Lifting Appliances and Anchor Handling Winches

Rule Development Department, Research and Development Division, ClassNK

1. INTRODUCTION

The International Maritime Organization (IMO) has conducted studies with the aim of formulating international safety standards to reduce accidents involving onboard lifting appliances.

Among international standards for onboard lifting appliances, ILO C152 (International Labour Organization Convention No. 152) is a safety standard for port workers engaged in "dock work," ILO C152 is widely recognized by related parties in the industry and is already applied in the ports of countries that ratified ILO C152 as well as in some non-ratifying countries, and the requirements of the technical rules of ship classification societies also take this Convention into account.

However, since ILO C152 does not apply to onboard lifting appliances not used by dock workers, such as engine-room overhead cranes, provision cranes, etc., its deficiencies as an international standard uniformly applicable to onboard lifting appliances were as concern, and the necessity of developing a new international standard separate from ILO C152 was recognized.

At the 89th session of the Maritime Safety Committee (MSC89) of the IMO held in May 2011, related national governments, beginning with Japan, submitted proposal MSC 89/22/12 (proposal for incorporating safety standards for onboard lifting appliances in the SOLAS Convention), and discussions on the establishment of internationally-unified safety standards for onboard lifting appliances were begun. Discussions on anchor handling winches were also carried out in parallel with the discussions on lifting appliances based on proposal DE56/22/4 (proposal for requirements for towing, anchor handling and stern lifting winches) submitted by Norway at the 56th session of the Sub-committee on Ship Design and Equipment (DE56) held in February 2012.

At MSC107 held in June 2023, an amendment to the SOLAS Convention concerning lifting appliances and anchor handling winches was adopted as IMO Resolution MSC.532(107) [1]. Specific safety requirements were also approved as MSC.1/Circ.1662 [2] and MSC.1/Circ.1663 [3] at MSC107 as requirements to be specified in guidelines.

The ClassNK (the Society) incorporated the provisions of the amendment to the SOLAS Convention and the related guidelines in its Rules, and "Rules for Cargo Handling Appliances" was formally amended to "Rules for Lifting Appliances and Anchor Handling Winches," and is to be applied beginning in January 2026. Furthermore, the implementation of the Rules has commenced, with our Material and Equipment Department responsible for matters related to lifting appliances, Machinery Department for the matters related to anchor handling winches, and Survey Department for the matters related to surveys.

This paper introduces the history of discussions at the IMO, ILO C152, and amendments to the Rules for Cargo Handling Appliances.

2. HISTORY OF DISCUSSIONS IN IMO

In the IMO, discussions on the establishment of international safety standards for onboard lifting appliances and anchor handling winches were carried out over a lengthy period of 12 years, substantially from 2011 to 2023. Including proposals from related governments, industry groups and others, and reports from committees and sub-committees, related working groups and correspondence groups, and the IMO Secretariat, almost 100 related documents were prepared (Table 1). This suggests how difficult it was to formulate unified international standards for lifting appliances and anchor handling winches, and also shows the high interest of the stakeholder.

Although these related documents are all important for understanding the content of the discussions in the IMO, in particular, the following presents an overview of the documents that led to the preparation of the amendment to the SOLAS Convention and related guidelines. Since it is not our intention to present a comprehensive description of the entire content of these documents, the reader should understand that they are presented here only for reference.

2.1 MSC 89/22/12

Against the backdrop of a serious accident that occurred during cargo handing between the cargo ship “M.V. RICKMERS JAKARTA” and the barge “18 Shin Ei-Maru” in Keihin Port (Japan) in September 2008, at least 18 accidents involving lifting appliances for cargo handling that occurred in Japan (including the aforementioned serious accident), and 64 accidents that raised safety concerns due to failure of onboard lifting appliances reported by New Zealand, this proposal was made to point out the necessity of incorporating requirements for the manufacture and installation of onboard lifting appliances in the SOLAS Convention.

2.2 DSC 16/5/5 and DE 56/2/3 (ICHCA: International Cargo Handling Coordination Association)

These are reports of results of preliminary investigations of accidents involving lifting appliances by the IMO’s Sub-committee on Dangerous Goods, Solid cargoes and Containers (DSC) and Sub-committee on Ship Design and Equipment (DE). Since 2001, 29 accidents involving lifting appliances for non-cargo handling had occurred in ships of a certain flag state, and in all cases, the cause was poor maintenance. Since ILO C152 is applicable only to lifting appliances for cargo-handling, this result suggested that countermeasures for lifting appliances for non-cargo handling were also necessary. In addition, the necessity of involvement of the flag state under the SOLAS Convention was also suggested. As examples of lifting appliances for non-cargo handling, DE56/INF.2 (Japan) mentioned hose handling cranes installed on tankers, small cranes for retrieval of provisions, engine-room overhead cranes, and davit cranes for deploying lifesaving equipment.

2.3 DE 56/22/4 (Norway)

In response to the capsizing of the anchor handling vessel “M.V. BOURBON DOLPHIN,” the need to draw up technical requirements for emergency release, tension control of towing, anchor handling and stern lifting winches was proposed.

2.4 DE 57/18/1 (Korea) and DE 57/18/2 (ICHCA)

The necessity of drawing up internationally-unified mandatory requirements under the SOLAS Convention was pointed out, and addition of Regulation 3-13, Chapter II-1 of the SOLAS Convention was proposed as the concrete content of an amendment. As the content of guidelines referenced from the SOLAS Convention after amendment under these proposals, DE 57/18/3 (Japan) proposed a guidelines including the construction, strength, installation, maintenance, inspection, certification and operation manuals.

2.5 DE 57/18/4 (New Zealand)

Application to the lifting appliances of existing ships and application to cranes for stores and engine-room overhead cranes were proposed.

2.6 SSE 1/WP.5 (Chair, SSE1 WG) and SSE 1/21 (IMO Secretariat)

The Sub-committee on Ship Systems and Equipment (SSE; a sub-committee created by reorganizing former DE and others) concluded that application should not be limited to lifting appliances for cargo-handling, and requirements should not be applied to elevators and escalators for human use, equipment related to the International Life-Saving Appliance Code (LSA Code), mobile offshore drilling units (which are subject to the MODU Code) or fishing boats. As the content of the requirements, these documents indicated that items relate to operation, maintenance, training, inspections, testing and certification should be applicable to all newly-constructed ships and existing ships, and items related to ship design and construction should be applied when lifting appliances are newly installed on newly-constructed ships and existing ships.

2.7 SSE 2/8/3 (Japan)

As clarification of the meaning of lifting appliances, this document proposed that the objects of application be defined as power-operated lifting appliances. It also proposed excluding from application to personnel/passenger/provisions elevators (lifts), escalators, removable hoists, items designated for special purposes such as accommodation ladders, pilot ladders, sludge winches and the like, and equipment regulated under the LSA Code. However, SSE 2/WP.2 (Chair, SSE2 WG) and SSE 2/20 (IMO Secretariat) took the view that personnel/passenger elevators (lifts), non-power-operated lifting appliances, removable hoists and sludge winches can be excluded from the scope of application.

2.8 MSC 95/22 (IMO Secretariat)

This is an agreement that the development of a proposal for a goal- and functional -based SOLAS amendment, supplementation of the SOLAS Convention after amendment with guidelines, and the contents of the guidelines should be specified based on items related to the design and manufacture of newly-installed lifting appliances and winches, items related to the inspection, maintenance and operation of all lifting appliances and winches, and items related to the familization of ship’s

crew and shore-based personnel. It also requested the establishment of a correspondence group, with Japan as the coordinator.

2.9 SSE 3/8 (Japan)

Draft amendments to Chapter II-1 of the SOLAS Convention and the related guidelines were submitted. The draft amendment to the SOLAS Convention provided the definition of lifting appliances and thresholds for the safe working loads (SWL) of lifting appliances outside the scope of application, etc. The draft amendment to the related guidelines specified treatment refer to rules of classification societies in requirements for design, fabrication and construction, and concrete safety requirements also for anchor handling winches.

2.10 SSE 3/8/1 (Norway)

A supplementary explanation of the safety requirements for anchor handling winches in the proposed guidelines in SSE 3/8 was provided.

2.11 SSE 4/8/2 (Antigua and Barbuda, New Zealand, ICHA, IHMA (International Harbour Masters' Association) and SSE 4/8/3 (China, Hong Kong)

This item proposed treating out of service or out of order lifting appliances as maintaining the validity of the SOLAS Convention certificate when the equipment does not pose a danger to the ship or crew.

2.12 SSE 4/WP.4 (Chair, SSE4 WG)

A study was carried out on an amendment to the SOLAS Convention comprising definitions (lifting appliances, anchor handling winches, and loose gear), application (also including a description of items outside the scope of application), and goals and functional requirements. Based on the opinion that manually-operated lifting appliances are not outside the scope of application, manually-operated lifting appliances were not explicitly excluded from the scope of application. However, the possibility that they may inevitably be excluded from application by the SWL thresholds was noted.

2.13 MSC 98/23 (IMO Secretariat)

Accompanying the inclusion of requirements related to anchor handling winches in the amendment to the SOLAS Convention, a change in the name of the agenda item from "Onboard lifting appliances and winches" to "Onboard lifting appliances and anchor handling winches" was approved, and instructions were given that work related to the proposed SOLAS Convention amendment and related guidelines should be carried out in line with the general guidelines for IMO Goal-Based Standards (GBS) specified in MSC/1/Circ.1394/Rev. 1.

2.14 SSE 5/10 (Japan)

Revision of the proposed amendment to the SOLAS Convention in the correspondence group based on the request of MSC98/23 was studied. To clarify the scope of application, this item presents a policy of also providing specific examples of lifting appliances that are within the scope of application, in addition to items that are outside the scope.

2.15 SSE 5/10/5 (Japan)

Based on the fact that manually-operated lifting appliances are not excluded from the scope of application, it was proposed that an SWL threshold of 1 000 kg or more should be set for application in order to avoid including such small-scale lifting appliances in the scope of application. Assuming that manufacturers of small-scale lifting appliances no longer exist, inclusion of a procedure for also recognizing the SWLs specified by shipowners or operators was proposed as a response to the inability to obtain design information.

2.16 MSC 100/9/5 (IMCA: International Marine Contractors Association)

A proposal was made that lifting appliances installed on offshore construction ships should be excluded from application of the amended SOLAS Convention because those lifting appliances are fundamental to the purpose of the ship, and are already designed and maintained based on rigorous international standards.

2.17 SSE 6/9/1 (Japan and ICS: International Chamber of Shipping) and SSE 6/9/2 (Japan and ICS)

Since development of the amendment to the SOLAS Convention has taken a significant period of time , and the content of ILO C152 is based on the prescriptive requirements of standard types and is already widely used among the variety of stakeholders, a proposal was made to the effect that the content based on the prescriptive equirements of standard types developed up to the time should be adopted, rather than an amendment to the SOLAS Convention based on Goal-Based Standards (GBS) as specified in MSC/1/Circ.1394/Rev.1. It was also proposed that threshold SWL values for application of the amendment should be set for design, construction and installation, but should not be set for items related to maintenance, inspection and testing/examination.

2.18 SSE 6/9/4 (Germany)

Assuming the use of lifting appliances with small SWLs, increased risks due to careless operation, operation by unauthorized personnel, inadequate inspection and maintenance, etc. were a concern. Therefore, a proposal was made opposing the introduction of thresholds for application of the amendment so that the requirements are applicable to all lifting appliances and loose gear.

2.19 SSE 6/WP.5 (Chair, SSE6 WG) and SSE 6/18 (IMO Secretariat)

It was agreed that content based on the prescriptive requirements of standard type developed up to the time, and not the SOLAS Convention amendment based on Goal-Based Standards (GBS) should be adopted. The SWL threshold for applicability of the amendment was set at 1 000 kg, and a policy excluding items with SWLs of less than 1 000 kg from application was adopted for the design, constructoin, installation and load testing of newly-installed lifting appliances and load testing of existing lifting appliances.

It was also agreed that definitions (lifting appliances, anchor handling winch, loose gear, etc.) should be revised; SWL thresholds should not be applied to anchor handling winches; provisions referencing the MODU Code should be deleted and offshore construction ships should be outside the scope of application; additional requirements for application of the SOLAS Convention should not be applied to standards conforming to ILO C152; the handling of out of service or inoperative lifting appliances should be incorporated in the amendment to the SOLAS Convention; and the guidelines for lifting appliances and anchor handling winches, which had been developed in a single document, should be prepared separately as two guidelines.

2.20 SSE 7/9 (Japan)

In addition to the proposed guidelines for lifting appliances, the proposed draft of the newly-established guidelines for anchor handling winches were also reported. For requirements related to the basic design of the winch itself, including the winch holding capacity, brake holding capacity, safety factor, etc., the proposed guidelines for anchor handling winches proposed a policy of not taking any action related to these items, based on the fact that there were no specific proposal.

2.21 SSE 7/9/3 (China)

It was pointed out that various problems will occur if the SOLAS Convention and ILO C152 coexist without harmonizing the two different examination intervals and certification systems, including increases in maintenance and testing, difficulty in ship management, and confusion and uncertainty in the implementation of examinations by the industry and the administration, and request further instructions from the MSC were requested.

2.22 SSE7 WP.5 (Chair, SSE7 WG) and SSE 7/21 (IMO Secretariat)

After making certain cosmetic corrections, the amendment to the SOLAS Convention was finalized. Development of the guidelines for lifting appliances was continued, and a overall revision was carried out, including definitions, test loads in load testing, examples of certificates for load testing and thorough examination, the response* to the inconsistencies in the survey intervals of thorough examinations between the SOLAS Convention and ILO C152, and provisions for marking, maintenance, inspections, operational testing, operation, etc. In the guidelines for anchor handling winches, it was agreed that “automatic spooling devices” would be changed to “remotely operated spooling devices” in SSE 7/9/4 (Norway).

(*This response allows either confirmation of proper implementation of a thorough examination based on ILO C152 in annual survey and renewal survey based on the SOLAS Convention, or granting of a 3-month postponement of the due date for the thorough examination, at the discretion of the flag administration.)

2.23 MSC 102/24 (IMO Secretariat)

The amendment to the SOLAS Convention finalized at SSE 7 was approved in principle, and a policy of adopting the amendment to the SOLAS Convention when the guidelines for anchor handling winches are finalized was adopted. However, due to the spread of the novel coronavirus (COVID-19), adoption taking effect on 1 January 2024 was difficult (because SSE would not be held in 2021). Therefore, as an exceptional measure, a policy of adopting the amendment effective at the earliest possible timing outside the 4-year cycle was announced (the actual effective date of 1 January 2026).

2.24 SSE 8/9 (Japan)

Revisions of the guidelines for anchor handling winches related to application, definitions, design, construction, installation, testing and thorough examinations (commissioning tests, periodical testing, thorough examinations and their records), demonstration of compliance, name plates, maintenance, inspections, operational testing, operation, loose gear, and inoperative anchor handling winches, etc. were reported.

2.25 SSE 8/9/2 (Japan)

Regarding the different survey intervals of thorough examinations of lifting appliances under the amendment to the SOLAS Convention and ILO C152, a proposal was submitted touching on the possibility that this difference may cause confusion among the stakeholders, including port authorities and others, and requesting that the IMO Secretariat inform the ILO on the SOLAS Convention amendment and take appropriate action.

2.26 SSE 8/9/3 (Japan)

Regarding the guidelines on anchor handling winches, as issues related to the load testing required once every 5 years, since huge test weights are used, the safety risk of testing is high, and the availability of testing locations is limited, and without an appropriate testing standard, it is difficult to carry out the testing safely and in a uniform manner. To address these issues, a proposal was made to eliminate the requirement that load testing be performed once every 5 years.

2.27 SSE 8/WP.5 (Chair, SSE8 WG) and SSE 8/20 (IMO Secretariat)

In the guidelines for anchor handling winches, periodical load testing was eliminated due to the difficulty of carrying out the tests safely. In its place, a provision that witnessing of periodical testing (operational tests) conducted once every 5 years by the administration or the recognized organization is required, and the guidelines were finalized. In the guidelines for lifting appliances, the provision recognizing a 3-month postponement of the due date for thorough examinations was deleted, as there is already a provision addressing the Administration's discretion on the flexibility for the due date, and this additional description may cause unnecessary concern.

2.28 MSC 106/19 (IMO Secretariat)

Reflecting the revised proposal for clarification in MSC 106/11/4 (Germany, IACS: International Association of Classification Societies) and MSC 106/11/7 (Japan), the respective guidelines for lifting appliances and anchor handling winches were approved in principle, anticipating final approval at MSC107. In addition, a request was made to the IMO Secretariat to inform the ILO on the amendment to the SOLAS Convention, and request that the ILO take appropriate action to avoid duplicative surveys under ILO C152.

2.29 MSC 107/20 (IMO Secretariat)

The SOLAS Convention amendment concerning onboard lifting appliances and anchor handling winches was adopted and final approval was also given to the related guidelines, and it was agreed that all of these documents will take effect on 1 January 2026.

2.30 SSE 10/12/6 (Germany, IACS)

Issuance of a Factual Statement was proposed in order to distinguish existing lifting appliances without a valid certificate based on international instruments such as ILO C152 from lifting appliances that conform to Paragraphs 1 and 3 of Regulation 3-13, Chapter II-1 of the SOLAS Convention, under which safety-related examinations are to be carried out in the design stage. Instructions were given in SSE 10 to perform a partial revision and submit it at the next session (SSE 11). The revision was then resubmitted as SSE 11/10/5 and approved as MSC.1/Circ.1696 in MSC 110/21 in the same year.

Table 1 Documents proposed by related governments, industry groups, etc. and IMO minutes

Document	Committee	Sub-committee	Year held
MSC 83/20/2（New Zealand）	MSC 83	-	2005
MSC 89/22/12（Chile , Japan, New Zealand, Norway, Korea）	MSC 89	-	2011
DSC 16/5/5（ICHCA）	-	DSC 16	2011
DE 56/2（IMO Secretariat）	-	DE 56	2012
DE 56/22/2（IMO Secretariat）	-	〃	〃
DE 56/22/3（ICHCA）	-	〃	〃
DE 56/22/4（Norway）	-	〃	〃
DE 56/22/6（ISO）	-	〃	〃
DE 56/INF.12（Japan）	-	〃	〃
DE 56/INF.13（Japan）	-	〃	〃
DE 57/18（Liberia, Vanuatu, IADC : International Association of Drilling Contractors）	-	DE 57	2013
DE 57/18/1（Korea）	-	〃	〃

Document	Committee	Sub-committee	Year held
DE 57/18/2（ICHCA）	-	〃	〃
DE 57/18/3（Japan）	-	〃	〃
DE 57/18/4（New Zealand）	-	〃	〃
DE 57/INF.5（New Zealand）	-	〃	〃
DE 57/18/5（IMCA）	-	〃	〃
SSE 1/13（New Zealand）	-	SSE 1	2014
SSE 1/INF.3（New Zealand）	-	〃	〃
SSE 1/13/1（Germany）	-	〃	〃
SSE 1/INF.4（Germany）	-	〃	〃
SSE 1/13/2（New Zealand）	-	〃	〃
SSE 1/13/3（New Zealand）	-	〃	〃
SSE 1/WP.5（Chair, SSE1 WG）	-	〃	〃
SSE 1/21（IMO Secretariat）	-	〃	〃
SSE 2/8（New Zealand）	-	SSE 2	2015
SSE 2/INF.2（New Zealand）	-	〃	〃
SSE 2/8/1（Vanuatu, IMCA）	-	〃	〃
SSE 2/8/1/Corr.1（Vanuatu, IMCA）	-	〃	〃
SSE 2/INF.5（Vanuatu ,IMCA）	-	〃	〃
SSE 2/8/2（Antigua and Barbuda, New Zealand, ICHCA）	-	〃	〃
SSE 2/8/3（Japan）	-	〃	〃
SSE 2/8/4（ICHCA）	-	〃	〃
SSE 2/WP.5（Chair, SSE2 WG）	-	〃	〃
SSE 2/20（IMO Secretariat）	-	〃	〃
MSC 95/12/1（Antigua and Barbuda, Australia, Netherlands, New Zealand, Norway, ICHCA, IHMA, ITF: International Transport Workers' Federation, Nautical Institute）	MSC 95	-	〃
MSC 95/12/2（ICS）	〃	-	〃
MSC 95/12/3（Vanuatu）	〃	-	〃
MSC 95/22（IMO Secretariat）	〃	-	〃
SSE 3/8（Japan）	-	SSE 3	2016
SSE 3/8/1（Norway）	-	〃	〃
SSE 3/8/2（China）	-	〃	〃
SSE 3/INF.5（OCIMF: Oil Companies International Marine Forum）	-	〃	〃
SSE 3/16 （IMO Secretariat）	-	〃	〃
SSE 4/8（Chair, SSE3 WG）	-	SSE 4	2017
SSE 4/8/1（Japan）	-	〃	〃
SSE 4/8/2（Antigua and Barbuda, New Zealand, ICHCA, IHMA）	-	〃	〃
SSE 4/8/3（China, Hong Kong）	-	〃	〃
SSE 4/8/4（China）	-	〃	〃
SSE 4/8/5（Japan）	-	〃	〃
SSE 4/WP.4（Chair, SSE4 WG）	-	〃	〃
SSE 4/19（IMO Secretariat）	-	〃	〃
MSC 98/12/5（Germany）	MSC 98	-	〃
MSC 98/23（IMO Secretariat）	〃	-	〃
SSE 5/2（IMO Secretariat）	-	SSE 5	2018
SSE 5/10（Japan）	-	〃	〃
SSE 5/10/1（Germany）	-	〃	〃

Document	Committee	Sub-committee	Year held
SSE 5/10/2（China）	-	〃	〃
SSE 5/10/3（IACS）	-	〃	〃
SSE 5/10/4（ICS）	-	〃	〃
SSE 5/10/5（Japan）	-	〃	〃
SSE 5/WP.5（Chair, SSE5 WG）	-	〃	〃
SSE 5/17（IMO Secretariat）	-	〃	〃
MSC 100/9/1（Japan, New Zealand, ICHCA）	MSC 100	-	〃
MSC 100/9/5（IMCA）	〃	-	〃
MSC 100/20（IMO Secretariat）	〃	-	〃
SSE 6/9（Japan）	-	SSE 6	2019
SSE 6/9/1（Japan, ICS）	-	〃	〃
SSE 6/9/2（Japan, ICS）	-	〃	〃
SSE 6/9/3（Canada）	-	〃	〃
SSE 6/9/4（Germany）	-	〃	〃
SSE 6/9/5（Germany）	-	〃	〃
SSE 6/WP.5（Chair, SSE6 WG）	-	〃	〃
SSE 6/18（IMO Secretariat）	-	〃	〃
SSE 7/2（IMO Secretariat）	-	SSE 7	2020
SSE 7/9（Japan）	-	〃	〃
SSE 7/9/1（China）	-	〃	〃
SSE 7/9/2（IACS）	-	〃	〃
SSE 7/9/3（China）	-	〃	〃
SSE 7/9/4（Norway）	-	〃	〃
SSE 7/WP.5（Chair, SSE7 WG）	-	〃	〃
SSE 7/21（IMO Secretariat）	-	〃	〃
MSC 102/24（IMO Secretariat）	MSC 102	-	〃
SSE 8/9（Japan）	-	SSE 8	2022
SSE 8/9/1（IACS）	-	〃	〃
SSE 8/9/2（Japan）	-	〃	〃
SSE 8/9/3（Japan）	-	〃	〃
SSE 8/WP.5（Chair, SSE8 WG）	-	〃	〃
SSE 8/20（IMO Secretariat）	-	〃	〃
MSC 106/11/4（Germany, IACS）	MSC 106	-	〃
MSC 106/11/7（Japan）	〃	-	〃
MSC 106/19（IMO Secretariat）	〃	-	〃
MSC 107/3/6（China）	MSC 107	-	2023
MSC 107/20（IMO Secretariat）	〃	-	〃
SSE 10/12/6（Germany, IACS）	-	SSE 10	2024
SSE 11/10/5（Germany, New Zealand, Norway, IACS）	-	SSE 11	2025
MSC 110/21（IMO Secretariat）	MSC 110	-	〃

3. INTERNATIONAL LABOUR ORGANIZATION CONVENTION NO. 152 (ILO C152)

As outlined above, requirements for onboard lifting appliances were specified in the SOLAS Convention. However, due to concerns about the compatibility of those requirements with the requirements of the International Labour Organization Convention No. 152 (ILO C152), which is widely recognized among the stakeholders, the author would like to review ILO C152 once again and organize the relevant points.

ILO C152 is a convention that specifies safety and health standards for dock workers (workers performing “all and any part of the work of loading or unloading any ship as well as any work incidental thereto”). It is widely recognized as an international safety standard applied to onboard lifting appliances (excluding engine-room overhead cranes, provision cranes, and others which are not used by dock workers). The concrete implementation procedure for this convention is supplemented by ILO Recommendation No. 160 (R160), which further specifies that each Member should take into consideration the technical suggestions in the latest edition of the “Code of Practice on safety and health in dock work” published by the International Labour Office. This Code was revised as the “Code of Practice on safety and health in ports” and, as of 2005, it is also posted on the IMO website [4].

As this suggests, although the “Code of Practice on safety and health in ports” is cited in the technical requirements of ILO C152, it is ultimately only guidance and lacks legal binding force. Consequently, its implementation is left to the discretion of the ratified countries of the ILO Convention.

The composition of the above-mentioned documents is as shown in Table 2. In particular, the main technical requirements for onboard lifting appliances are specified in Chapter 4 Lifting appliances and loose gear of the “Code of Practice on safety and health in ports” as 4.1 Basic Requirements, 4.2 Testing, thorough examination, marking and inspection of lifting appliances and loose gear, 4.3.1 Ships’ lifting appliances (in 4.3), 4.4 Loose gear, and 4.5 Lifting devices forming an integral part of a load. Parts of these requirements have also been incorporated in the Rules of the Society.

The obligation to implement ILO C152 is, in principle, borne by the ratified countries of the Convention. However, on the condition that safe labour conditions are maintained, Article 2.1 of the Convention recognizes exemptions or exceptions to the requirements for dock work at any place where the traffic is irregular and confined to small ships, as well as in respect of dock work in relation to fishing vessels or specified categories thereof. Article 2.2 of the same Convention permits variation of particular requirements specified in Part III of the Convention provided that, after consultation with organizations of employers and workers, the competent authority is satisfied that overall protection will not be inferior to that if the provisions of the Conventions were fully applied. Based on these points, there are, strictly speaking, cases where the handling will differ in each port, even when the ports are under the jurisdiction of the ratified countries. Moreover, some nations have also established independent systems similar to ILO C152 under domestic law, even though the country has not ratified ILO C152. (For example, the examination requirements of ILO C152 are applied mutatis mutandis in Australia and the United States.)

Thus, whether ILO C152 is applied or not differs at each port, not limited to ratified countries, and as a result, those engaged in ship operation work must pay careful attention to whether dock work is being carried out, and under what type of safety and health management, at each port of call.

It may be noted that the only 27 countries listed in Table 3 had ratified ILO C152 as of November, 2025 [5]. From the beginning of the proposed amendment to the SOLAS Convention, this small number of ratifying countries is pointed out as the reason for international standards that can be applied uniformly to onboard lifting appliances are inadequate in conjunction with the application of ILO C152 is limited to lifting appliances for cargo applications used by dock workers (DSC 16/5/5 (ICHCA).

Safety requirements related to onboard lifting appliances and anchor handling winches are specified as Regulation 3-13 in Chapter II-1 of the SOLAS Convention. After they become effective, the thorough examinations and load tests required for onboard lifting appliances move to the survey schedules under Chapter II-1 of the SOLAS Convention. Specifically, the requirements of ILO C152 stipulate that thorough examinations are to be carried out at intervals not to exceed 12 months, and load testing is to be performed once in every 5 years. In contrast to the ILO C152, the survey schedules move to at Safety Construction surveys under Chapter II-1 of the SOLAS. In particular, for thorough examinations, the SOLAS provides a grace period of 3 months before and after the anniversary dates for annual surveys and interim surveys.

Concerns regarding the coexistence of two different survey schedules, as provided in ILO C152 and Regulation 3-13, Chapter II-1 of the SOLAS Convention, were also expressed in the discussion of the amendment to the SOLAS Convention (SSE 7/9/3 (China)). As the response by the IMO, in periodical survey of Safety Construction surveys, handling that ensures appropriate implementation of thorough examinations based on examination of records was introduced (SSE 7/21 (IMO Secretariat)), and informing the ILO of the proposed SOLAS Convention amendment and requesting appropriate action (MSC 106/19 (IMO Secretariat)) is also agreed, while continuing to accept the survey schedule in accordance with ILO C152.

As of November, 2025, no additional information on the results of requests to the ILO has been obtained. Therefore, the possible responses for ships subject to application of the survey schedule based on ILO C152 are either to check the records of

implementation of thorough examinations when Safety Construction surveys are conducted, or to specifically conduct a thorough examination when deemed necessary.

Table 2 Composition of ILO C152, ILO R160 and the Code of Practice on safety and health in ports

ILO C152
Preamble
Part I. Scope and Definitions (Articles 1 to 3)
Part II. General Provisions (Articles 4 to 7)
Part III. Technical Measures (Articles 8 to 40)
Part IV. Implementation (Articles 41 and 42)
Part V. Final Provisions (Articles 43 to 51)

ILO R160
Preamble
I. Scope and Definitions (Paragraphs 1 and 2)
II. General Provisions (Paragraphs 3 to 6)
III. Technical Measures (Paragraphs 7 to 27)

Code of Practice on safety and health in ports
Preface
List of abbreviations and acronyms
1. Introduction, scope, implementation and definitions (Paragraphs 1.1 to 1.5)
2. General provisions (Paragraphs 2.1 to 2.8)
3. Port infrastructure, plant and equipment (Paragraphs 3.1 to 3.15)
4. Lifting appliances and loose gear (Paragraphs 4.1 to 4.5)
5. Safe use of lifting appliances and loose gear (Paragraphs 5.1 to 5.4)
6. Operations on shore (Paragraphs 6.1 to 6.25)
7. Operations afloat (Paragraphs 7.1 to 7.11)
8. Dangerous goods (Paragraphs 8.1 to 8.4)
9. Health (Paragraphs 9.1 and 9.2)
10. Personnel welfare facilities (Paragraphs 10.1 to 10.7)
11. Emergency arrangements (Paragraphs 11.1 to 11.3)
12. Other relevant safety matters (Paragraphs 12.1 and 12.2)
References
Appendices (Appendix A to H)
List of figures

Table 3 Ratified countries of ILO C152 (27 countries as of November, 2025)

Country	Ratification date
Brazil	18 May 1990
Congo	24 Jun 1986
Cuba	15 Oct 1982
Cyprus	13 Nov 1987
Denmark	22 Dec 1989
Ecuador	20 May 1988
Egypt	03 Aug 1988
Finland	03 Jul 1981
France	30 Jul 1985
Germany	17 Dec 1982
Guinea	08 Jun 1982
Iraq	17 Apr 1985
Italy	07 Jun 2000
Jamaica	04 Nov 2005
Lebanon	06 Sep 2004

Country	Ratification date
Mexico	10 Feb 1982
Montenegro	27 Apr 2017
Netherlands(Kingdom of the)	13 May 1998
Norway	05 Dec 1980
Peru	19 Apr 1988
Republic of Moldova	22 Jan 2007
Russian Federation	14 Jul 2004
Seychelles	28 Oct 2005
Spain	03 Mar 1982
Sweden	13 Jun 1980
Türkiye	17 Mar 2005
United Republic of Tanzania	30 May 1983

4. AMENDMENT OF RULES FOR CARGO HANDLING APPLIANCES

Accompanying the establishment of Regulation 3-13, Chapter II-1 of the SOLAS Convention and its related guidelines, the Society's Rules for Cargo Handling Appliances were amended to incorporate the content of SOLAS Regulation 3-13. Although this amendment also includes some provisional content, the content of the amended Rules is introduced in this chapter.

Conventionally, the Society's Rules for the Survey and Construction of Steel Ships have specified requirements generally related to the structural safety and seaworthiness of ships, such as requirements for the hull construction, machinery, materials and welding. In contrast, the Society's Rules for Installations provide technical requirements for various types of equipment that are not handled in the Rules for the Survey and Construction of Steel Ships but are necessary for ship operation, including life-saving equipment, radio equipment, accommodation and sanitation equipment, equipment for prevention of marine pollutions, and cargo handling appliances, in which safety is particularly required. Based on this, the requirements for anchor handling winches were specified in the Rules for Installations, and the title "Rules of Cargo Handling Appliances" was amended to "Rules for Lifting Appliances and Anchor Handling Winches."

The composition of "Rules for Lifting Appliances and Anchor Handling Winches" is as shown in Table 4. The Technical Requirements for lifting appliances and anchor handling winches are specified in Part 1 and Part 2, respectively. The contents of the two parts are introduced in the following.

Table 4　Composition of Rules for Lifting Appliances and Anchor Handling Winches and its Guidance

After amendment		Before amendment
Rules for Lifting Appliances and Anchor Handling Winches		**Rules for Cargo Handling Appliances**
Part 1 LIFTING APPLIANCES	Chapter 1 GENERAL **(partial revision)**	Chapter 1 GENERAL
	Chapter 2 SURVEYS **(partial revision)**	Chapter 2 SURVEYS
	Chapter 3 DERRICK SYSTEMS (no important revisions)	Chapter 3 DERRICK SYSTEMS
	Chapter 4 CRANES (no important revisions)	Chapter 4 CRANES
	Chapter 5 CARGO FITTINGS (no important revisions)	Chapter 5 CARGO FITTINGS
	Chapter 6 LOOSE GEAR (no important revisions)	Chapter 6 LOOSE GEAR
	Chapter 7 MACHINERY, ELECTRICAL INSTALLATIONS AND CONTROL ENGINEERING SYSTEMS (no important revisions)	Chapter 7 MACHINERY, ELECTRICAL INSTALLATIONS AND CONTROL ENGINEERING SYSTEMS
	Chapter 8 CARGO LIFTS AND CARGO RAMPS (no important revisions)	Chapter 8 CARGO LIFTS AND CARGO RAMPS

After amendment

Rules for Lifting Appliances and Anchor Handling Winches	
Part 1 LIFTING APPLIANCES	Chapter 9 CERTIFICATION, MARKING AND DOCUMENTATION **(partial revision)**
	Chapter 10 OPERATION, MAINTENANCE, INSPECTION AND OPERATIONAL TESTING **(new)**
Part 2 ANCHOR HANDLING WINCHES **(new)**	Chapter 1 GENERAL
	Chapter 2 SURVEYS
	Chapter 3 DESIGN, CONSTRUCTION AND INSTALLATION
	Chapter 4 OPERATION, MAINTENANCE, INSPECTION AND OPERATIONAL TESTING

Before amendment

Rules for Cargo Handling Appliances
Chapter 9 CERTIFICATION, MARKING AND DOCUMENTATION

After amendment

Guidance for Lifting Appliances and Anchor Handling Winches	
Part 1 LIFTING APPLIANCES	Chapter 1 GENERAL (no important revisions)
	Chapter 2 SURVEYS (no important revisions)
	Chapter 3 DERRICK SYSTEMS (no important revisions)
	Chapter 4 CRANES (no important revisions)
	Chapter 6 LOOSE GEAR (no important revisions)
	Chapter 7 MACHINERY, ELECTRICAL INSTALLATIONS AND CONTROL ENGINEERING SYSTEMS (no important revisions)
	Chapter 8 CARGO LIFTS AND CARGO RAMPS (no important revisions)
	(For foreign flag ships) Annex 1.1.1-9 ADDITIONAL REQUIREMENTS FOR CRANES USED FOR PERSONNEL TRANSFERS (no important revisions)
	(For Japanese flag ships) Annex 1.1.1-10 ADDITIONAL REQUIREMENTS FOR CRANES USED FOR PERSONNEL TRANSFERS **(new)**
Part 2 ANCHOR HANDLING WINCHES **(new)**	Chapter 1 GENERAL

Before amendment

Guidance for Cargo Handling Appliances
Chapter 1 GENERAL
Chapter 2 SURVEYS
Chapter 3 DERRICK SYSTEMS
Chapter 4 CRANES
Chapter 6 LOOSE GEAR
Chapter 7 MACHINERY, ELECTRICAL INSTALLATIONS AND CONTROL ENGINEERING SYSTEMS
Chapter 8 CARGO LIFTS AND CARGO RAMPS
(For foreign flag ships) Annex 1.1.1-3 ADDITIONAL REQUIREMENTS FOR CRANES USED FOR PERSONNEL TRANSFERS

4.1 Lifting Appliances (Part 1)

4.1.1 Application and Definitions (Chapter 1)

The scope of application was amended as shown in Table 5 to conform to Regulation 3-13, Chapter II-1 of the SOLAS Convention, and the limitation of application to power operated cargo handling appliances was deleted. Since Japanese flag ships also conform to Japanese domestic laws and regulations, the object ships are different from those subject to the rules for foreign flags ships.

Here, lifting appliances outside the scope of application were specified in accordance with Regulation 3-13, Chapter II-1 of the SOLAS Convention. In this requirement, “integrated mechanical equipment for opening and closing hold hatch covers”

means equipment having a mechanical structure consisting of a folding or side-rolling type hatch cover. In addition, it should be noted that when life-saving launching appliances conforming to the LSA Code are subject to application of the requirements for lifting appliances, when they are also used to retrieve cargo.

In application of the requirements of Regulation 3-13, Chapter II-1 of the SOLAS Convention, the requirements and timing of application differ depending on the installation date of the lifting appliance. Therefore, the Society's Rules also specify these requirements according to the divisions shown in Table 6 in the text of the Rules. The requirements related to design, construction and installation are applied to lifting appliances installed on or after 1 January 2026 (see Note 2 of Table 6). However, the requirements related to operational testing, thorough examinations, inspections, operation and maintenance are applicable on and after 1 January 2026, irrespective of the installation date of the lifting appliance. In particular, it needs to be noted that thorough examinations are to be witnessed by a "competent person" (e.g., a ClassNK surveyor). For lifting appliances with a safe working load (SWL) of less than 1 000 kg, the extent of application of the requirements for design, construction, installation and load testing is left to the discretion of the Administration. The Society also confirms the judgements of the Administrations with each Administration and posts this information on the ClassNK website, where can be accessed by interested parties [6]. Note also that the requirements for operational testing, thorough examinations, inspections, operation and maintenance are applied irrespective of the discretion of the Administration.

Definitions have been amended to be consistent with Regulation 2, Chapter II-1 of the SOLAS Convention and the related guideline MSC.1/Circ.1663. Before amendment, the Rules for Cargo Handling Appliances used the terms "cargo handling appliances" (lifting appliances and loose gear), "lifting appliances" (cargo gears and cargo ramps) and "cargo gears" (derrick systems, cranes, cargo lifts, etc. for the loading and unloading cargo) only for foreign flag vessels, and the handling of cargo ramps and other appliances was different in the Rules for foreign and Japanese flag ships. However, in accordance with Regulation 3-13, Chapter II-1 of the SOLAS Convention, those terms were unified as "lifting appliances," and cargo ramps were included in lifting appliances, limited to those that open/close or turn while loaded with cargo. In addition, other definitions in MSC.1/Circ.1663, etc. (such as "competent person," etc.) have also been included.

Table 5　Amendments of scope of application

After amendment	Before amendment
(For foreign flag ships) Applicable to lifting appliances and loose gear installed on the following ships: (1) Passenger ships engaged on international voyages (including high-speed crafts) (2) Cargo ships not less than 500 gross tonnage engaged on international voyages (same as above)	(For foreign flag ships) Applicable to power operated lifting appliances
(For Japanese flag ships) Applicable to lifting appliances and loose gear installed on ships not less than 300 gross tonnage, except passenger ships	(For Japanese flag ships) Applicable to following power operated lifting appliances: (1) Lifting appliances and loose gear with a safe working load (SWL) of not less than 1 000 kg installed on ships not less than 300 gross tonnage, excluding passenger ships (2) Cargo ramp equipment
(For both foreign and Japanese flag ships) The following lifting appliances are outside the scope of application: (1) Lifting appliances installed on ships certified as MODU (2) Lifting appliances used on offshore construction ships which comply with standards acceptable to the Administration (3) Integrated mechanical equipment for opening and closing hold hatch covers (4) Life-saving launching appliances complying with the LSA code	(For both foreign and Japanese flag ships) (New)

Table 6 Differences in application of requirements by installation date of lifting appliances

Installation date	Requirement	Timing of application
Before 1 January 2026 [1]	Based on Part 1, load tests, thorough examinations, marking of SWL (documentary evidence is to be provided and kept onboard the ship)	Before first special survey after 1 January 2026
	Based on Part 1, operational testing, thorough examinations, inspections, operation and maintenance	On or after 1 January 2026
On or after 1 January 2026 [1] [2]	Based on Part 1, Design, construction and installation, load tests, thorough examinations, marking of SWL (documentary evidence is to be provided and kept onboard the ship)	Before first use
	Based on Part 1, operational testing, thorough examination, inspection, operation and maintenance	On or after 1 January 2026

1) For lifting appliances with a safe working load (SWL) of less than 1 000 kg, the extent of application of requirements related to design, construction and installation and load tests is to be determined by the Administration.

2) Lifting appliances installed on or after 1 January 2026 means:

a) Lifting appliances installed on a ship of which the keel was laid, or in a similar stage of construction, on or after 1 January 2026

b) For ships other than those in the above a) (including ships constructed before 1 January 2009), lifting appliances having a contractual delivery date (or the actual delivery date in the absence of a contractual delivery date) on or after 1 January 2026

4.1.2 Timing of Surveys (Chapter 2)

In line with Regulation 3-13, Chapter II-1 of the SOLAS Convention and MSC.1/Circ.1663, the term “annual thorough survey” was amended to “thorough examination”. As the timing of thorough examinations, since these examinations are now under Chapter II-1 of the SOLAS Convention, the timing of examinations which had formerly followed the requirements of ILO C152 (i.e., a timing not to exceed 12 months from the date of completion of the previous annual thorough survey) was amended to the timing of the annual survey and interim survey in Safety Construction surveys (i.e., the timing of annual surveys and interim surveys of the classification survey, which are similar in terms of practical work). In addition, the timing is also specified to be after the load test. No substantial changes were made in the timing of the load tests.

To avoid the possibility of duplication of thorough examinations based on the SOLAS Convention and ILO C152, when a thorough examination is to be conducted in accordance with ILO C152, MSC.1/Circ.1663 recognizes verification, by examination of the records, that a thorough examination was properly conducted and completed at the timing of an annual survey or interim survey of the ship. Therefore, a related provision, making it possible to respond to this requirement by application, was also included in the Society’s Rules.

Postponement of the timing of thorough examinations are no longer recognized when a thorough examination is carried out at the timing of an annual survey or interim survey of the ships. This is because extensions of annual surveys and interim surveys of the ships are not recognized. However, since the timing of the thorough examination becomes the same timing as the annual survey or interim survey, a window of 3 months after the anniversary date is considered. Therefore, there is no substantial change from the previous practice. When a thorough examination is carried out at the timing according to ILO C152 by application, there may be cases where the examination deadline is extended by 3 months, as in the past. On the other hand, load tests must be carried out at a timing not to exceed 5 years from the date of completion of the previous load test. Thus, if a load test is carried out at the timing of a special survey of classification society, it may exceed the 5-year limit. In this case, careful attention must be paid when applying for an extension, since the approval of the Administration is required.

4.1.3 Inoperative Lifting Appliances and Loose Gear, Designation as Out-of-Service (Chapter 2)

When a deficiency that affects the operational safety of a lifting appliance or loose gear is discovered in a thorough examination in accordance with the requirements of MSC.1/Circ.1663, use of that lifting appliance or loose gear is to be prohibited until the deficiency is rectified (until that time, the device is to be marked as “not to be used,” and its status is to be recorded in the survey records etc.). This requirement also specifies actions to be taken by the ship’s master to reduce the risk of inoperative lifting appliances and loose gear (e.g., lashing, marking as inoperative, record-keeping).

4.1.4 Load Test (Chapter 2)

The requirements for load tests of lifting appliances and loose gear were amended in accordance with the requirements of

MSC.1/Circ.1663. For cases where the safe working load (SWL) of a lifting appliances is 100 tonnes or more, the load to be used in the load test was changed from the former "load as considered appropriate by the Society" to "1.1 times the safe working load (SWL)." However, in actual practice, there is no change because 1.1 times SWL was also used before the amendment. On the other hand, in accordance with JIS F 3421, load tests of loose gear had been performed with different test loads for loose gear with and without a becket. For compatibility with international standards and clarification of the handling, this requirement was amended in accordance with MSC.1/Circ.1663 so that tests are to be performed using the same test load with or without a becket.

For lifting appliances and loose gear intended for open-sea operations, this requirement specifies that the test load must be to the satisfaction of the Administration, taking into account dynamic loads such as ship motion (rolling, pitching) and waves, as a requirement that considers designs to withstand use under more severe environments (e.g., designs based on EN 13852-2, API Spec 2C, etc.).

When information concerning the safe working load (SWL) is not documented and design information is not available, for example, in case the manufacturer of an existing lifting appliance (installed prior to 1 January 2026) no longer exists, etc., this requirement stipulates that the test load is to be determined based on the SWL nominated by the ship owner or ship management company, to the satisfaction of the Administration.

4.1.5 Assignment and Marking of Safe Working Load and Certificates (Chapter 9)

In accordance with MSC.1/Circ.1663, this requirement specifies that diagrams of the permissible maximum loads over the entire range of use are to be displayed in a position where they are clearly visible to the operator. For example, for cranes, it is assumed that the diagram is a performance curve showing the slewing radius (outreach) on the X-axis and the Safe Working Load (SWL) on the Y-radius, and is displayed in a position within the field of view from the control panel or in the operating cabin. (As supplemental information, the boom length, boom angle, etc. are also included in some cases.)

Although not directly related to MSC.1/Circ.1663, for stamping of the SWL, the former requirement had stipulated use of a weld bead and paint or other methods recognized by the Society to be equivalent. However, to make it clear that marking by punch marks is also recognized, the expression "weld bead and paint" was deleted. The former rules had stipulated that the height of the characters marked on lifting appliances and loose gear is to be not less than 77 mm. However, this provision was amended by limiting the requirement to derricks, since it is only applied to derricks in ILO C152. In addition, requirement for marking of loose gear was amended to content requiring marking corresponding to the type of loose gear.

When the test load of a lifting appliance is determined based on the SWL nominated by the ship owner or the ship management company, as mentioned at the end of section 4.1.4 above, in accordance with MSC.1/Circ.1696, a factual statement for the load test is to be issued in place of the standard load test certificate, based on the fact that the potential safety of the appliance (materials, design strength, etc.) is different from those of lifting appliances verified by examination of drawings, etc. in the design, manufacture and installation stages.

4.1.6 Operation, Maintenance, Inspection and Operational Testing (Chapter 10)

The fact that proper implementation of operation, maintenance, inspections and operational testing is important for reducing accidents involving lifting appliances has been pointed out by the related Administrations and industry groups since development of international standards for lifting appliances began. Therefore, in view of its importance, the requirements of MSC.1/Circ.1663 were incorporated as-is, as matters to be observed by ship owners and ship operators responsible for ship operation.

For operation and maintenance manuals, the requirements formerly specified in Chapter 9 were moved to Chapter 10, accompanying the establishment of the new Chapter 10.

4.2 Anchor Handling Winches (Part 2)

4.2.1 Application and Definitions (Chapter 1)

In the rules for both Japanese flag ships and foreign flag ships, the scope of application was specified as anchor handling winches and loose gear installed on ships not less than 500 gross tonnage engaged in international voyages, so as to be consistent with Regulation 3-13, Chapter II-1 of the SOLAS Convention. As in the case of lifting appliances, under Regulation 3-13, Chapter II-1 of the SOLAS Convention, the requirements and timing of application differ depending on the date of installation of the anchor handling winch. Therefore, in the Society's Rules, this point was also specified separately depending on the installation date, as shown in Table 7. Here, it should be noted that the requirements for operational testing, thorough

examinations, inspections, operation and maintenance apply from 1 January 2026, irrespective of the installation date of the anchor handling winch, as in the case of lifting appliances.

The definitions were amended for consistency with Regulation 2, Chapter II-1 of the SOLAS Convention and the related guideline MSC.1/Circ.1662. The definition of "anchor handling winch" is "any winch for the purpose of deploying, recovering and repositioning anchors and mooring lines in subsea operations" (SOLAS II-1/Reg.2.31). This term is different from windlasses and mooring winches used in mooring the ship itself, in that it refers to winches used to deploy, etc. the anchors and mooring lines of other vessels. Working winches installed in the forward part of the aft working deck of an anchor handling vessel (AHV) generally fall under this definition (Fig. 1). Classification by type of anchor (drag, pile, suction, etc.) is not assumed.

Table 7　Differences in applied requirements by installation date of anchor handling winches

Installation date	Requirements	Timing of Application
Before 1 January 2026	Based on Part 2, Periodic survey (functional confirmation), thorough examination	Before first special survey after 1 January 2026
	Based on Part 2, Operational testing, thorough examination, inspection, operation and maintenance	On or after 1 January 2026
On or after 1 January 2026 [1)]	Design, construction and installation, testing and thorough examination, where deemed applicable under Part 2 and the Administration	Before first use
	Based on Part 2, operational testing, thorough examination, inspection, operation and maintenance	On or after 1 January 2026

1)　Anchor handling winches installed on or after 1 January 2026 means:

a) Anchor handling winches installed on a ship of which the keel was laid, or in a similar stage of construction, on or after 1 January 2026

b) For ships other than those in the above a) (including ships constructed before 1 January 2009), anchor handling winches having a contractual delivery date (or the actual delivery date in the absence of a contractual delivery date) on or after 1 January 2026

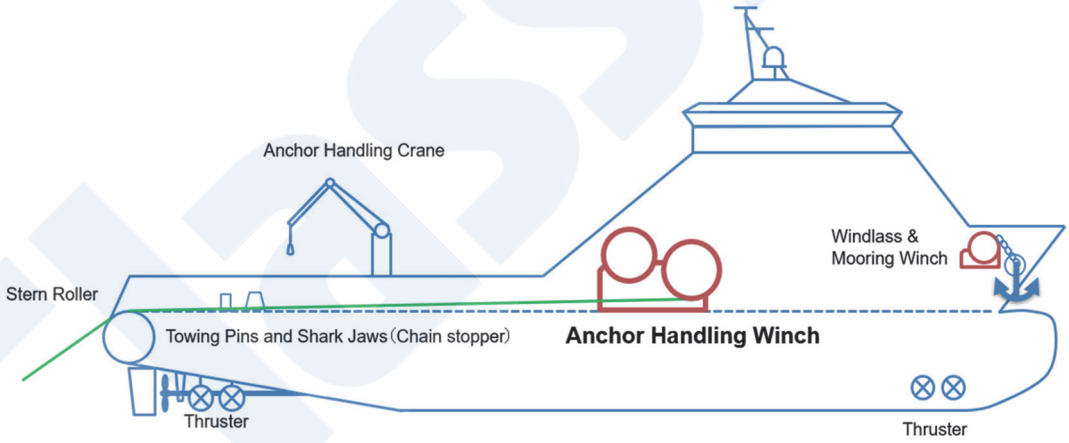

Fig. 1　Image of arrangement of anchor handling winch

4.2.2　Arrangement, Construction and Materials (Chapter 1)

Chapter 8, Part O of Rules for the Survey and Construction of Steel Ships specifies requirements for anchor handling vessels. However, the requirements for the arrangement and construction of anchor handling winches were moved to Part 2 of the Rules for Lifting Appliances and Anchor Handling Winches. Although no clear requirements were provided for materials, the range of the minimum limits considered necessary for safety was specified in accordance with the requirements of Part 1 "Lifting Appliances."

4.2.3　Surveys (Chapter 2)

General requirements related to preparations for surveys, etc. were specified in accordance with Part 1 "Lifting Appliances." In accordance with MSC.1/Circ.1662, the content is the same as that of the requirements in Part 1 "Lifting Appliances," and the handling of out-of-service anchor handling winches and loose gear, inoperative anchor handling winches, associated equipment and loose gear was specified.

The types of surveys may be classified as registration surveys (registration survey during construction, registration survey of anchor handling winches not built under Survey) and periodical surveys for maintaining registration (thorough examination, periodical test (annual survey), occasional survey, unscheduled survey). Among the registration surveys and periodical surveys for maintaining registration, the timing of thorough examinations and periodical test is as shown in Table 8. The timing of occasional surveys and unscheduled survey is the same as in Part 1 “Lifting Appliances.”

As the content of the surveys, in line with the requirements of Part 1 “Lifting Appliances” and MSC.1/Circ.1662, registration surveys, thorough examinations and periodical tests are stipulated as shown in Table 9. Commissioning tests are tests which are conducted after an anchor handling winch is installed on a ship. Among these tests, a load test at a load that exceeds the maximum line pull force is assumed. However, since the maximum line pull force of some anchor handling winches exceeds 400 tonnes, depending on the winch, it is assumed that there may be cases where the test cannot be conducted because the necessary test environment cannot be prepared, etc. Therefore, it is considered necessary to clarify the handling of this test in the future, based on the possibility of executing the test.

Table 8　Timing of registration surveys and periodical surveys for maintaining registration (thorough examinations, periodical tests)

Survey category 1	Survey category 2	Timing
Registration survey	Registration survey during construction	When applying for registration
	Registration survey of anchor handling winches not built under Survey	
Periodical surveys for maintaining registration	Thorough examinations	At time of the following class surveys (Part B, Rules) • Registration survey • Annual survey [1], intermediate survey [1], special survey
	Periodical tests	At time of the following class surveys (Part B, Rules) • Annual survey [1], intermediate survey [1], special survey

1) In place of an actual survey, this requirement may also be satisfied by examination of operation test records.

Table 9　Content of registration surveys and periodical surveys for maintaining registration (thorough examinations, periodical tests)

Survey category 1	Survey category 2	Examination of drawings	Survey (inspection)
Registration survey	Registration survey during construction	Drawing to be submitted for approval: • General arrangement of anchor handling winch • Construction drawing of anchor handling winch • Drawings of fittings • Arrangement of loose gear • List of loose gear • Construction drawing of drive gears • Power system diagram • Drawings of operation and control mechanisms • Drawings of safety devices • Drawings of protective devices • Other drawings and documents deemed necessary by the Society Documents to be submitted for reference: • Specification for anchor handling winch • Calculation sheets or check sheets relevant to drawings and documents for approval • Anchor handling winch operation and maintenance manual	Surveys in work: • Workmanship of anchor handling winches and loose gear is to be examined and ascertained to be in good order • Tests specified in Part K of the Rules (where necessary) • Tests specified in Part M of the Rules (where necessary) • Nondestructive testing (where necessary) • Shop trials of driving gears • Operational tests of safety and protective devices (including braking test and electric power source cutoff test) • Others test deemed necessary by the Society Commissioning test: • Functional testing and operational testing under light load • Overload tests • Emergency release and residual brake holding force test • Static bollard pull test (only when used for towing) • Brake holding test (can also be demonstrated by calculation) • Function test of whole winch systems

Survey category 1	Survey category 2	Examination of drawings	Survey (inspection)
		• Commissioning test procedure • Asbestos-free declarations and supporting documents • Other drawings and documents deemed necessary by the Society	Thorough examination: • According to the content of periodical surveys for maintaining registration
	Registration survey of anchor handling winches not built under Survey	In principle, same as registration survey during construction	In principle, same as registration survey during construction
Periodical surveys for maintaining registration	Thorough examinations	None	Anchor handling winch: • Thorough examination by visual examination ➢ Structural members ➢ Connections between structural members and hull structure ➢ Installations of drive system ➢ Safety devices and protective devices ➢ Markings and validity of the relevant certificates ➢ Provision of operation and maintenance manuals on board the ship • Surveys considered necessary by the Surveyor ➢ Measurement of plate thickness, nondestructive testing, open-up examination ➢ Operational testing of safety and protective devices Loose gear: • Thorough examination by visual examination ➢ Wires throughout their full length ➢ Chains, rings, hooks, shackles, swivels, clamps, etc. ➢ Marking of SWL and identifying symbols marking of loose gear and validity of the relevant certificates • Open-up examination when considered necessary by Surveyor
	Periodical tests	None	• Operational testing and functional testing of all equipment as recommended by the manufacturer

4.2.4 Design of Anchor Handling Winches (Chapter 3)

The design requirements (and some inspection items) for anchor handling winches and their associated equipment were assumed in accordance with the requirements of MSC.1/Circ.1662. Some of the requirements of Chapter 8, Part O of Rules for the Survey and Construction of Steel Ships were also moved and incorporated in the Rules for Lifting Appliances and Anchor Handling Winches. The main requirements are as shown in Table 10.

Table 10　Design requirements (including some inspection items) of anchor handling winches and associated equipment

Requirement item	Content of requirement	Supplementary explanation
Speed control and handling	• Should be capable of hoisting and lowering in a controlled manner. • Should be provided with adjustable speed control between the minimum and maximum speeds. • Should be designed to pay out the wire by moving the control lever away from the operator, and to heave in by pulling the control lever towards the operator. • Should be permanently marked with signs indicating the operating direction. • The control lever should be a “hold-to run” type that automatically returns to the neutral position when released by the operator.	MSC.1/Circ.1662 Para.3.1.2
Tension control	• Should be equipped with tension control to prevent overloading. • Should be equipped with a means of measuring tension for display of tension at the control station.	MSC.1/Circ.1662 Para.3.1.3
Overload alarm and monitoring	• Should be provided with continuous load monitors and an audible and visual overload alarm. • The overload alarm should be programmable for lower levels of load. (Pre-overload alarm)	MSC.1/Circ.1662 Para.3.1.4
Control stations	• The main control station should be in a position on the navigation bridge with a clear view of the deck area. • If the view is obstructed, cameras or video monitoring equipment may be used as supplementary devices. • Where a winch is controlled from more than one control station, an arrangement for preventing simultaneous control is to be provided. • Each control station should be provided with the following: ➢ Means of two-way communication with the main control station ➢ Arrangement to prevent inadvertent actuation ➢ Adequate protection for personnel ➢ Sufficient lighting (not less than 320 Lux)	MSC.1/Circ.1662 Para.3.1.5
Spooling device	Anchor handling winches should be equipped with remotely operated spooling devices.	MSC.1/Circ.1662 Para.3.1.6
Emergency release	• Should be designed to facilitate safe and controlled emergency release under both normal and dead-ship conditions. • Controls for actuation of emergency release should be conducted in the main control station (the emergency release function may also be available from the local control station). • Should be protected against unintentional activation. • The emergency release should be design considering restrictions on the wire pay-out speed due to inertia and any restrictions due to onboard arrangements. • Instructions for the operation of the emergency release should be clearly displayed at the navigation bridge and locally at the winch. • After emergency release, an inspection should be carried out, and any damage should be rectified.	MSC.1/Circ.1662 Para.3.1.7
Chain stopper	• Chain stoppers (including wire stoppers) should be provided. • Should be equipped with an audible alarm that activates when the stopper is engaged or disengaged. • Should be equipped with an emergency release that functions under all conditions, including the dead-ship condition (also including disengagement of pins, etc. that can cause entanglement of the wire during release). • Emergency release should be designed for remote operation. • Should be protected against unintentional activation. • Instructions for operation of the emergency release should be clearly displayed at the navigation bridge and locally on the emergency release control mechanism side. • After an emergency release, the chain stopper system should be inspected, and any damage should be rectified.	MSC.1/Circ.1662 Para.3.1.8.1

Requirement item	Content of requirement	Supplementary explanation
Winch brake	• The winch brake is to be provided with a means of controlling power braking (regenerative brake, dynamic brake, etc.) capable of maintaining control at low speeds. • Brakes are to be applied automatically upon loss of power and whenever the winch lever is returned to the neutral position.	Moved from 8.5.3, Part O of the Rules
Power supply	• When the power supply for an anchor handling winch is the same as the power supply for propulsion equipment (shaft generators, shaft power take-offs (PTO, etc.), independent redundant power supply is to be provided. • The power supply is to have sufficient capacity for operation of the anchor handling winch, so that ship maneuverability performance is not degraded during winch operation (anchor handling, towing).	Moved from 8.5.4, Part O of the Rules

4.2.5 Operation, Maintenance, Inspection and Operational Testing (Chapter 4)

As in Chapter 1 “Lifting Appliances,” the matters to be observed by the ship owners or ship operators responsible for ship operation are specified. For the content of the Rules for Lifting Appliances and Anchor Handling Winches, the provisions of MSC.1/Circ.1662 were incorporated without modification.

4.2.6 Installations Character

Accompanying the new establishment of requirements for anchor handling winches in the Rules for Installations, “AHW” was added to Chapter 3 of the Regulations for Classification and Registry of Ships as a new installations character.

5. CONCLUSION

With the aim of preventing accidents involving onboard lifting appliances and anchor handling winches and improving the safety of seamen, Regulation 3-13, Chapter II-1 of the SOLAS Convention and the related guidelines were finally enacted after a lengthy study of the establishment of internationally-unified standards. Following this, further improvement in the safety of onboard lifting appliances and anchor handling winches is expected, based on mandatory requirements established by the Administrations. On the other hand, there are also uncertainties regarding the actual operation of these regulations, including the objects and timing of application of the requirements, the response to the existing ILO C152, test conditions, etc. In the future, the Society will continue its efforts to clarify the requirements through amendment of the ClassNK Rules, to enable smooth compliance of the equipment concerned with the requirements of the SOLAS Convention. In addition to revisions of the ClassNK Rules, the Society will also share information whenever appropriate through ClassNK Technical Information [7) 8) 9)] and special pages [6)] of the Society website, and will promptly share information when additional information is obtained from the Administrations, the IMO, IACS and others. Inquiries regarding the application of the Society’s rules will continue to be handled by our Materials and Equipment Department (concerning rules related to lifting appliances), Machinery Department (concerning rules related to anchor handling winches), and Survey Department (concerning survey-related matters), and stakeholders are kindly invited to seek clarification from these departments as needed.

REFERENCES

1) IMO: RESOLUTION MSC.532(107), AMENDMENT TO THE INTERNATIONAL CONVENTION FOR THE SAFETY OF LIFE AT SEA, 1974, 2023, pp. 1-4
2) IMO: MSC.1/Circ1662, GUIDELINES FOR ANCHOR HANDLING WINCHES, 2023
3) IMO: MSC.1/Circ1663, GUIDELINES FOR LIFTING APPLIANCES, 2023
4) IMO: ILO Code of practice on safety and health in ports, IMO website, https://www.imo.org/en/ourwork/facilitation/pages/ilocode-default.aspx (accessed Oct. 2025)
5) ILO: Ratifications of C152 - Occupational Safety and Health (Dock Work) Convention, 1979 (No. 152), ILO NORMLEX, https://normlex.ilo.org/dyn/nrmlx_en/f?p=1000:11300:0::NO:11300:P11300_INSTRUMENT_ID:312297 (accessed Oct. 2025)
6) NIPPON KAIJI KYOKAI (ClassNK): SOLAS Convention, Chapter II-1, Regulation 3-13 and MSC.1/Circ.1663,

ClassNK website, https://www.classnk.or.jp/hp/ja/activities/statutory/solas/solas_treaty/lifting/ (accessed Oct. 2025)

7) NIPPON KAIJI KYOKAI (ClassNK): New requirements for Lifting appliances due to the Amendments to SOLAS II-1, ClassNK Technical Information No. TEC-1340

8) NIPPON KAIJI KYOKAI (ClassNK): New requirements for anchor handling winches due to the amendments to SOLAS II-1, ClassNK Technical Information No. TEC-1359

9) NIPPON KAIJI KYOKAI (ClassNK): Compliance with new requirements for Lifting appliances in accordance with the Amendments to SOLAS II-1, ClassNK Technical Information No. TEC-1361