Bulletin

CCS Australian Office, No. 086, 2023 Issue 002

SAFE HANDLING AND MAINTENANCE OF CARGO HATCH COVERS

BACKGROUND

Safe handling and maintenance of cargo hatch covers have long been the must-inspected items in the AMSA PSC checklist. The relevant requirements on this topic are clearly stipulated in SOLAS 2004 Amendment>Chapter XII>Reg. 7 'Survey and maintenance of bulk carriers'.

The significance of above SOLAS requirements is that the functionalities, sealing conditions, structural integrity and level of maintenance of cargo hatch covers and their associated equipment/components are not only directly related to a ship's damaged stability, safety voyage and safety of seafarers, but also to the validity of her Cargo Ship International Loadline Certificate, Cargo Ship Safety Construction Certificate and ISM Certificate. Only too often, there are detention cases of ships calling Australian Ports due to hatch-cover-related deficiencies. To reduce such a occurrence, AMSA published a Marine Notice, 'Safe Handling of Hatch Covers'. To make seafarers, ship operators and ship owners better appreciate the importance of the topic, this issue will list some typical hatch-cover-related deficiencies

that are derived from real cases in Australia.

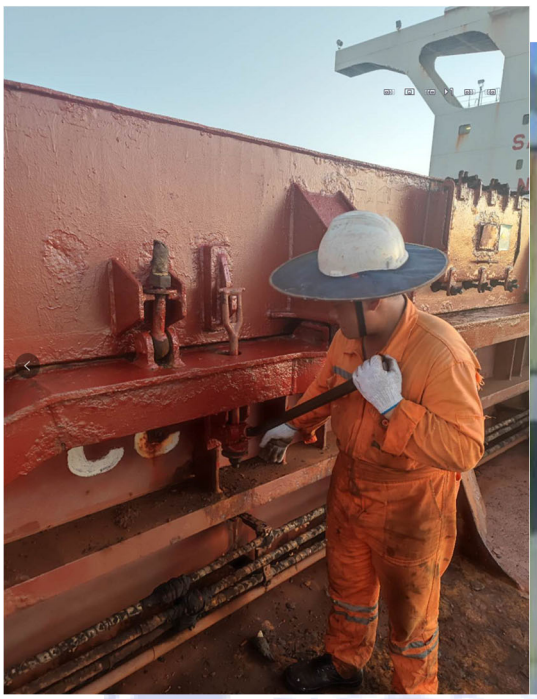
DEFICIENCIES & CASES

1. Cleating Systems

   Inappropriate and insufficient closing of hatch covers may result in accidents of ships that are navigating at sea in adverse weather conditions, especially under loaded conditions at the same time, which often caused by rusting, wear and/or rupture of her cleating system. During AMSA PSC inspections, the deficiencies that are frequently identified include heavily corroded cleats and aged rubber gaskets (Picture 1), seized/frozen cleats (Picture 2), missing/lost cleats (Picture3).



Picture 1





Picture 2 Picture 3

Seafarers and ship operators should attach high importance to periodical inspections and routine maintenance of the cleating system as per manufacturer' s instructions and or guidance. Such operations as rust removal, greasing, gasket replacement and cleat adjustment should be performed on a regular basis. In addition, non-elastic rubber gaskets should be readily replaced. Before sailing, all hatch covers should be completely secured; on the voyage, the securing of cleating system and relevant safety arrangement should be checked, especially when a ship is loaded and forsees adverse weather or thereafter.

2. Hydraulic System

Deficiencies related to hatch cover hydraulic systems are also frequently found during PSC. A pertinent incident happened in the past when a hatch cover failed to close due to hydraulic oil leakage,

followed by a burst of its rusted high-pressure oil lines in the presence of a PSC officer. The other point, such oil leakage on the exposed deck is seen as a hazard that may cause marine pollution. It is almost certain that the above was directly linked to insufficient routine maintenance of the system. Therefore, we expect seafarers and ship operators to thoroughly check and maintain it both during daily care and dry-docking.

3. Personnel Access Hatches/Doors into/out of Cargo Holds

   As another case in point, a ship calling an Australian port on eastern coast was detained by AMSA due to the failure of meeting sealing requirements based on the finding that her multiple personnel access hatches/doors could not be satisfactorily closed and many nuts at a few flush hatches/scuttles were missing.

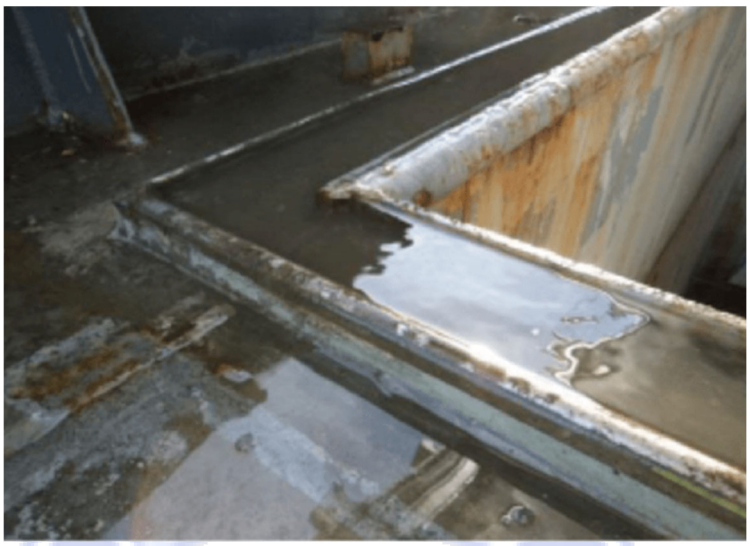


Picture 4

Based on the above, we strongly recommend that the seafarers are to apply and tighten all the bolts and nuts of the flush hatches and scuttles in way of personnel passage at cargo holds, and never intentionally omit some of them for the sake of convenient opening/closing of said hatches; attention should be given to looseness and missing of the bolts and nuts at these locations, and to failure to open/close them due to corrosion and deformation of their hatch coamings, which should be addressed at the first opportunity and if not possible and feasible, reported to the ship company for further supports and assistance.

4. Cargo Hatch Cover Drains

Another PSC deficiency is the blockage of the drains (Picture 5). Good drainage of all the hatch covers should always be ensured where their non-return valves, if fitted, should be in good working order; if drain lines are located on the inner sides of the rubber sealing, non-return valves should be in place in avoidance of sea water ingress into cargo holds.



Picture 5

5. Rubber Packing and Guide Rails

Aging, partial absence, tear of hatch cover rubber packing (Picture 6) and deformation of guide rails frequently appear in AMSA PSC reports. Seafarers are to protect and maintain the rubber packing, rubber sealing, the surface of guide rails and adjacent structure. In other words, the surface smoothness and correct structural shape are important to lessen abrasion and damage of these components.



Picture 6

6. Safe Operation of Hatch Covers

Previously, a bulk carrier calling a Western Australian port was about to accept cargo hold inspection at anchorage, when wind speed began to pick up and swells were increasing to such an extent that the ship was considerably pitching and rolling. However, the seafarers failed to perform an effective risk assessment in line with their SMS before opening operation of her hatch covers in this condition. As a result, one of her STBD hatch cover derailed and fell off the guide rails, causing damages to the hatch cover itself, guide rails and adjacent hand railing (Picture 7 & 8). Fortunately, the hatch did not fell into the sea and there were no casualties at the time of the incident. Subsequently, it took a few days for the ship operator to get the damaged items repaired by a hired shore repair team.



Picture 7



Picture 8

The failure of implementation of their shipboard SMS can be attributed to the above occurrence:

- A risk assessment for opening and closing hatch covers and

working in cargo holds;

- Instructions and procedure to ensure the safe operation of hatch covers and associated equipment; and
- Defined levels of authority and lines of communication between shipboard personnel when such operations are being undertaken.

AMSA Marine Notice 04/2022 has following statement:

"Communication among seafarers is importance for safe hatch cover operation. Co-ordination between vessels' crew and ensuring there is a culture onboard for crew to speak up when they see something unsafe, can help prevent these types of serious incidents.

CONCLUSION & SUGGESTIONS

Effectiveness and integrity of cargo hatch cover and its associated structure/equipment are important to a ship and ship crew in terms of safety and are also inspected in almost every AMSA PSC inspection. However, with months and years of contacts with saline air moisture and sea water and impact by waves, cargo hatch covers, and their components are vulnerable to structural deformation, corrosion, and leakage. Therefore, following suggestions are provided to seafarers, ship operators and ship owners:

1. Reinforce periodical inspections of hatch covers and associated structure, components, and equipment; undertake routine maintenance in accordance with manufacturer's manual/guidance;

adequate spares should be available on board for those prone to loss and missing.

2. Undertake hatch cover operation in accordance with shipboard SMS and procedure; seriously and carefully perform risk assessments; communication should be maintained throughout the whole operation process; relevant trainings should be carried out for ship crew to prohibit such practice as securing personnel access hatches without applying all the bolts and nuts.

CCS Australia Office

June 27, 2023

Announcement:

1. Intention is to assist and ensure owners to understand and well prepared, ensuring all updated requirements from AMSA can be met
2. For more information, please visit AMSA website at www.amsa.gov.au and CCS website at www.ccs.org.cn
3. The information contained does not and cannot supersede any AMSA or related governing parties requirements as well