of such updates by way of Member Alert.

Yours faithfully,

Joseph E.M. Hughes, Chairman & CEO
Shipowners Claims Bureau, Inc., Managers for
THE AMERICAN CLUB

Wise up before you rise up!

Consider the risks of personal fall arrest equipment that is improperly maintained.

Description of Incident: During routine maintenance work aloft while at sea, a 41 year old able bodied seaman was seriously injured after a near fatal fall from a height of 13 feet (4 meters) onto the cross deck. The fall was ultimately determined to be the consequence of the lanyard on his fall arrest equipment breaking under tension. The safety harness was found to be overused and had gone unchecked as evidence had shown upon review of the maintenance records for life saving appliances.



Actual Injuries: *The seafarer sustained multiple fractures to his pelvis, left wrist, ribs and a ruptured spleen.* The injury to his pelvis required both surgical and external stabilization.

Potential Risks: *Serious bodily injury or death.* In the event of a fall, it is critical that personal fall arrest equipment has been properly donned, fully functional and reliable. For this reason, personal fall protection equipment must be inspected regularly and checked to be fully functional before each use. Improper storage and care for fall this equipment will increase the likelihood that the next piece of equipment that your shipmate picks up is dangerously weakened.

Recommendations

Equipment

- *Use a full-body harness with a shock-absorbing lanyard or a retractable lifeline.* A full-body harness distributes the fall forces throughout the body and reduces the chances of injury. A “body belt” fall protection device concentrates any fall related forces into the abdomen area. The shock-absorbing lanyard decreases the total fall arresting forces.
- *Only rig a full body harnesses and use fiber lines intended for use as personal fall arrest equipment.* Only personal fall arrest equipment designed for use should be used for working aloft.

Storage

- *Properly store personal fall arrest equipment indoors in a clean, cool, dry place, and hung up if possible.*
- *Personal fall arrest equipment should not be left lying around a jobsite.* Exposure to rain, heat, freezing temperatures, and direct sunlight can potentially damage the equipment. Direct sunlight or exposure to heat sources can cause weakening to the materials that make up the harness and lanyard making them susceptible to failure.

- *Ensure the protection of personal fall arrest equipment by not exposing or storing nearby heat sources, chemical products, where fumes are present, or near sharp objects.*

Cleaning

- *When cleaning personal fall arrest equipment, use a sponge or rag to spot clean harnesses as necessary with warm water and non-corrosive laundry or dish soap, and then hang to dry in a cool dry place. Harnesses should not be soaked in water or cleaned with any agents containing bleach, chlorine, or corrosive or abrasive materials.*

Inspect

- *Incorporate visual checks and inventories of personal fall arrest equipment into your regular safety equipment inspection regime. Inspect harnesses and shock cords regularly as a part of the normal safety equipment check routine. Ensure they are in proper condition, free of wear and tear, and clean and ready for use.*
- *Personal fall arrest equipment found to be damaged, heavily worn, or overused should be removed from the inventory to ensure it is not mistakenly used by the crew.*

Working aloft procedures

- *The ship's safety management system (SMS) should have procedures that include a risk assessment for working aloft. At a minimum the procedures should consider the following:*
 - *Communication.* The officer in charge should communicate the risks of injury that could occur during the exercise to the crewmen who are to go aloft.
 - *Evaluation.* Consider any potential hazards of working aloft, for example, if working aloft during inclement weather conditions.
 - *Safeguarding.* Ensure that safeguards are in place prior to the seaman going aloft. For example, a crewman going aloft on the flying bridge or mast will require radio equipment to be switched off and proper signage posted. It also may be necessary to rope off and post advisories in the area underneath a job aloft as a precaution for dropped tools or debris.
 - *Visual checks.* It is important that all of the personal fall arrest equipment to be used is examined prior to commencing work and found in a good working condition.
 - *Supervision.* The ship's SMS should include procedures for jobs performed aloft and require the Master's approval and adequate supervision. A crewmember keeping watch may be able assist in hoisting to throwing a lifebuoy in an emergency situation.
 - *Further consideration.* A written Safety Job Assessment (SJA) or Job Hazard Analysis (JHA) should be considered as a prelude to the Permit to Work for working aloft. SJA or JHA must be done for certain high risk tasks such as working aloft, confined space entries and hot work. The Master should review and approve the SJA or JHA prior to signing the Permit to Work.
- *Crew members should not go aloft if:*
 - they are not properly trained and familiar with the safe and proper use of the ship's personal fall arrest equipment;
 - they are not appropriately or fully aware of the risks associated tasks to be performed;
 - they have not taken precautionary measures;

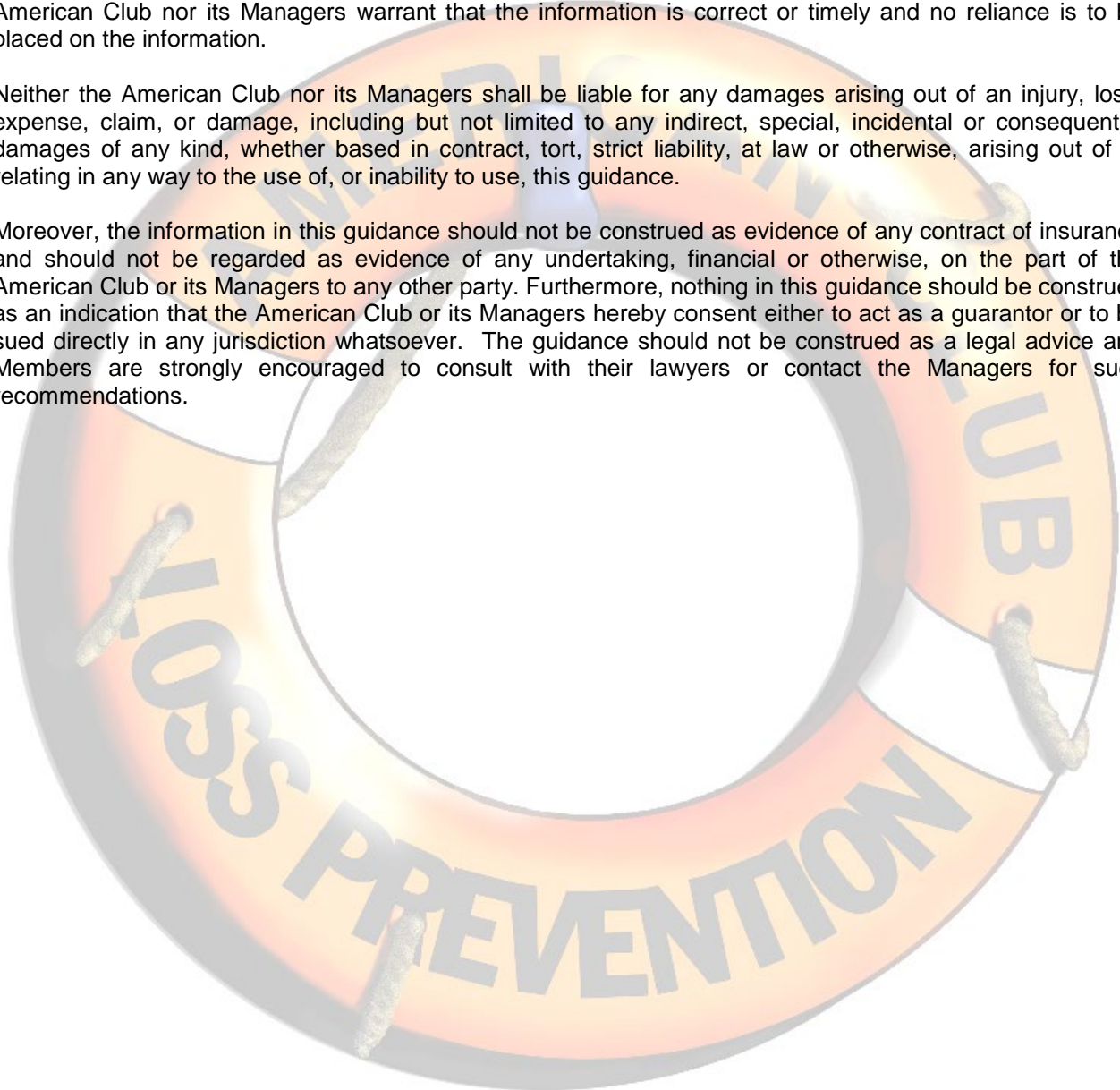
- they have not received approval from the Master for the tasks to be performed; and
- there is inadequate supervision available while working aloft.

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Fix it before the fall!

Consider the risks of falling from heights below deck.

While ascending from a bulk carrier's cargo hold no. 3, a 52 year old stevedore sustained serious injuries after falling 20 feet (6 meters) from the cargo hold's fixed vertical ladder onto the cargo hold's tank top. He was found face down and unconscious.

This incident resulted from the stevedore having grasped a weakened wooden batten board at the top of the ladderwell that broke while trying to climb off of the ladder. At the time of the incident, the ladderwell configuration offered no better option to hold onto at the top of the ladder.

A few months later, a similar incident transpired. In this instance, a 54 year old stevedore descended into cargo hold no. 2 and fell from the fixed ladderwell platform. As in the prior incident, it was discovered that the ladderwell hold design and configuration did not provide sufficient hand holds at the top of the ladder to prevent his falling. Eventually, modifications were made in order to ensure that grip bars above the ladder were installed above the ladder as seen in the figure.



Actual Injuries: The stevedores sustained neurological, orthopedic, psychological injuries and one of them was rendered a quadriplegic.

Potential Risks: *Serious bodily injury or death.* Working inside a ship's cargo hold or tank may not always be regarded as working aloft but presents many of the same hazards. Some vertical ladders in cargo holds may be narrow, cramped, poorly lit, humid and uncomfortable. Members should consider proper safeguards that can prevent or reduce the possibility of such falls.

Recommendations

Inspection and maintenance

- *The crew should inspect cargo hold access areas prior to cargo operations and only present the vessel in a condition that stevedores can load and discharge the cargo with reasonable safety.* Ladder's standing platforms, grip bars, rungs/treads, railings are free of dust, cargo debris, oily or greasy surfaces or any other condition that can cause a slippery condition.
- *Any latent hazards discovered by the crew are best corrected and repaired prior to commencement of cargo operations.* If any of the ladder's standing platforms, grip bars, rungs/treads, railings, etc. are in disrepair, do not use the ladder until it is fully repaired.

- *The crew should advise the stevedores of any latent defects before the commencement of cargo operations.* If the hazards are not adequately repaired at the time, they should be marked and identified with proper signage, and/or pointed out by the mate or hatch boss on duty.
- *Ensure adequate lighting is in place in the access areas to cargo hold ladders and in the ladderwell.* Portable lights should be properly suspended and secured by separate lines and not by the lighting power cord. The lights should be rigged so they do not hinder the climber when using the ladder.

“Three Points of Contact” Rule

- *The climber should always face the ladder and grip ladder rungs or side rails with two hands while bracing with one foot, or brace with two feet and grip with one hand.* It is safest for climbers to use this “three points of contact” rule at all times during ascent, descent, and working on the ladder. In this way, the climber is not likely to become unstable in the event one limb slips during the climb. The use of personal fall arrest equipment or a lifeline should be considered when the top of the fixed ladder is greater than 24 feet (7 meters) or if three point contact rule cannot be maintained.

Familiarization

- *As practicable as possible, know the customs and practices of the stevedores.* The interplay and relationship between stevedores and ship’s crew on safety can vary depending on the cargo being carried, the type of trade for the ship, the ports where the ship calls, and the union(s) to which the stevedores may belong. The crew should do their best to familiarize themselves with the customs and practices of each stevedore in ports they trade to regularly.

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