

標題

SOLAS II-1 章改正によるアンカーハンドリングウインチ
の新要件について

ClassNK

テクニカル インフォメーション

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各位

2023 年 6 月に開催された国際海事機関(IMO)第 107 回海上安全委員会(MSC 107)において、SOLAS 条約を改正する決議 MSC.532(107)が採択され、SOLAS 条約 II-1 章第 3-13 規則として、新たに揚貨装置及びアンカーハンドリングウインチに関する要件が規定されました。

また、揚貨装置に関するガイドライン(MSC.1/Circ.1663)及びアンカーハンドリングウインチに関するガイドライン(MSC.1/Circ.1662)が併せて承認され、SOLAS 条約 II-1 章第 3-13 規則で参照されています。

なお、上記については、2024 年 12 月 16 日付け、ClassNK テクニカルインフォメーション No.TEC-1340 及び 2023 年 8 月 16 日付け、ClassNK テクニカルインフォメーション No.TEC-1303 でもご紹介していますので、ご参照ください。

本テクニカルインフォメーションでは、アンカーハンドリングウインチに関する主な要件についてお知らせいたします。なお、一部の内容については IACS など議論中のものもあることから、取り扱いの変更や追加情報がありました際には本テクニカルインフォメーションの改訂等にてお知らせいたします。

また、本件に関する弊社規則の改正案は、2025 年度第 3 回技術委員会(2025 年 7 月 30 日開催)にて承認され、弊社ホームページに公開しています。

1. 適用

総トン数 500 トン以上の国際航海に従事する船舶に搭載されるアンカーハンドリングウインチ^{*1}

従前、弊会は、アンカーハンドリングウインチを搭載し、海洋構造物、浚渫船等の係留アンカーの設置、移設、揚収作業に従事する揚錨船には、鋼船規則 O 編 8 章に基づき船級符号に「AHV」を付記しています。一方、今回の SOLAS 条約改正の要件は、アンカーハンドリングウインチの設備が対象となりますので、上記の揚錨船に限らず適用となる可能性がありますので、ご留意ください。

一例としては、アンカーハンドリングの用途を兼ねるトーイングウインチを搭載する船舶(SOLAS 条約非適用船は除く)も適用となります。

^{*1}: アンカーハンドリングウインチとは海中作業におけるアンカー及び係船索の配置、回収及び再配置のためのウインチ(SOLAS 条約 II-1 章第 2.31 規則参照)

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NOTES:

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2. 主な要件

(1) 設計、製造及び搭載

(i) 2026 年 1 月 1 日以降に搭載されるアンカーハンドリングウインチ^{*2}

アンカーハンドリングウインチに関するガイドライン(MSC.1/Circ.1662)に基づき、設計^{*3}、建造、搭載及び試験を実施する。主管庁が認める船級協会の規則又は基準に従うことが要求され、図面審査、製造工場での検査、関連装具を含む構成品の証明書確認、船上での試験及び詳細検査を実施する。(SOLAS 条約 II-1 章第 3-13.2.2 規則、MSC.1/Circ.1662, 3.1 & 3.3)

^{*2}: 対象となるアンカーハンドリングウインチは次のとおり。

- (a) 2026 年 1 月 1 日以降の起工もしくはこれと同等の建造段階にある船舶に搭載されるアンカーハンドリングウインチ
- (b) 上記以外の船舶は契約上の納入日、或いは契約上の納入日がない場合には実際の納入日が 2026 年 1 月 1 日以降のアンカーハンドリングウインチ

^{*3}: 設計に関わる主な事項は次のとおり。(MSC.1/Circ.1662, 3.1.2 から 3.1.8)

- (a) ウインチに対する、速度制御、過負荷警報及び監視、制御場所及び緊急離脱
- (b) ワイヤに対する、張力制御、乱巻き防止、ストッパーの設置及び緊急離脱

(ii) 2026 年 1 月 1 日より前に搭載されたアンカーハンドリングウインチ^{*4}

2026 年 1 月 1 日以降の最初の Safety Construction 証書 (以下、「SC」という) 更新検査までにアンカーハンドリングウインチに関するガイドライン(MSC.1/Circ.1662)に基づき、試験及び詳細検査を実施し、主管庁又は船級協会に承認されること。(SOLAS 条約 II-1 章第 3-13.2.5 規則、MSC.1/Circ.1662, 3.3.2) ただし、既存のアンカーハンドリングウインチで、主管庁が認める他の国際基準に基づいた有効な証明書のあるアンカーハンドリングウインチは本規定に適合しているものとみなされる。(MSC.1/Circ.1662, 3.3.3)

^{*4}: 対象となるアンカーハンドリングウインチは前 2.(1)(i)以外のアンカーハンドリングウインチ

(2) 試験及び詳細検査 (SOLAS 条約 II-1 章第 3-13.2.2 規則、MSC.1/Circ.1662, 3.2)

船舶に搭載後初めて使用する前及び主要構造部の修理・改造・変更が行われた後にコミッショニング試験及び詳細検査を実施すること。また船級協会の推奨に従い定期的に作動試験及び機能試験を実施する(MSC.1/Circ.1662, 3.2.2)。

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(3) 銘板の表示 (SOLAS 条約 II-1 章第 3-13.2.2 規則、MSC.1/Circ.1662, 3.4.1)

少なくとも次の情報を恒久的に標示する*5。

- (i) 製造者の詳細 (製造者名、所在地)
- (ii) 型式名又は型式番号
- (iii) シリアルナンバー
- (iv) 製造日及び搭載日
- (v) 動力源の詳細
- (vi) ワイヤの詳細 (長さ、直径など)
- (vii) Maximum brake holding capacity (トン) : アンカーハンドリングウインチブレーキがブレーキを滑らせずに耐えられる Maximum line pull
- (viii) Maximum line pull (トン) : アンカーハンドリングウインチがけん引できる最大持続力
- (ix) Maximum static bollard pull (トン) : 船舶が最大出力 (すなわち、100% の最大連続定格(MCR)) 及び前進速力 0 において発生させることができる最大持続けん引力
- (x) 船級協会検査員の刻印欄
- (xi) ドラムサイズ
- (xii) ウインチ速度

*5: (iv) から (xii) はアンカーハンドリングウインチの操作手引書又は保守手引書に記載することでも認められる。(MSC.1/Circ.1662, 3.4.2)

(4) 保守、点検及び作動試験

- (i) アンカーハンドリングウインチの保守、点検、作動試験は製造者の推奨、業界標準などに従って実施すること。(MSC.1/Circ.1662, 3.5.1.1)
- (ii) アンカーハンドリングウインチの保守手引書は製造者により提供されること。既存のアンカーハンドリングウインチで製造者の保守手引書が入手できない場合には、十分な知識を有する第三者により提供されることが認められる。(MSC.1/Circ.1662, 3.5.2.1)
- (iii) アンカーハンドリングウインチの保守手引書には、少なくとも次の情報が含まれていること。(MSC.1/Circ.1662, 3.5.2.2)
 - (a) アンカーハンドリングウインチ固有の点検制度及び保守スケジュール、チェックリスト、重要な工具又は点検及び保守を実施する際に使用される他の物品のリスト
 - (b) 日常の修理、保守の指示
 - (c) 技術的な保守情報
 - (d) 推奨される潤滑剤、油やフィルター交換の情報
 - (e) 必要な場合、ベアリング保守の情報
 - (f) 交換可能な部品及び構成品のリスト及びこれらの点検、保守、交換手順
 - (g) 予備品の供給元のリスト
 - (h) 点検及び保守記録の書式例
 - (i) 運転試験の手順及び運転試験前後の点検手順
 - (j) 点検時に特段の注意を払うことが要求される構成部品のリスト及びこれらの部品の点検、保守手順

(次頁に続く)

- (k) 構成部品及び装置の交換並びに開放の推奨間隔
- (l) 塗装及び腐食保護の維持に関する情報
- (m) アンカーハンドリングウインチが長期間作動されない場合における特別な点検及び保守に関する情報
- (iv) アンカーハンドリングウインチの日常点検及び保守の記録は船上に保管されること。記録簿は、責任者により認証されたものであれば、いかなる書式であっても差し支えない。ただし、製造者が推奨するものがあれば、それを使用しなければならない。(MSC.1/Circ.1662, 3.5.3.1 & 3.5.3.2)
- (v) アンカーハンドリングウインチの操作手引書は製造者により提供されること。既存の装置で製造者の操作手引書が入手できない場合には、十分な知識を有する第三者により提供されることが認められる。(MSC.1/Circ.1662, 3.6.2.1)
- (vi) 操作手引書には、少なくとも次の情報が含まれていること。また、搭載後のいかなる改造も考慮したものでなければならない。(MSC.1/Circ.1662, 3.6.2.2 & 3.6.2.3)
 - (a) 設計、操作及び環境上の制限
 - (b) 互換性のある装具
 - (c) 安全指示
 - (d) 特殊な手順があればそれを含む操作手順
- (5) 関連装具
 - (i) SOLAS 条約 II-1 章第 3-13.2.2 及び 2.5 規則の適用を受けるアンカーハンドリングウインチに利用される関連装具は、主管庁が認める船級協会又は主管庁が認める要件に従って、設計・製造されること。(MSC.1/Circ.1662, 4.1)
 - (ii) アンカーハンドリングウインチに利用される全ての関連装具は、荷重試験の証拠書類を所持すること。(MSC.1/Circ.1662, 4.2.1)
 - (iii) 2026 年 1 月 1 日より前に主管庁が認める他の国際基準に基づいた有効な試験及び証明書のある関連装具は本規定に適合しているものとみなされる。(MSC.1/Circ.1662, 4.3.2)
 - (iv) 関連装具には固有の識別、制限荷重及び安全な使用のために要求される追加の情報を明確かつ恒久的に標示しなければならない。(MSC.1/Circ.1662, 4.4.1)
 - (v) 関連装具上に制限荷重以外を標示するための十分なスペースがない場合、省略された情報は証明書又は他の適当な手段によって確認可能であること。(MSC.1/Circ.1662, 4.4.2)
- (6) 作動不能なアンカーハンドリングウインチ及び装具の取り扱い(SOLAS 条約 II-1 章第 3-13.4 規則、MSC.1/Circ.1662, 3.2.3.2, 3.5.1.6, 4.2.2.2, 4.6.6 & 5)
 アンカーハンドリングウインチ及び装具が操作上で安全でない、又は主管庁の要件に適合していない場合、欠陥の是正が確認されるまで、休止状態としなければならない。ただし、安全な航海の計画及び実施にあたり、船長により作動不能なアンカーハンドリングウインチを考慮した措置がとられている場合には、アンカーハンドリングウインチの故障をもって、船舶の航行を不可能にする理由又は停泊中の船舶の出港を遅らせる理由とすることはできない。
 このことから船長は、作動不能なアンカーハンドリングウインチ及び装具によるリスクを軽減するための次の対応を実施する必要がある。

(次頁に続く)

- (i) 安全な航海計画及び実施にあたり当該アンカーハンドリングウインチ、関連装置及びワイヤを考慮する。
- (ii) 当該アンカーハンドリングウインチ、関連装具及び関連装置の操作を禁止する。
- (iii) 適切に拘束等を行うことで、当該アンカーハンドリングウインチ、関連装具及び関連装置の制御されない動きを防止する。
- (iv) 使用不可のワイヤ及び関連装具は使用不可である旨を標示し、使用中のワイヤ及び関連装具と分けて保管する。
- (v) 必要な修理が完了し、適切に試験・検査が実施されるまで、当該アンカーハンドリングウインチ、関連装置、関連装具が使用不可である旨を記録する。

なお、本件に関してご不明な点は、以下の部署にお問い合わせください。

[規則適用、一般に関するお問い合わせ]

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[IACS 動向及び弊会規則取り入れに関するお問い合わせ]

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添付:

1. SOLAS 条約 II-1 章(決議 MSC.532(107))
2. IMO アンカーハンドリングウインチに関するガイドライン(MSC.1/Circ.1662)

ANNEX 2

**RESOLUTION MSC.532(107)
(adopted on 8 June 2023)**

**AMENDMENTS TO THE INTERNATIONAL CONVENTION FOR THE
SAFETY OF LIFE AT SEA, 1974**

THE MARITIME SAFETY COMMITTEE,

RECALLING Article 28(b) of the Convention on the International Maritime Organization concerning the functions of the Committee,

RECALLING ALSO article VIII(b) of the International Convention for the Safety of Life at Sea, 1974 ("the Convention"), concerning the amendment procedure applicable to the annex to the Convention, other than to the provisions of chapter I,

HAVING CONSIDERED, at its 107th session, amendments to the Convention proposed and circulated in accordance with article VIII(b)(i) of the Convention,

1 ADOPTS, in accordance with article VIII(b)(iv) of the Convention, amendments to the Convention, the text of which is set out in the annex to the present resolution;

2 DETERMINES, in accordance with article VIII(b)(vi)(2)(bb) of the Convention, that the said amendments shall be deemed to have been accepted on 1 July 2025, unless, prior to that date, more than one third of the Contracting Governments to the Convention or Contracting Governments, the combined merchant fleets of which constitute not less than 50% of the gross tonnage of the world's merchant fleet, have notified the Secretary-General of their objections to the amendments;

3 INVITES Contracting Governments to the Convention to note that, in accordance with article VIII(b)(vii)(2) of the Convention, the amendments shall enter into force on 1 January 2026 upon their acceptance in accordance with paragraph 2 above;

4 REQUESTS the Secretary-General, for the purposes of article VIII(b)(v) of the Convention, to transmit certified copies of the present resolution and the text of the amendments contained in the annex to all Contracting Governments to the Convention;

5 ALSO REQUESTS the Secretary-General to transmit copies of this resolution and its annex to Members of the Organization which are not Contracting Governments to the Convention.

ANNEX

**AMENDMENTS TO THE INTERNATIONAL CONVENTION FOR THE
SAFETY OF LIFE AT SEA, 1974**

**CHAPTER II-1
CONSTRUCTION – STRUCTURE, SUBDIVISION AND STABILITY,
MACHINERY AND ELECTRICAL INSTALLATIONS**

**Part A
General**

Regulation 2

Definitions

1 The following new paragraphs are added after existing paragraph 29:

"30 *Lifting appliance* means any load-handling ship's equipment:

- .1 used for cargo loading, transfer, or discharge;
- .2 used for raising and lowering hold hatch covers or moveable bulkheads;
- .3 used as engine-room cranes;
- .4 used as stores cranes;
- .5 used as hose handling cranes;
- .6 used for launch and recovery of tender boats and similar applications;
and
- .7 used as personnel handling cranes.

31 *Anchor handling winch* means any winch for the purpose of deploying, recovering and repositioning anchors and mooring lines in subsea operations.

32 *Loose gear* means an article of ships equipment by means of which a load can be attached to a lifting appliance or an anchor handling winch but which does not form an integral part of the appliance or load.

33 The expression *installed on or after 1 January 2026*, as provided in regulation 3-13, means:

- .1 for ships the keel of which is laid or which is at a similar stage of construction on or after 1 January 2026, any installation date on the ship; or
- .2 for ships other than those specified in .1, including those constructed before 1 January 2009, a contractual delivery date for lifting appliance or anchor handling winches, or in the absence of a contractual delivery date, the actual delivery date of the lifting appliance or anchor handling winches to the ship on or after 1 January 2026."

Part A-1

Structure of ships

2 The following new regulation is added after existing regulation II-1/3-12, together with the associated footnotes:

"Regulation 3-13

Lifting appliances and anchor handling winches

1 Application

1.1 Unless expressly provided otherwise, this regulation shall apply to lifting appliances and anchor handling winches, and loose gear utilized with the lifting appliances and the anchor handling winches.

1.2 Notwithstanding the above, this regulation does not apply to:

- .1 lifting appliances on ships certified as MODUs;¹
- .2 lifting appliances used on offshore construction ships, such as pipe/cable laying/repair or offshore installation vessels, including ships for decommissioning work, which comply with standards acceptable to the Administration;
- .3 integrated mechanical equipment for opening and closing hold hatch covers; and
- .4 life-saving launching appliances complying with the International Life-Saving Appliance (LSA) Code.

1.3 The Administration shall determine to what extent the provisions of paragraphs 2.1 and 2.4 do not apply to lifting appliances which have a safe working load below 1,000 kg.

2 Design, construction and installation

2.1 Lifting appliances installed on or after 1 January 2026 shall be:

- .1 designed, constructed and installed in accordance with the requirements of a classification society which is recognized by the Administration in accordance with the provisions of regulation XI-1/1 or standards acceptable to the Administration which provide an equivalent level of safety; and
- .2 load tested and thoroughly examined after installation and before being taken into use for the first time and after repairs, modifications or alterations of major character.

2.2 Anchor handling winches installed on or after 1 January 2026 shall be designed, constructed, installed and tested to the satisfaction of the Administration, based on the Guidelines developed by the Organization.²

2.3 Lifting appliances installed on or after 1 January 2026 shall be permanently marked and provided with documentary evidence for the safe working load (SWL).

2.4 Lifting appliances installed before 1 January 2026 shall be tested and thoroughly examined, based on the Guidelines developed by the Organization³ and comply with paragraph 2.3 no later than the date of the first renewal survey on or after 1 January 2026.

2.5 Anchor handling winches installed before 1 January 2026 shall be tested and thoroughly examined, based on the Guidelines developed by the Organization² no later than the date of the first renewal survey on or after 1 January 2026.

3 Maintenance, operation, inspection and testing

All lifting appliances and anchor handling winches, regardless of installation date, and all loose gear utilized with any lifting appliances and anchor handling winches, shall be operationally tested, thoroughly examined, inspected, operated and maintained, based on the Guidelines developed by the Organization.^{2,3}

4 Inoperative lifting appliances and anchor handling winches

Except as provided in regulation I/11(c), while all reasonable steps shall be taken to maintain lifting appliances, anchor handling winches and loose gear to which this regulation applies in working order, malfunctions of that equipment shall not be assumed as making the ship unseaworthy or as a reason for delaying the ship in ports, provided that action has been taken by the master to take the inoperative lifting appliance or anchor handling winch into account in planning and executing a safe voyage.^{2, 3}

¹ Ships certified as MODUs are those subject to the MODU Code and which carry a MODU Code Certificate on board issued by the Administration or a recognized organization. The carriage of this certificate includes authorized electronic versions available on board.

² Refer to the *Guidelines for anchor handling winches* (MSC.1/Circ.1662).

³ Refer to the *Guidelines for lifting appliances* (MSC.1/Circ.1663)."

CHAPTER II-2 CONSTRUCTION – FIRE PROTECTION, FIRE DETECTION AND FIRE EXTINCTION

Part A General

Regulation 1 Application

2 Applicable requirements to existing ships

3 The following new paragraph 2.10 is added after existing paragraph 2.9, together with the associated footnote:

"2.10 Ships constructed before 1 January 2026 shall comply with regulation 10.11.2, as adopted by resolution MSC.532(107), not later than the date of the first survey* on or after 1 January 2026.

* Refer to the *Unified interpretation of the term "first survey" referred to in SOLAS regulations* (MSC.1/Circ.1290)."

Part C

Suppression of fire

Regulation 10 *Fire fighting*

4 The following new paragraph 11 is added after existing section 10:

"11 Fire-extinguishing media restrictions

The purpose of this paragraph is to protect persons on board against exposure to dangerous substances used in firefighting, as well as to minimize the impact of fire-extinguishing media that are deemed detrimental to the environment.

11.1 Application

This regulation applies to ships constructed on or after 1 January 2026.

11.2 General

11.2.1 The prohibited substances in this regulation shall be delivered to appropriate shore-based reception facilities when removed from the ship.

11.2.2 Use or storage of extinguishing media containing perfluorooctane sulfonic acid (PFOS) shall be prohibited."

CHAPTER V

SAFETY OF NAVIGATION

Regulation 2 *Definitions*

5 The following new paragraphs are added after existing paragraph 7, together with the associated footnotes:

"8 *Bulk carrier* means a bulk carrier as defined in regulation XII/1.1.¹

9 *Containership* means a ship which is intended primarily to carry containers.²

1 Refer to *Clarification of the term 'bulk carrier' and guidance for application of regulations in SOLAS to ships which occasionally carry dry cargoes in bulk and are not determined as bulk carriers in accordance with regulation XII/1.1 and chapter II-1* (resolution MSC.277(85)).

2 Refer to the term 'container' as defined in article II of the International Convention for Safe Containers (CSC), 1972."

Regulation 18 *Approval, surveys and performance standards of navigational systems and equipment and voyage data recorder*

6 The following reference is added to the footnote corresponding to paragraph 2:

"*Performance standards for electronic inclinometers* (resolution MSC.363(92))"

Regulation 19

Carriage requirements for shipborne navigational systems and equipment

7 The following new paragraph 2.12 is added after existing paragraph 2.11:

"2.12 Containerships and bulk carriers of 3,000 gross tonnage and upwards constructed on or after 1 January 2026 shall be fitted with an electronic inclinometer, or other means, to determine, display and record the ship's roll motion."

CHAPTER XIV SAFETY MEASURES FOR SHIPS OPERATING IN POLAR WATERS

Regulation 2

Application

8 Regulation 2 is replaced by the following:

"Regulation 2

Application

1 Unless expressly provided otherwise, this chapter applies to the following ships operating in polar waters:¹

- .1 ships certified in accordance with chapter I;
- .2 fishing vessels of 24 metres in length overall and above;
- .3 pleasure yachts of 300 gross tonnage and upwards not engaged in trade; and
- .4 cargo ships of 300 gross tonnage and upwards but below 500 gross tonnage.

¹ Refer to the *Interim safety measures for ships not certified under the SOLAS Convention operating in polar waters* (resolution A.1137(31)).

2 Ships subject to paragraph 1.1 constructed before 1 January 2017 shall meet the relevant requirements of the Polar Code by the first intermediate or renewal survey, whichever occurs first, after 1 January 2018.

3 Ships subject to paragraphs 1.2, 1.3 or 1.4 constructed before 1 January 2026 shall meet the relevant requirements of chapters 9-1 and 11-1 in part I-A of the Polar Code by 1 January 2027.

4 In applying part I-A of the Polar Code, consideration should be given to the additional guidance in part I-B of the Polar Code.

5 This chapter shall not apply to ships owned or operated by a Contracting Government and used, for the time being, only in government non-commercial service. However, ships owned or operated by a Contracting Government and used, for the time being, only in government non-commercial service are encouraged to act in a manner consistent, so far as reasonable and practicable, with this chapter.

6 Nothing in this chapter shall prejudice the rights or obligations of States under international law."

Regulation 3

Requirements for ships to which this chapter applies

- 9 Regulation 3 is replaced by the following:

"Regulation 3

Requirements for ships certified in accordance with chapter I

1 Ships subject to regulation 2.1.1 above shall comply with the requirements of the safety-related provision of the introduction and with part I-A of the Polar Code and shall, in addition to the requirements of regulations I/7, I/8, I/9 and I/10, as applicable, be surveyed and certified, as provided for in that Code.

2 Ships subject to regulation 2.1.1 above holding a certificate issued pursuant to the provisions of paragraph 1 shall be subject to the control established in regulations I/19 and XI-1/4. For this purpose, such certificates shall be treated as a certificate issued under regulation I/12 or I/13."

- 10 The following new regulation is inserted after existing regulation 3:

"Regulation 3-1

Requirements for fishing vessels of 24 metres in length overall and above, pleasure yachts of 300 gross tonnage and upwards not engaged in trade and cargo ships of 300 gross tonnage and upwards but below 500 gross tonnage

1 Ships subject to regulations 2.1.2, 2.1.3 or 2.1.4 on all voyages in the Antarctic area and voyages in Arctic waters beyond the outer limit of the territorial sea of the Contracting Government whose flag the ship is entitled to fly shall comply with the provisions of chapters 9-1 and 11-1 of part I-A of the Polar Code, taking into account the introduction and the safety-related provisions of paragraphs 1.2, 1.4 and 1.5 of chapter 1 of part I-A of the Polar Code.

2 Notwithstanding paragraph 1 above, the Administration shall determine to what extent the provisions of regulations 9-1.3.1 and 9-1.3.2 of chapter 9-1 of part I-A of the Polar Code do not apply to:

- .1 fishing vessels of 24 metres in length overall and above; and
- .2 ships of 300 gross tonnage and upwards but below 500 gross tonnage not engaged in international voyages."

APPENDIX
CERTIFICATES

Record of equipment for passenger ship safety (Form P)

2 Details of life-saving appliances

11 In the table for "Details of life-saving appliances", entries 10 to 10.2 are replaced by the following:

10	Number of immersion suits
----	---------------------------

Form of Safety Equipment Certificate for Cargo Ships

Cargo Ship Safety Equipment Certificate

Type of ship

12 The following new entry is added after "Gas carrier":

"Containership"

Record of equipment for cargo ship safety (Form E)

2 Details of life-saving appliances

13 In the table for "Details of life-saving appliances", entries 9 to 9.2 are replaced by the following:

9	Number of immersion suits
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3 Details of navigational systems and equipment

14 In the table for "Details of navigational systems and equipment", the following new entry is added after existing entry 15 (Bridge navigational watch alarm system (BNWAS)):

"16 Electronic inclinometer"

Form of Safety Certificate for Nuclear Cargo Ships

Nuclear Cargo Ship Safety Certificate

Type of Ship

15 The following new entry is added after "Gas carrier":

"Containership"

Record of equipment for cargo ship safety (Form C)

2 Details of life-saving appliances

16 In the table for "Details of life-saving appliances", entries 9 to 9.2 are replaced by the following:

9	Number of immersion suits
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5 Details of navigational systems and equipment

17 In the table for "Details of navigational systems and equipment", the following new entry is added after existing entry 15 (Bridge navigational watch alarm system (BNWAS)):

"16 Electronic inclinometer"

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MSC.1/Circ.1662
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GUIDELINES FOR ANCHOR HANDLING WINCHES

1 The Maritime Safety Committee, at its 107th session (31 May to 9 June 2023), having considered a proposal by the Sub-Committee on Ship Systems and Equipment, at its eighth session, with a view to ensuring a uniform approach towards the application of SOLAS regulation II-1/3-13, adopted by resolution MSC.532(107), approved *Guidelines for anchor handling winches*, as set out in the annex.

2 Member States are invited to use the annexed Guidelines when applying SOLAS regulation II-1/3-13 and to bring them to the attention of ship designers, shipyards, shipowners, equipment manufacturers and other organizations and parties concerned.

ANNEX

GUIDELINES FOR ANCHOR HANDLING WINCHES

1 Application

These Guidelines support the application of SOLAS regulation II-1/3-13 for anchor handling winches, associated equipment and loose gear used in association with anchor handling winches.

2 Definitions

For the purpose of these Guidelines, the following definitions apply:

- .1 *Brake holding force* is the maximum force for which the winch brake is designed.
- .2 *Brake holding capacity* is the maximum line pull that the winch brake can withstand without slipping of the brake.
- .3 *Maximum line pull* is the maximum sustained force the winch is capable of pulling.
- .4 *Static bollard pull* is the maximum sustained pulling force a vessel is capable of generating at maximum power (i.e. 100% maximum continuous rating (MCR)) and zero forward speed.
- .5 A *wire* means a dedicated line (wire rope, synthetic rope or chain cable) used for the handling of anchors by means of an anchor handling winch. The wire may include connecting loose gear.
- .6 *Chain stopper* is a device used for securing and holding a section of wire, thereby relieving the load on the winch drum.
- .7 *Competent person* means a person possessing the knowledge and experience required for the performance of duties specified in these guidelines and acceptable as such to the Administration.
- .8 *Inspection* means an assessment carried out by a responsible person to ascertain if the anchor handling winches or associated loose gear are in good working condition for continued safe use.
- .9 *Responsible person* means a person appointed by the master or company as defined in SOLAS regulation IX/1, as appropriate, possessing the knowledge and experience required for the performance of duties specified in these Guidelines.
- .10 *Thorough examination* means a detailed assessment carried out by a competent person in order to determine whether or not the anchor handling winches or associated loose gear are in compliance with the applicable requirements of the Administration.

- .11 *Certified* means that the anchor handling winches or associated loose gear have been verified and documented as compliant to the satisfaction of the Administration or recognized organization acting on its behalf.
- .12 *Maintenance* means any activity carried out by a responsible person to keep the anchor handling winches or associated loose gear in good working condition for continued safe use.
- .13 *Operational testing* means a test carried out by a responsible person to verify the correct functioning of a component or operation of the anchor handling winches and/or associated loose gear.
- .14 *Load test* means a test in excess of the maximum line pull, carried out in the presence of a competent person in order to check the structural integrity of the anchor handling winches and their attachment to and adequacy of their supporting structure.

3 Anchor handling winches

3.1 Design, construction and installation

3.1.1 General

Anchor handling winches and associated equipment should be designed, constructed and installed in accordance with the requirements of a classification society which is recognized by the Administration in accordance with the provisions of SOLAS regulation XI-1/1 or standards acceptable to the Administration which provide an equivalent level of safety. In addition to the above, anchor handling winches that fall under the scope of SOLAS regulation II-1/3-13.2.2 should also comply with the additional guidance specified under paragraphs 3.1.2 to 3.1.8 below.

3.1.2 Speed control and handling

3.1.2.1 The anchor handling winches should be capable of hoisting and lowering in a controlled manner, and should be provided with adjustable speed control between the minimum and maximum speeds.

3.1.2.2 The winch operating controls should be designed to pay out the wire by moving the control lever away from the winch operator and heave in by pulling the control lever towards the operator. All operating controls should be permanently marked with signs indicating their purpose and the operating direction.

3.1.2.3 The winch operating controls should be of the "hold-to run" type, which will cause the hoisting or lowering motion to automatically stop when the control lever is released by the operator.

3.1.3 Tension control

Anchor handling winches should be equipped with tension control to ensure that the system is not overloaded in the event that the anchor being handled gets stuck, entangled or is exposed to similar situations.

3.1.4 Overload alarm and monitoring

3.1.4.1 Winches should be provided with continuous load monitors and an audible and visual overload alarm.

3.1.4.2 The overload alarm should be programmable for lower levels of load.

3.1.5 Control stations

3.1.5.1 The main control station should be placed in a position on the bridge which has a clear view of the deck area. Operators should be able to visually monitor anchor handling winches and associated equipment and, if the view is obstructed, cameras or video monitoring devices may be used for this purpose.

3.1.5.2 The anchor handling winch may be controlled from more than one position provided that an arrangement to prevent more than one position from exercising control at any one time is fitted.

3.1.5.3 Each control station should be provided with:

- .1 means for two-way communication with the main control station;
- .2 an arrangement to prevent inadvertent actuation;
- .3 adequate protection of personnel; and
- .4 sufficient illumination.*

3.1.6 Spooling device

Anchor handling winches should be equipped with remotely operated spooling devices.

3.1.7 Emergency release

3.1.7.1 Anchor handling winches should be designed to facilitate emergency release of the load on the wire in a safe and controlled manner, both under normal as well as dead-ship conditions.

3.1.7.2 The controls for actuation of the emergency release should be placed at the main control station. Emergency release function may also be available at the local control station.

3.1.7.3 Emergency release control should be protected against unintentional activation.

3.1.7.4 The design and operation of the emergency release should take into consideration restrictions on the pay-out speed of the wire due to inertia and any restrictions due to onboard arrangements.

3.1.7.5 Instructions for the operation of the emergency release should be clearly displayed at the navigation bridge and locally at the winch.

* The minimum lighting level is at least 320 Lux.

3.1.7.6 After an emergency release, the complete anchor handling winch system should be inspected for signs of damage or deterioration. Any identified damage or deterioration should be rectified before the anchor handling winch is put back into service.

3.1.8 Associated anchor handling equipment

3.1.8.1 Chain stopper

3.1.8.1.1 Anchor handling vessels should be equipped with chain or wire stoppers (hereafter referred to as chain stoppers).

3.1.8.1.2 A chain stopper should be equipped with an audible alarm which is activated when the stopper is either being engaged or disengaged.

3.1.8.1.3 A chain stopper should be equipped with an emergency release that is functional in all conditions, including dead-ship situations.

3.1.8.1.4 Emergency release of chain stopper should include disengaging of pins and other equipment that may prevent releasing the wire or cause the wire to get stuck/entangled during release.

3.1.8.1.5 Emergency release of the chain stopper should be designed for remote operation in order to minimize the risk of injury to personnel.

3.1.8.1.6 The emergency release mechanism of the chain stopper should be protected against unintentional activation.

3.1.8.1.7 Instructions for the operation of the emergency release should be clearly displayed at the navigation bridge and locally at the emergency release control mechanism.

3.1.8.1.8 After an emergency release, the chain stopper system should be inspected for signs of damage or deterioration. Any identified damage or deterioration should be rectified before the chain stopper is put back into service.

3.2 Testing and thorough examination

3.2.1 Commissioning test

3.2.1.1 For anchor handling winches to which SOLAS regulation II-1/3-13.2.2 applies, a commissioning test should be carried out according to the manufacturer's instructions and the requirements of a classification society which is recognized by the Administration in accordance with SOLAS regulation XI-1/1, or with applicable national or international standards acceptable to the Administration and which provide an equivalent level of safety. The commissioning test should include the following:

- .1 Function tests at light load to verify the correct working of the winch and its controls over the full operating range.
- .2 An overload test to verify the capacity and integrity of the anchor handling winch, the attachment of the winch to ship and the adequacy of the ship's supporting structure.
- .3 Test of emergency release and residual holding force in the wire. The test should be performed with the wire attached to an onshore strong point, or an anchor on the seabed or a similar arrangement.

- .4 Residual brake holding force after emergency release should be verified by test.
- .5 Function test of the whole winch system including static bollard pull test and brake holding capacity test. Where it is not practicable to verify the brake holding capacity by testing, the same may be demonstrated through calculations.

3.2.1.2 After repairs, modifications or alterations of a major character, anchor handling winches are to be tested in accordance with 3.2.1.1.1, 3.2.1.1.2 and 3.2.1.1.5. If the emergency release system is affected by these repairs, modifications or alterations of a major character, the anchor handling winches are to be additionally tested in accordance with 3.2.1.1.3 and 3.2.1.1.4.

3.2.1.3 Repairs, modifications or alterations of a major character are those which:

- .1 change the rated wire pull of the anchor handling winch;
- .2 affect the strength, stability or service life of the anchor handling winch;
- .3 affect the primary load bearing structure of the anchor handling winch; or
- .4 modify the functionality of the anchor handling winch or any part thereof which may affect its strength or safety or structural integrity.

3.2.1.4 Anchor handling winches that are not designed for towing do not need to undergo the bollard pull test in 3.2.1.1.5. Functional testing other than the static bollard pull test is still required.

3.2.2 *Periodical testing*

Anchor handling winches and associated equipment should be operationally tested annually and five-yearly according to the manufacturer's recommendation and the requirements or recommendations of a classification society which is recognized by the Administration in accordance with the provisions of regulation XI-1/1. The annual test should include function tests of all equipment. The Administration or recognized organization should witness the five-yearly test.

3.2.3 *Thorough examination*

3.2.3.1 Anchor handling winches and associated equipment should be subject to a thorough examination to the satisfaction of the Administration during annual surveys required by SOLAS regulations I/7 for passenger ships and I/10 for cargo ships, before re-entering service after any structural repairs or modifications of major character and after load testing.

3.2.3.2 If on completion of a thorough examination, the competent person considers the anchor handling winch to be unsafe for operation or not in compliance with the applicable requirements of the Administration, then that anchor handling winch should be taken out of service until any deficiency is rectified to the satisfaction of a competent person. The anchor handling winch should be clearly marked "not to be used" and the status should be recorded as outlined in 3.2.4. While out of service, the relevant actions for inoperative anchor handling winches as outlined under section 5 of these Guidelines should be followed.

3.2.4 *Records of testing and thorough examination*

Records of thorough examination and testing may be documented in any convenient form, provided each entry includes the necessary information, is clearly legible and is authenticated by the competent person. The relevant classification society or equivalent forms for documenting the thorough examination and testing should be considered for use.

3.3 **Demonstration of compliance**

3.3.1 Before being put into use for the first time, anchor handling winches installed on or after 1 January 2026 should be certified by the Administration or a classification society which is recognized by the Administration in accordance with the provisions of regulation XI-1/1 as compliant with SOLAS regulations II-1/3-13.2.2 with the recommended scope for demonstration of compliance of anchor handling winches comprising the following:

- .1 a plan appraisal of the anchor handling winch and foundation connections;
- .2 verification of materials;
- .3 survey, testing and examination during fabrication;
- .4 verification of component certificates including its loose gear; and
- .5 testing and thorough examination when installed on board.

3.3.2 Anchor handling winches installed before 1 January 2026 should be certified by the Administration or a classification society which is recognized by the Administration in accordance with the provisions of regulation XI-1/1 as compliant with SOLAS regulation II-1/3-13.2.5 no later than the date of the first renewal survey on or after 1 January 2026.

3.3.3 Existing anchor handling winches with valid certificates under another international instrument acceptable to the Administration and issued prior to the entry into force of SOLAS regulation II-1/3-13 should be considered compliant with SOLAS regulation II-1/3-13.2.5.

3.3.4 Demonstration of compliance certified as per paragraphs 3.3.1 and 3.3.2 should be recorded in accordance with paragraph 3.2.4.

3.4 **Nameplate**

3.4.1 Anchor handling winches should be provided with a permanently affixed name plate which should include at least the following information:

- .1 details of the manufacturer (name, address);
- .2 model name/number;
- .3 serial number;
- .4 date of manufacture and date of installation;
- .5 details of power supply;
- .6 details of wire (e.g. length, diameter);
- .7 maximum brake holding capacity, metric tons;

- .8 maximum line pull, metric tons;
- .9 maximum static bollard pull, metric tons;
- .10 placeholder for the classification society's surveyor's stamp;
- .11 drum size; and
- .12 winch speed.

3.4.2 Detailed specifications of anchor handling winches, such as the following information, can be included in other documentation, e.g. anchor handling winches' operation/maintenance manual on board:

- .1 date of manufacture and date of installation;
- .2 details of power supply;
- .3 details of wire (e.g. length, diameter);
- .4 maximum brake holding capacity, metric tons;
- .5 maximum line pull, metric tons;
- .6 maximum static bollard pull, metric tons;
- .7 placeholder for the classification society's surveyor's stamp;
- .8 drum size; and
- .9 winch speed.

3.4.3 It should be ensured that the documentation on board can be unambiguously related to the actual winch, i.e. by referring to the unique serial number.

3.5 Maintenance, inspection and operational testing

3.5.1 General

3.5.1.1 Maintenance, inspection, operational testing and their respective intervals should be in accordance with the manufacturer's recommendations, industry standards and guidelines or classification society requirements and recommendations acceptable to the Administration, considering factors such as the operational profile of the ship and the anchor handling winch.

3.5.1.2 All anchor handling winches and associated equipment should be considered vulnerable to marine environmental conditions which may lead to significant and accelerated deterioration and corrosion, and the inspection and maintenance regime should be implemented accordingly.

3.5.1.3 The inspection and maintenance of anchor handling winches and associated equipment may involve working at height, enclosed space entry and other hazards. These hazards should be considered when developing the relevant procedures for undertaking such tasks, including safe access.

3.5.1.4 Examples of items requiring particular attention may include:

- .1 corrosion and damage of primary structural members, such as winch frames and bedplates, drums, foundations and foundation connections, including welds and bolts;
- .2 wear, corrosion and damage of mechanical components including hydraulic/pneumatic cylinders, pins, winch drums, chain wheels, wire-spooling and guide systems, clutches, bearings, rollers, shafts, gears, bearings and brakes;
- .3 correct setting and functioning of safety, protection and limiting devices;
- .4 condition and correct functioning of the anchor handling winch as a whole and, in particular, the piping/hoses, hydraulic arrangements, spooling devices, motors, and electrical and control systems;
- .5 corrosion and damage to all means of safe access to the anchor handling winch, including attached maintenance platforms and extensions, with particular attention to support brackets and welds; and
- .6 certification and identification of all wires.

3.5.1.5 Damaged, broken, worn or corroded wires, including their terminations connecting loose gear, should be inspected and discarded according to manufacturers' recommendations, relevant industry standards, international standards or requirements of classification societies acceptable to the Administration.

3.5.1.6 If on the completion of an inspection, the responsible person considers the anchor handling winch to be unsafe for operation or not in compliance with the applicable requirements of the Administration, then that anchor handling winch should be taken out of service until any deficiency is rectified to the satisfaction of a competent person. The anchor handling winch should be clearly marked not to be used and the status should be recorded in accordance with 3.2.4. While out of service, the relevant actions for inoperative anchor handling winches as outlined under section 5 of these Guidelines should be followed.

3.5.2 *Maintenance manual*

3.5.2.1 A maintenance manual for an anchor handling winch should be provided by the manufacturer. Where maintenance manuals for existing anchor handling winches are not available from the manufacturer, these may be provided by competent third parties.

3.5.2.2 The maintenance manual should, as a minimum, include the following for each anchor handling winch:

- .1 description of the required inspection regime and maintenance schedules specific to the anchor handling winch, checklists and a list of key tools or other items for use when carrying out inspections and maintenance;
- .2 instructions for routine repairs/maintenance;
- .3 technical maintenance information;
- .4 information on recommended lubricants, oil and filter change;
- .5 information on bearing maintenance, if applicable;

- .6 lists of replaceable parts/components, as well as the inspection/maintenance/replacement procedures for these parts/components;
- .7 lists of sources of spare parts;
- .8 model forms for records of inspections and maintenance;
- .9 operational test procedures, as well as the pre/post-operational test inspection procedures;
- .10 list of components requiring particular attention during inspections, as well as the inspection/maintenance procedures for these components;
- .11 recommended intervals for replacement and overhaul of components and equipment;
- .12 information on the preservation of the coating and corrosion protection system; and
- .13 information regarding special inspection and maintenance in cases where the anchor handling winch is not operated for long periods of time.

3.5.3 *Records of maintenance and inspection*

3.5.3.1 Records of the routine inspection and maintenance of anchor handling winches or their components or parts should be maintained and kept on board.

3.5.3.2 The records and particulars of inspection and maintenance may be documented in any convenient form, provided each entry contains the necessary information, is clearly legible and is authenticated by a responsible person. Any recommendations of the manufacturer for such inspection and maintenance records should be used.

3.6 **Operations**

3.6.1 *General*

3.6.1.1 Personnel operating anchor handling winches and their associated equipment should be qualified, familiarized with the equipment and be authorized by the master.

3.6.1.2 All personnel involved in an anchor handling winch operation should understand their role during the operation and, in particular, the signals that may be required to commence, coordinate or stop the operation.

3.6.1.3 Personnel involved in anchor handling winch operations should be equipped with appropriate personal protective equipment for the task.

3.6.1.4 Anchor handling winch operations should be planned, supervised and carried out so that any identified risks are minimized.

3.6.1.5 Procedures and instructions should relate to the specific type of anchor handling winch and should be provided in the operations manual.

3.6.1.6 Due consideration should be given to any limiting operational conditions, such as the ship's motion/inclination, environmental conditions including sea state, maximum wind speeds including wind gusts, ice and snow accretion, as well as limitations of the anchor handling winch, such as maximum line pull, maximum brake holding capacity, etc.

3.6.1.7 Effective communication should be established among ship's personnel as well as other ships/offshore units involved in the anchor handling winch operation.

3.6.1.8 Safe means of access to anchor handling winches and the work area should be established. Safe areas for the personnel involved should be available.

3.6.1.9 When developing plans and procedures for anchor handling winch operations, consideration should be given to prevention of accidents or incidents due to the wires striking any person or other structures in close proximity.

3.6.1.10 Procedures and measures for the safe operation of anchor handling winches should take account of applicable international and national instruments and best practices for occupational safety and health.

3.6.1.11 Personnel operating the anchor handling winch should consult the operations manual for any specific instructions related to the anchor handling operations.

3.6.1.12 Periodic drills for emergency release and emergency brake operation should form part of the planned maintenance schedule.

3.6.2 *Operations manual*

3.6.2.1 An operations manual for the anchor handling winches should be provided by the manufacturer. Where operations manuals for existing anchor handling winches are not available from the manufacturer, these may be provided by competent third parties.

3.6.2.2 The operations manual should, as a minimum, include the following for each anchor handling winch:

- .1 design, operational and environmental limitations;
- .2 compatible loose gear, if any;
- .3 safety instructions; and
- .4 operating procedures, including emergency procedures, if any.

3.6.2.3 For anchor handling winches installed before 1 January 2026, their operations manual should be developed with original manufacture, design and build data, and take into account any modifications since installation. Where original data or modification data is not available, the operations manuals should be developed on the current operational procedures and practices.

4 *Loose gear*

4.1 *Design and manufacturing*

Loose gear utilized with anchor handling winches to which SOLAS regulations II-1/3-13.2.2 and II-1/3-13.2.5 apply should be designed and manufactured in accordance with requirements acceptable to the Administration or a classification society which is recognized by the Administration in accordance with the provisions of regulation XI-1/1.

4.2 Proof test and thorough examination

4.2.1 Proof test

All loose gear in use with anchor handling winches and associated equipment to which SOLAS regulation II-1/3-13 applies should have documentary evidence of a proof test and be retested after repairs, modifications or alterations of major character acceptable to the Administration.

4.2.2 Thorough examination

4.2.2.1 Loose gear should be subject to thorough examination to the satisfaction of the Administration:

- .1 after any proof test; and
- .2 annually.

4.2.2.2 If on completion of a thorough examination, the competent person considers the item(s) of loose gear to be unsafe for operation or not in compliance with the applicable requirements of the Administration, then that loose gear should be taken out of service until any deficiency is rectified to the satisfaction of a competent person. The loose gear should be clearly marked "not to be used" and the status should be recorded as detailed in sub-section 4.7. While out of service, the relevant actions for inoperative loose gear as outlined under section 5 of these Guidelines should be followed.

4.3 Demonstration of compliance

4.3.1 Before being put into use for the first time, the loose gear utilized with anchor handling winches which comply with SOLAS regulations II-1/3-13.2.2 and 3-13.2.5 should be certified to meet the provisions in section 4.

4.3.2 The existing loose gear utilized with anchor handling winches and associated equipment to which SOLAS regulations II-1/3-13.2.2 and II-1/3-13.2.5 apply, with valid certificates under another international instrument acceptable to the Administration and issued prior to the entry into force of SOLAS regulation II-1/3-13, should be considered compliant with SOLAS regulation II-1/3-13.5.

4.4 Marking

4.4.1 Loose gear should be clearly and permanently marked with its unique identification (serial no.), safe working load (SWL) and any additional marks required for safe use.

4.4.2 If there is insufficient space for the marking on the loose gear other than the SWL, the omitted information should be included in the certificate or be provided by other suitable means.

4.5 Operation

The personnel involved in anchor handling winch operations which utilize loose gear should be qualified, familiarized with the equipment and be authorized by the master.

4.6 *Maintenance and inspection*

4.6.1 Maintenance and inspections at respective intervals should be in accordance with the manufacturer's recommendations, industry standards and guidelines or classification society requirements and recommendations acceptable to the Administration, considering factors such as the operational profile of the ship, anchor handling winch and the loose gear.

4.6.2 All loose gear should be considered vulnerable to marine environmental conditions which may lead to significant and accelerated deterioration and corrosion, and the inspection and maintenance regime should be implemented accordingly.

4.6.3 Hazards particular to the inspection and maintenance of loose gear should be considered when developing the relevant procedures for undertaking such tasks.

4.6.4 Loose gear should be inspected by a responsible person before each use.

4.6.5 Examples of aspects requiring particular attention may include:

- .1 wear, corrosion, damage and correct functioning of the loose gear;
- .2 damaged, worn or corroded chains, including their terminations;
- .3 certification, identification and marking of loose gear; and
- .4 physical or chemical degradation, including degradation due to the exposure to the environment.

4.6.6 If on completion of an inspection the responsible person considers the loose gear to be unsafe for operation or not in compliance with the applicable requirements of the Administration, then the loose gear should not be used until any deficiency is rectified to the satisfaction of a competent person. The loose gear should be clearly marked "not to be used" and the status should be recorded. While out of service, the relevant actions for inoperative loose gear as outlined in section 5 should be followed.

4.7 *Records of inspection, maintenance, testing and thorough examination*

4.7.1 *Records of thorough examination and testing*

4.7.1.1 A record of thorough examination and evidence of proof testing of loose gear should be maintained and kept on board.

4.7.1.2 Records of thorough examination and testing may be documented in any convenient form, provided each entry includes the necessary information, is clearly legible and is authenticated by the competent person. Forms issued by the relevant classification society recognized by the Administration or any equivalent forms for documenting the thorough examination and testing should be considered for use.

4.7.2 *Records of inspection and maintenance*

4.7.2.1 Records of the routine inspection and maintenance of loose gear should be maintained and kept on board.

4.7.2.2 The records and particulars of inspection and maintenance may be documented in any convenient form, provided each entry contains the necessary information, is clearly legible and is authenticated by a responsible person. Any recommendations of the manufacturer for such inspection and maintenance records should be used.

5 Inoperative anchor handling winches, associated equipment and loose gear

For the implementation of SOLAS regulation II-1/3-13.4, the following actions should be taken by the master to mitigate risks posed by inoperative anchor handling winches and associated loose gear and wire:

- .1 take the inoperative anchor handling winches, associated equipment and wire into account in planning and executing a safe voyage;
 - .2 prevent the operation of inoperative anchor handling winches and associated loose gear and equipment;
 - .3 prevent uncontrolled movement of inoperative anchor handling winches or associated loose gear and equipment using appropriate restraining and preventing arrangements, if required;
 - .4 store inoperative wires and loose gear separately from in-service wires and loose gear and mark it as being inoperative; and
 - .5 record the particulars of anchor handling winches or loose gear, associated equipment and wire that is inoperative as detailed in paragraph 3.2.4 and/or 4.7.1 until necessary repairs have been completed and it has been tested or proof tested, as necessary, and thoroughly examined.
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