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MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF MARINE ADMINISTRATION

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Directive (11/2018)

Keeping a Maintenance Plan and a Record of maintenance of Bulk Carrier Hatch Covers

Applicable to: All Ship - Owners, Ship Operators, Flag State Surveyors, Recognized Organizations, Masters and Officers of Myanmar Flagged Ships.

Reference :

- (a) SOLAS 74, as amended Reg: II-1/3-1 and XII/7
- (b) ISM code, Part A, Para: 7 and 10
- (c) IMO Res MSC.169(79)
- (d) IMO MSC/Circ.1071
- (e) IMO MSC

1. The Department of Marine Administration circulates this directive in the exercise of the power of Section 294(B), paragraph (b) of Myanmar Merchant Shipping Act 1923, as amended.
2. This directive applies to all Myanmar flagged ships, especially Bulk Carriers engaged on International voyages complying with requirements of the International Convention for Safety of Life at Sea 1974, as amended, for enhancing the safety of ships carrying solid bulk cargoes.
3. The Department of Marine Administration sets out that the above-mentioned ships shall comply with the maintenance requirements provided in regulation II-1/3-1 and the Standards for owners' inspection and maintenance of bulk carrier hatch covers, adopted by the Organization by Res. MSC.169(79), as may be amended by the Organization.
4. The Administration directs that Ship owners and operators shall keep a Maintenance Plan and a record of maintenance and component replacement carried out, in order to facilitate maintenance planning and statutory surveys by the Administration. Hatch cover maintenance plans shall form part of a ship's Safety Management System as referred to in the ISM Code / as required by paragraph 7 and paragraph 10 of part A of the International Safety Management (ISM) code.
5. The Guidance for the Maintenance Plan and a Record of maintenance of Bulk Carrier Hatch Covers is set out by Department of Marine Administration to fulfill the relevant requirements.

Maung Maung Oo
Director General
Department of Marine Administration



Department of Marine Administration
Ministry of Transport and Communications
Republic of the Union of Myanmar

GUIDANCE FOR THE MAINTENANCE PLAN AND A RECORD OF MAINTENANCE OF BULK CARRIER HATCH COVERS

2018



Introduction

1. This Guidance for the Maintenance Plan and a Record of maintenance of Bulk Carrier Hatch Cover applies to shipping companies and their employed on Myanmar flagged ships.
2. The purpose of this Guidelines is for enhancing the safety of ships carrying solid bulk cargoes.
3. The Administration directs that Ship owners and operators shall keep a Maintenance Plan and a record of maintenance and component replacement carried out, in order to facilitate maintenance planning and statutory surveys by the Administration. Hatch cover maintenance plans shall form part of a ship's Safety Management System as referred to in the ISM Code / as required by paragraph 7 and paragraph 10 of part A of the International Safety Management (ISM) code.
4. This Guidance for the Maintenance Plan and a Record of maintenance of Bulk Carrier Hatch Covers is set out on 23th January 2018 according to the directive 11/2018 in the exercise of the power of Section 294 (B), paragraph (b) of Myanmar Merchant Shipping Act 1923, as amended.

Guidance for the Maintenance Plan and a Record of maintenance of Bulk Carrier Hatch Covers

Contents

1.	Application	3
2.	Standards for Owners' Inspection and Maintenance of Bulk Carrier of Bulk Carrier Hatch Covers	3
3.	Guidelines for Bulk Carrier Hatch Cover Surveys and Owner's Inspections And Maintenance	6

Guidance for the Maintenance Plan and a Record of maintenance of Bulk Carrier Hatch Covers

1. Application

This Guidance applies to all Myanmar flagged ships, especially Bulk Carriers engaged on International voyages complying with requirements of the International Convention for Safety of Life at Sea 1974, as amended.

The purpose of this Guidelines is for enhancing the safety of ships carrying solid bulk cargoes.

The above-mentioned ships shall comply with the maintenance requirements provided as follows;

- (1) Ships shall be designed, constructed and maintained in compliance with the structural, mechanical and electrical requirements of a classification society which is recognized by the Administration in accordance with the provisions of Regulation XI - 1//1, or with applicable national standards of the Administration which provide an equivalent level of safety and
- (2) the Standards for owners' inspection and maintenance of bulk carrier hatch covers, adopted by the Organization by Res. MSC.169(79).

2. Standards for Owners' Inspection and Maintenance of Bulk Carrier of Bulk Carrier Hatch Covers

2.1 Application

These Standards define requirements for the owners' inspection and maintenance of cargo hatch covers on board bulk carriers.

2.2 Maintenance of hatch covers and hatch opening, closing, securing and sealing systems

2.2.1 Lack of weather tightness may be attributed to:

- .1 normal wear and tear of the hatch cover system: deformation of the hatch coaming or cover due to impact; wear of the friction pads where fitted; wear and tear of the cleating arrangement; or
- .2 lack of maintenance: corrosion of plating and stiffeners due to breakdown of coatings; lack of lubrication of moving parts; cleats, joint gaskets and rubber pads in need of replacement, or replaced with incorrect specification parts.

2.2.2 Insecure hatch covers may be particularly attributed to damage or wear of securing devices, or incorrect adjustment, and incorrect pre-tension and load sharing, of cleating systems.

2.2.3 Ship owners and operators shall therefore institute a programme of maintenance. This maintenance shall be directed to:

- .1 protecting exposed surfaces of plating and stiffeners of hatch covers and coamings in order to preserve overall structural strength;
- .2 preserving the surface of track ways of rolling covers, and of compression bars and other steel work bearing on seals or friction pads, noting that surface smoothness and correct profile are important for reducing wear rates on these components;
- .3 maintaining hydraulic or mechanically powered opening, closing, securing or cleating systems in accordance with manufacturer's recommendations;
- .4 maintaining manual cleats in adjustment, with replacement when significant wastage, wear or loss of adjustment capability is identified;
- .5 replacing seals and other wear components in accordance with manufacturers' recommendations, noting the need to carry on board or obtain such spares of correct specification, and that seals are designed for a particular degree of compression, hardness, chemical and wear resistance; and
- .6 keeping all hatch cover drains and their non-return valves, where fitted, in working order, noting that any drains fitted to the inboard side of seal lines will have non-return valves for prevention of water ingress to holds in the event of boarding seas.

2.2.4 The equalization of securing loads shall be maintained following the renewal of components such as seals, rubber washers, peripheral and cross joint cleats.

2.2.5 Ship owners and operators shall keep a Maintenance Plan and a record of maintenance and component replacement carried out, in order to facilitate maintenance planning and statutory surveys by the Administration. Hatch cover maintenance plans shall form part of a ship's safety management system as referred to in the ISM Code.

2.2.6 Where the range of cargoes carried requires different gasket materials, a selection of gasket materials of the correct specifications shall be carried on board, in addition to other spares.

2.2.7 At each operation of a hatch cover, the cover and, in particular, bearing surfaces and drainage channels shall be free of debris and as clean as practicable.

2.2.8 Attention is drawn to the dangers of proceeding to sea without fully secured hatch covers. Securing of all covers shall always be completed before the commencement of a sea passage. During voyages, especially on loaded passages, cover

securing devices and tightness of cleating and securing arrangements shall be checked, especially in anticipation of, and following periods of, severe weather. Hatch covers may only be opened on passage, when necessary, during favourable sea and weather conditions; imminent weather forecasts shall also be considered.

2.2.9 Operators shall consult the Cargo Securing Manual when planning the loading of containers or other cargo on hatch covers and confirm that they are designed and approved for such loads. Lashings shall not be secured to the covers or coamings unless these are suitable to withstand the lashing forces.

2.3 Inspection of hatch covers and hatch opening, closing, securing and sealing systems

2.3.1 Statutory surveys of hatch covers and their coamings are carried out by the Administration as part of the annual survey required by article 14 of the International Convention on Load Lines, 1966, as modified by the 1988 Protocol relating thereto and in accordance with the requirements for Surveys contained in resolution A. 744(18), as amended. However, the continued safe operation is dependent on the shipowner or operator instituting a regular programme of inspections to confirm the state of the hatch covers in between surveys.

2.3.2 Routines shall be established to perform checks during the voyage, and inspections when the hatch covers are opened.

2.3.3 Voyage checks shall consist of an external examination of the closed hatch covers and securing arrangements in anticipation of, and after, heavy weather but in any event at least once a week, weather permitting. Particular attention shall be paid to the condition of hatch covers in the forward 25% of the ship's length, where sea loads are normally greatest.

2.3.4 The following items, where provided, shall be inspected for each hatch cover set when the hatch covers are opened or are otherwise accessible on each voyage cycle, but need not be inspected more frequently than once per month:

- .1 hatch cover panels, including side plates, and stiffener attachments of open covers for visible corrosion, cracks or deformation;
- .2 sealing arrangements of perimeter and cross joints (gaskets, flexible seals on combination carriers, gasket lips, compression bars, drainage channels and non-return valves) for condition and permanent deformation;
- .3 clamping devices, retaining bars and cleating for wastage, adjustment, and condition of rubber components;

- .4 closed cover locating devices for distortion and attachment;
- .5 chain or wire rope pulleys;
- .6 guides;
- .7 guide rails and track wheels;
- .8 toppers;
- .9 wires, chains, tensioners and gypsies;
- .10 hydraulic system, electrical safety devices and interlocks; and
- .11 end and inter-panel hinges, pins and stools where fitted.

As part of this inspection, the coamings with their plating, stiffeners and brackets shall be checked at each hatchway for visible corrosion, cracks and deformation, especially of the coaming tops and corners, adjacent deck plating and brackets.

3. Guidelines for Bulk Carrier Hatch Cover Surveys and Owner's Inspections and Maintenance

3.1 Application

These Guidelines are intended primarily for large steel hatch covers on bulk carriers to which SOLAS chapter XII applies. However, they may also be relevant to other minimum freeboard ship types having steel covers in exposed positions.

3.2 Design considerations

3.2.1 Recent research has quantified the magnitude of sea load pressures acting on the side and end faces of hatch covers and on hatch coamings. This has revealed substantial green sea loading pressures which may generate lateral forces well in excess of the capability of some hatch cover securing devices. These forces cause significant loading on hatch cover travel stops and securing devices, and are only partially resisted by frictional and cleating forces.

3.2.2 The strength of securing devices of hatch covers on all ships should therefore be reviewed by the Administration. The review should ensure that the weather tightness of each cover is not likely to be impaired having regard to the service in which the ship is engaged and the location of the hatchway. Where hatch covers or coamings undergo substantial repair, the strength of securing devices should be brought up to the relevant standard for new construction.

3.2.3 Hydraulic cleating systems are generally preferable to manual cleats from the operability standpoint on large hatch covers. Where hydraulic cleating is used, the system should be protected against release by incorporating mechanical securing devices. IACS Recommendation 14 contains such guidance.

3.2.4 The cleating and securing devices should be designed or otherwise arranged to be readily visible, so as to facilitate checking proper and complete securing of hatch covers during a voyage.

3.2.5 Manufacturers should provide recommendations on the safe operation, inspection, maintenance and repair of each type of hatch cover fitted, with a recommended list of spare parts to be carried aboard. This guidance should include recommendations for the periodic renewal of components subject to wear or ageing. A maintenance record sheet should also be provided to document owner's inspections and maintenance planning in accordance with the International Safety Management Code (ISM Code).

3.3 Maintenance of hatch covers and hatch opening, closing, securing and sealing systems

3.3.1 Lack of weathertightness may be attributed to:

- .1 normal use of the hatch cover system, such as deformation of the hatch coaming or cover due to impact, wear of the friction pads where fitted, or wear and tear of the cleating arrangement which may be corrected by a rebuild to restore the original specification; or
- .2 lack of maintenance such as corrosion of plating and stiffeners due to breakdown of coatings, lack of lubrication of moving parts; cleats, joint gaskets and rubber pads in need of replacement, or replaced with incorrect specification parts.

3.3.2 Insecure hatch covers may be particularly attributed to damage or wear of securing devices, and incorrect adjustment, hence incorrect pre-tension and load sharing, of cleating systems.

3.3.3 Shipowners and operators should institute a programme of maintenance. This maintenance should be directed to:

- .1 protecting exposed surfaces of plating and stiffeners of hatch covers and coamings in order to preserve overall structural strength;
- .2 preserving the surface of trackways of rolling covers, and of compression bars and other steel work bearing on seals or friction pads, noting that surface smoothness and correct profile are important for reducing wear rates on these components;
- .3 maintaining hydraulic or mechanically powered opening, closing securing or cleating systems in accordance with manufacturers recommendations;
- .4 maintaining manual cleats in adjustment, with replacement on significant wastage, wear or loss of adjustment capability;

- .5 replacing seals and other wear components in accordance with manufacturers recommendations, noting the need to carry aboard or obtain such spares of correct specification, and that seals are designed for a particular degree of compression, hardness, chemical and wear resistance; and
- .6 keeping peripheral and cross joint drains, where fitted, in working order, noting that any drains fitted to the inboard side of seal lines will have non-return valves for prevention of water ingress to holds in the event of boarding seas.

3.3.4 It is recommended that renewal of components such as seals, rubber washers, peripheral and cross joint cleats are made at least as a panel set, to facilitate equalisation of securing loads.

3.3.5 Shipowners and operators are recommended to maintain a record of maintenance, and component replacement, to facilitate statutory surveys by the Administration. All major repairs should be undertaken only after consultation with the hatch cover manufacturer and with the approval of the Administration. Hatch cover maintenance plans should form part of a ship's safety management system as referred to in the ISM Code.

3.3.6 Where a range of cargoes carried requires different gasket materials, a selection of gasket materials of the correct specification should be carried aboard, in addition to other spares.

3.3.7 At each operation of a hatch cover, the cover, and in particular bearing surfaces and drainage channels, should be free of debris and as clean as practicable.

3.3.8 Attention is drawn to the dangers of proceeding to sea without fully secured hatch covers. Securing of all covers should always be completed before the commencement of a sea passage. During voyages, especially on loaded passages, cover securing devices and tightness of cleating and securing arrangements should be checked, especially in anticipation of and following periods of severe weather.

3.3.9 Containers and other cargoes should not be stowed on hatch covers unless the covers are designed and approved for such carriage. Lashings should not be secured to the covers or coamings unless these are designed to withstand the lashing forces. It is therefore particularly important to consult the cargo securing manual when loading on deck.

3.4 Survey of hatch covers and hatch opening, closing, securing and sealing systems

3.4.1 Statutory surveys of hatch covers and their coamings are to be carried out by the Administration as part of the annual survey required by article 14 of the International Convention

on Load Lines, 1966, as modified by the 1988 Protocol relating thereto. On ships subject to the Guidelines on the enhanced programme of inspections during surveys of bulk carriers and oil tankers (resolution A.744(18), as amended), these should be surveyed taking into account the guidance in paragraph 3.3 of Annex A to the said Guidelines.

3.4.2 A thorough survey of hatch covers and coamings is only possible by examination in the open as well as closed positions and should include verification of proper opening and closing operation. As a result, at least 50% of hatch cover sets should be surveyed open, closed and in operation to the full extent in each direction, at each annual survey. The closing of the covers should include the fastening of all peripheral, and cross joint cleats or other securing devices. Particular attention should be paid to the condition of hatch covers in the forward 25% of the ship's length, where sea loads are normally greatest.

3.4.3 If there are indications of difficulty in operating and securing hatch covers, additional sets above those required by 4.2, at the discretion of the surveyor, should be tested in operation.

3.4.4 Owners and operators should ensure that facilities and personnel are available to perform the required hatch cover movements during each annual survey.

3.4.5 It is implicit that if the hatch securing system cannot be properly operated, the ship will be obliged to effect repairs under the supervision of the Administration. Where hatch covers or coamings undergo substantial repairs, the strength of securing devices should comply with IACS UR S30.

3.4.6 Owners and operators should be made aware that partial replacements in cleating systems have the potential to introduce imbalance between old and new cleats. This could result in isolated cleats being subjected to excessive loads, which may then lead to sequential failure.

3.4.7 For each hatch cover set, at each annual survey, the following items should be surveyed:

- .1 cover panels, including side plates, and stiffener attachments of opened covers, by close up survey (for corrosion, cracks, deformation);
- .2 sealing arrangements of perimeter and cross joints (gaskets for condition and permanent deformation, flexible seals on combination carriers, gasket lips, compression bars, drainage channels and non return valves);
- .3 clamping devices, retaining bars, cleating (for wastage, adjustment, and condition of rubber components);
- .4 closed cover locating devices (for distortion and attachment);

- .5 chain or rope pulleys;
- .6 guides;
- .7 guide rails and track wheels;
- .8 stoppers;
- .9 wires, chains, tensioners and gypsies;
- .10 hydraulic system, electrical safety devices and interlocks; and
- .11 end and interpanel hinges, pins and stools where fitted.

3.4.8 At each hatchway, at each annual survey, the coamings, with plating, stiffeners and brackets should be checked for corrosion, cracks and deformation, especially of the coaming tops.

3.4.9 Where considered necessary, the effectiveness of sealing arrangements may be proved by hose or chalk testing supplemented by dimensional measurements of seal compressing components.