



**Australian Government**  
**Australian Maritime Safety Authority**

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AMSA MO 2023/7

**Marine Order 12 (Construction — subdivision and stability, machinery and electrical installations) 2023**

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I, Michael Kinley, Chief Executive Officer of the Australian Maritime Safety Authority, make this Order under subsection 342(1) of the *Navigation Act 2012*.  
*Act 1983.*

Dated 16 November 2023

**Michael Kinley**  
Chief Executive Officer

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## Division 1 Preliminary

### 1 Name of Marine Order

This Marine Order is *Marine Order 12 (Construction — subdivision and stability, machinery and electrical installations) 2023*.

#### 1A Commencement

This Marine Order commences on 1 January 2024.

#### 1B Repeal of Marine Order 12 (Construction — subdivision and stability, machinery and electrical installations) 2016

*Marine Order 12 (Construction — subdivision and stability, machinery and electrical installations) 2016* is repealed.

### 2 Purpose

This Marine Order:

- (a) gives effect to Chapter II-1 of SOLAS other than regulations 19-1 and 21; and
- (b) prescribes standards for the structure, subdivision, stability, machinery and electrical installations for regulated Australian vessels, and foreign vessels; and
- (c) gives effect to the IMO's OSV Guidelines.

### 3 Power

- (1) The following provisions of the Navigation Act provide for this Marine Order to be made:
  - (a) paragraphs 339(2)(a) and (b), which provide that the regulations may provide for the design and construction of vessels and for the machinery and equipment to be carried on board vessels;
  - (b) paragraph 339(2)(e), which provides that the regulations may provide for the stability of vessels, including information about, and testing of, the stability of vessels;
  - (c) subsection 339(2)(l), which provides that the regulations may provide for the keeping of an official logbook including prescribing the entries to be made and the time of making the entries (see also subsection 309(2));
  - (d) paragraph 340(1)(a), which provides that the regulations may provide for giving effect to SOLAS;
  - (e) subsection 341(1), which provides that the regulations may provide for the imposition of penalties for a contravention of a provision of the regulations.
- (2) Subsection 339(1) of the Navigation Act provides for regulations to be made prescribing matters required or permitted to be prescribed, or that are necessary or convenient to be prescribed, for carrying out or giving effect to the Act.
- (3) Subsection 342(1) of the Navigation Act provides that AMSA may make a Marine Order about matters that can be provided for by regulation.

# 1 Definitions

In this Marine Order:

**constructed:** a vessel is **constructed** at the earlier of the following times:

- (a) when the keel is laid;
- (b) when construction identifiable with the vessel has started, and the lesser of at least 50 tonnes, or 1% of the estimated mass of all structural material, of the vessel is assembled.

**IS Code** means the *Code on Intact Stability, 2008* adopted by IMO Resolution MSC.267(85), as in force from time to time.

*Note* A copy of each IMO resolution that adopts or amends this Code is available on AMSA's website at <http://www.amsa.gov.au>.

**offshore supply vessel** has the same meaning as in the OSV Guidelines.

**OSV Guidelines** means:

- (a) for a vessel constructed on or after 31 May 2007— the *Guidelines for the Design and Construction of Offshore Supply Vessels, 2006* as adopted by IMO Resolution MSC.235(82) on 1 December 2006, or as revised or replaced from time to time; or
- (b) for a vessel constructed before 31 May 2007 — the *Guidelines for the Design and Construction of Offshore Supply Vessels* as adopted by IMO Resolution A.469(XII) on 19 November 1981.

*Note 1* Some terms used in this Marine Order are defined in *Marine Order 1 (Administration) 2013*, including:

- cargo vessel
- equivalent
- IMO (short for International Maritime Organization)
- Navigation Act
- NSCV (short for National Standard for Commercial Vessels)
- SOLAS (short for the International Convention for the Safety of Life at Sea)
- use (of an equivalent)
- USL Code (short for Uniform Shipping Laws Code).

*Note 2* Other terms used in this Marine Order are defined in the Navigation Act, including:

- AMSA (short for the Australian Maritime Safety Authority)
- inspector
- issuing body
- Load Lines Convention
- official logbook
- owner
- recognised organisation (for organisations that have been prescribed for the definition — see *Marine Order 1 (Administration) 2013*)
- regulated Australian vessel.

*Note 3* Information on obtaining copies of any IMO Resolution or document, or any other document that is mentioned in this Marine Order, is available from the AMSA website Marine Orders link at <https://www.amsa.gov.au>.

*Note 4* For delegation of AMSA's powers under this Marine Order — see the AMSA website at <https://www.amsa.gov.au>.

## 5 Interpretation — SOLAS and other instruments

- (1) For a provision of Chapter II-1 of SOLAS applied, adopted or incorporated by this Marine Order, the *Administration* is:
  - (a) for a regulated Australian vessel — AMSA; or
  - (b) for a foreign vessel — the government of the country whose flag the vessel is entitled to fly.
- (2) If an expression used in this Marine Order is also used in a provision of an instrument (such as SOLAS) or other writing applied, adopted or incorporated by this Marine Order, the expression has the same meaning as in that instrument or other writing, unless the contrary intention appears.

## 6 Application

This Marine Order applies to a vessel that is:

- (a) a regulated Australian vessel; or
- (b) a foreign vessel.

## 7 Exemptions — regulated Australian vessels

- (1) A requirement of this Marine Order does not apply in relation to a regulated Australian vessel if AMSA, under this section, exempts the vessel from the requirement.
- (2) The owner of a regulated Australian vessel may apply to AMSA, in accordance with the application process set out in *Marine Order 1 (Administration) 2013*, for an exemption of the vessel from a requirement of this Marine Order.
- (3) AMSA may exempt the vessel from the requirement in accordance with the application, but only if satisfied that:
  - (a) compliance with the requirement would be unnecessary or unreasonable having regard to the vessel, its equipment and its intended voyage; and
  - (b) giving the exemption would not contravene SOLAS.

*Note* *Marine Order 1 (Administration) 2013* deals with the following matters about exemptions:

- making an application
- seeking further information about an application
- the time allowed for consideration of an application
- imposing conditions on approval of an application
- notification of a decision on an application
- review of decisions.

## 8 Equivalent — regulated Australian vessels

- (1) A requirement under this Marine Order, in relation to a regulated Australian vessel is taken to be complied with if:
  - (a) AMSA, under this section, approves the use of an equivalent for the vessel in relation to the requirement; and
  - (b) the equivalent is used for the vessel in accordance with the approval.
- (2) The owner of a regulated Australian vessel may apply to AMSA, in accordance with the application process set out in *Marine Order 1 (Administration) 2013*,

for approval to use an equivalent in relation to a listed requirement for the vessel.

- (3) AMSA may approve the use of the equivalent applied for, but only if satisfied that:
- (a) use of the equivalent would be at least as effective as compliance with the requirement; and
  - (b) approving the use of the equivalent would not contravene SOLAS.

*Note* *Marine Order 1 (Administration) 2013* deals with the following matters about equivalents:

- making an application
- seeking further information about an application
- the time allowed for consideration of an application
- imposing conditions on approval of an application
- notification of a decision on an application
- review of decisions.

## **Division 2 Construction and stability requirements**

### **9 Vessels to which Chapter II-1 of SOLAS applies**

- (1) A vessel to which Chapter II-1 of SOLAS applies must:
- (a) meet the standards for structure, subdivision, stability, machinery and electrical installations that apply to it under Chapter II-1 of SOLAS; and
  - (b) for a regulated Australian vessel — comply with Schedule 1 to this Marine Order; and
  - (c) for a regulated Australian vessel that is a ro-ro passenger vessel — also comply with:
    - (i) the Annex to IMO Resolution MSC.141(76) *Revised Model Test Method*, as adopted on 5 December 2002; and
    - (ii) except to the extent to which it is superseded by the instrument mentioned in subparagraph (i) — the Appendix to the Annex to resolution 14 of the Conference of Contracting Governments to the International Convention for the Safety of Life at Sea, 1974 as adopted on 29 November 1995.

*Note 1* For explanatory notes on the interpretation of Chapter II-1 of SOLAS, see IMO resolution MSC.281(85), as adopted on 4 December 2008.

*Note 2* Some provisions of Chapter II-1 of SOLAS apply to:

- (a) particular kinds of vessels; or
- (b) vessels constructed before, on, or after a particular time.

- (2) However:
- (a) a regulated Australian vessel that is surveyed and certified under a code mentioned in *Marine Order 47 (Offshore industry units) 2019* or *Marine Order 49 (High-speed craft) 2015* must instead meet the standards mentioned in the code under which it is certified; and
  - (b) a regulated Australian vessel that is an offshore supply vessel must, in addition to complying with subsection (1), comply with any requirements

of Parts 2 and 3 of the OSV Guidelines that are not required by Chapter II-1.

## 10 Vessels to which Chapter II-1 of SOLAS does not apply

### Application

- (1) This section applies to a vessel to which Chapter II-1 does not apply.

### Regulated Australian vessels — $\geq 24$ metre in length

- (2) A regulated Australian vessel that is  $\geq 24$  metres in length must meet the standards for structure, subdivision, stability, machinery and electrical installations that either:
- (a) apply as follows:
    - (i) for a vessel that was constructed, or subject to initial survey, on or after 1 October 2008 or constructed before that date but upgraded in service — mentioned in sections 3, 5, 6 and 7 of Part C of the NSCV;
    - (ii) in any other case — mentioned in sections 5, 6, 7 and 8 of the USL Code as in force immediately before 1 October 2008; or
  - (b) are applied by the vessel's classification society.

*Note* The USL Code and the NSCV are available on AMSA's website at [www.amsa.gov.au](http://www.amsa.gov.au).

### Regulated Australian vessels — $< 24$ metres in length

- (3) A regulated Australian vessel that is  $< 24$  metres in length must meet the following:
- (a) for structure, subdivision, stability, machinery and electrical installations — the standards mentioned in paragraphs (2)(a) or (b);
  - (b) for watertight and weathertight integrity — the standard mentioned in section 2 of Part C of the NSCV if the vessel was constructed on or after 1 January 2024.

### Regulated Australian vessels — watertight doors

- (4) A regulated Australian vessel must have an indicator system for watertight doors that complies with either:
- (a) as follows:
    - (i) if a vessel was constructed, or subject to initial survey, on or after 1 October 2008 or constructed before that date but upgraded in service — subsection 6B of Part C of the NSCV;
    - (ii) if the vessel was constructed before 1 October 2008 — subsection 5C or subsection 5D of the USL Code as applies and in force immediately before 1 October 2008; or
  - (b) the standard applied by the vessel's classification society.

**Regulated Australian vessels — anchors, chain cables, hawsers and warps**

- (5) A regulated Australian vessel must have anchors, chain cables, hawsers and warps that comply with either:
- (a) as follows:
    - (i) if a vessel was constructed, or subject to initial survey, on or after 1 October 2008 or constructed before that date but upgraded in service — subsection 7D of Part C of the NSCV;
    - (ii) if the vessel was constructed before 1 October 2008 — Appendices H and I of section 13 of the USL Code as in force immediately before 1 October 2008; or
  - (b) the standards applied by the vessel's classification society.

**Foreign vessels**

- (6) A foreign vessel must carry and comply with the requirements demonstrated by any certificate or other document issued by or on behalf of the government of the country whose flag the vessel is entitled to fly.

**Meaning of *length***

- (7) In this section:
- length*, of a vessel, has the meaning given by regulation 3 of Annex I to Annex B of the 1988 Protocol to the Load Lines Convention.

**11 Offshore supply vessels — additional requirements for regulated Australian vessels**

- (1) A regulated Australian vessel that is an offshore supply vessel constructed on or after 31 May 2007 must comply with the documentation requirements mentioned in Part 8 of the OSV Guidelines.
- (2) A regulated Australian vessel that is an offshore supply vessel constructed before 31 May 2007 must have a document confirming that the vessel complies with the OSV Guidelines.

*Note* The following documents offer guidance for offshore supply vessels with dynamic positioning systems:

- (a) IMO MSC/Circ.645, Annex, *Guidelines for Vessels with Dynamic Positioning Systems*, as approved 6 June 1994; and
- (b) *The Training and Experience of Key DP Personnel*, IMCA, IMCA M 117 Rev.2, September 2016, noted by IMO MSC.1/Circ.738/Rev.2, as approved 16 June 2017, as a guideline for the training of dynamic positioning system operators (available on the IMCA website in 2023 at <https://www.imca-int.com>).

**12 Intact stability information**

- (1) The owner of a vessel must ensure that there is carried on the vessel, at all times, information complying with subsection (2) relating to the vessel's intact stability characteristics under different conditions of service.

Penalty: 50 penalty units.



- (2) The information mentioned in subsection (1) must:
- (a) either:
    - (i) for a vessel constructed on or after 1 July 2010 — include details for each item mentioned in paragraph 3.6.4 of Part B of the IS Code; or
    - (ii) for a vessel constructed before 1 July 2010 — be substantially in accordance with Appendix 2 of *Marine Orders – Part 12: Construction — Subdivision and stability, machinery and electrical installations, Issue 2* as in force on 31 December 2009; and
  - (b) for a regulated Australian vessel — show that any inclining experiment or lightship measurement was carried out in accordance with Annex 1 of the IS Code; and
  - (c) be approved:
    - (i) for a regulated Australian vessel — by an issuing body; or
    - (ii) for a foreign vessel — by the government of the country whose flag the vessel is entitled to fly.
- (3) If a stability instrument is used for stability calculations, the instrument must be used in accordance with Chapter 4 of Part B of the IS Code.
- (4) For subsection (3), a **stability instrument** is an instrument used to ascertain whether the stability requirements specified in the vessel's stability booklet mentioned in the IS Code are met.
- Note* For the stability booklet, see Chapter 3 of Part B of the IS Code.
- (5) An offence against subsection (1) is a strict liability offence.
- (6) A person is liable to a civil penalty if the person contravenes subsection (1).
- Civil penalty: 50 penalty units.

### 13 Towing and mooring arrangement plans

#### Regulated Australian vessels

- (1) The owner of a regulated Australian vessel must ensure that there is carried on the vessel, at all times, a towing and mooring arrangement plan for that vessel.
- Penalty: 50 penalty units.
- (2) For a vessel constructed on or after 1 January 2024, the towing and mooring arrangement plan must:
- (a) comply with section 5 of the Annex to MSC.1/Circ. 1175/Rev.1 *Revised guidance on shipboard towing and mooring equipment*, as approved on 9 December 2020; and
  - (b) include a supplement recording any deviations from the towing and mooring arrangement plan that complies with section 6 of the Annex to MSC.1/Circ. 1619 *Guidelines on the design of mooring arrangements and the selection of appropriate mooring equipment and fittings for safer mooring*, as approved on 11 December 2020, or as revised or replaced from time to time.
- (3) For a vessel constructed on or after 1 January 2007 and before 1 January 2024 — the towing and mooring arrangement plan must comply with section 5 of the Annex to MSC.1/Circ. 1175 *Shipboard Equipment, Fittings and*

*Supporting Hull Structures Associated with Towing and Mooring*, as approved on 24 May 2005.

- (4) An offence against subsection (1) is a strict liability offence.
- (5) A person is liable to a civil penalty if the person contravenes subsection (1).  
Civil penalty: 50 penalty units.

**Foreign vessels**

- (6) The owner of a foreign vessel must ensure that there is carried on the vessel, at all times, a towing and mooring arrangement plan that complies with the law of the country whose flag the vessel is entitled to fly.  
Penalty: 50 penalty units.
- (7) An offence against subsection (6) is a strict liability offence.
- (8) A person is liable to a civil penalty if the person contravenes subsection (6).  
Civil penalty: 50 penalty units.

**Division 3 Other safety measures****14 Watertight doors**

- (1) The master of a vessel must ensure that each watertight door is closed while the vessel is at sea, unless:
  - (a) it is necessary for the door to be open for the working of the vessel; or
  - (b) the door is opened and closed for testing in accordance with section 20.Penalty: 50 penalty units.
- (2) However, paragraphs (1)(a) and (b) do not apply:
  - (a) for a vessel constructed on or after 1 January 2020 — except in a case of urgent necessity, to a Category D watertight door, within the meaning of the Annex to IMO Circular MSC.1/Circ. 1564 *Revised guidance for watertight doors on passenger ships which may be opened during navigation*, as approved on 16 July 2017, or as revised or replaced from time to time; or
  - (b) for a vessel constructed before 1 January 2020 — to a category D watertight door, within the meaning of the Annex to IMO Circular MSC.1/Circ. 1380 *Guidance for Watertight Doors on Passenger Ships Which May be Opened During Navigation*, as approved on 10 December 2010.

*Note* For guidance on the application of subsections (1) and (2), see the relevant instrument mentioned in this subsection.
- (3) The master must ensure that the area around the doorway of a watertight door is unobstructed.  
Penalty: 50 penalty units.
- (4) An offence against subsection (1) or (3) is a strict liability offence.
- (5) A person is liable to a civil penalty if the person contravenes subsection (1) or (3).  
Civil penalty: 50 penalty units.

**15 Portable plates**

- (1) The master of a vessel must ensure that, before each voyage starts, any portable plate over an opening in the internal watertight structure of a vessel is fitted.  
Penalty: 50 penalty units.
- (2) The master of a vessel may order the removal of a portable plate when a vessel is at sea if the master considers that the removal of the plate is an urgent necessity.
- (3) A person must not remove a portable plate when a vessel is at sea otherwise than in accordance with the direct order of the master under subsection (2).  
Penalty: 50 penalty units.
- (4) An offence against subsection (1) or (3) is a strict liability offence.
- (5) A person is liable to a civil penalty if the person contravenes subsection (1) or (3).  
Civil penalty: 50 penalty units.

**16 Openings to be kept closed at sea**

- (1) The master of a vessel must ensure that each of the following vessel openings is closed watertight and secured before the vessel leaves each berth or anchorage:
  - (a) a watertight door in a watertight bulkhead separating cargo spaces or separating a cargo space from a passenger space;
  - (b) a watertight door that does not comply with paragraphs 5.1, 5.2, 5.3 and 6 of regulation 13 of Chapter II-1 of SOLAS;
  - (c) a sidescuttle that is below the freeboard deck;
  - (d) a sidescuttle that is not accessible while the vessel is at sea, and its deadlights;
  - (e) a gangway port, cargo port or coaling port or similar side opening below the margin line, or below the freeboard deck in a vessel.  
Penalty 50 penalty units
- (2) A person must not open a vessel opening mentioned in subsection (1) when the vessel is at sea.  
Penalty: 50 penalty units.
- (3) An offence against subsection (1) or (2) is a strict liability offence.
- (4) A person is liable to a civil penalty if the person contravenes subsection (1) or (2).  
Civil penalty: 50 penalty units.

**17 Closure of cargo loading doors etc.**

- (1) The master of a vessel must ensure that the following items (each of which is an **applicable item**) are closed and secured before a vessel starts a voyage:
  - (a) any cargo loading door in the shell or the boundary of an enclosed superstructure;
  - (b) any bow visor fitted in the shell or the boundary of an enclosed superstructure;
  - (c) any cargo loading door in the collision bulkhead;

- (d) any weather-tight ramp forming an alternative to an item mentioned in paragraph (a), (b) or (c).  
Penalty: 50 penalty units.
- (2) A person must not unlock or open an applicable item, unless:
  - (a) the vessel is at berth; or
  - (b) the master of the vessel allows the door to be unlocked or opened in a circumstance to which subsection (3) applies.  
Penalty: 50 penalty units.
- (3) For the purposes of paragraph (2)(b), the master of the vessel may allow:
  - (a) an applicable item that is a bow or stern door to be unlocked or opened when the vessel approaches a berth, or left open when the vessel leaves a berth if:
    - (i) the item cannot be opened or closed when the vessel is at berth; and
    - (ii) the item is unlocked or opened or left unlocked or open for the shortest amount of time necessary to allow for the operation of the door; and
    - (iii) the inner bow door is kept closed; or
  - (b) any applicable item to be unlocked or opened if:
    - (i) it is necessary for the operation of the vessel or the embarking or disembarking of a person; and
    - (ii) the vessel is at safe anchorage; and
    - (iii) the master is satisfied that it will not impair the safety of the vessel.
- (4) The master must ensure that the unlocking, or opening and closing, of an applicable item is supervised by an officer.  
Penalty: 50 penalty units.
- (5) An offence against subsection (1), (2) or (4) is a strict liability offence.
- (6) A person is liable to a civil penalty if the person contravenes subsection (1), (2) or (4).  
Civil penalty: 50 penalty units.

## **18 Sidescuttles in spaces used for cargo**

- (1) The master of a vessel must ensure that any sidescuttle or deadlight on an area of the vessel used for the carriage of cargo is closed, watertight and locked before the cargo is loaded.  
Penalty: 50 penalty units.
- (2) A person must not unlock or open a sidescuttle or deadlight mentioned in subsection (1) until the cargo is unloaded.  
Penalty: 50 penalty units.
- (3) An offence against subsection (1) or (2) is a strict liability offence.
- (4) A person is liable to a civil penalty if the person contravenes subsection (1) or (2).  
Civil penalty: 50 penalty units.

**19 Ash-chutes, rubbish-chutes and similar fittings**

- (1) The master of a vessel must ensure that each cover and valve of any ash chute, rubbish chute or similar fitting that has an inboard opening below the margin line of the vessel is kept closed and secured when not in use.

Penalty: 50 penalty units.

- (2) An offence against subsection (1) is a strict liability offence.
- (3) A person is liable to a civil penalty if the person contravenes subsection (1).

Civil penalty: 50 penalty units.

**20 Testing and periodic operation of openings etc.**

- (1) The master of a vessel must ensure that the following (each of which is an **applicable item**) are tested in accordance with subsection (2):
- (a) a watertight door, other than a watertight door to which subsection (3) applies;
  - (b) a sidescuttle;
  - (c) the valves and closing mechanisms of a scupper;
  - (d) an ash chute;
  - (e) a rubbish chute;
  - (f) the means of communication for any watertight door that cannot be closed from a central control station.

Penalty: 50 penalty units.

- (2) Each applicable item that this Marine Order does not require to be closed when a vessel is at sea must be tested to ensure it operates correctly:
- (a) at least once every week during the voyage; and
  - (b) if the voyage is to exceed 7 days — immediately before the voyage commences; and
  - (c) for a ro-ro passenger vessel — immediately before leaving port.
- (3) The master of a vessel must ensure that all watertight doors in watertight bulkheads, both hinged and power operated, must be operated daily when in use at sea.

Penalty: 50 penalty units.

- (4) The master may carry out the test mentioned in subsection (3) in port before departure of the vessel.
- (5) An offence against subsection (1), (2) or (3) is a strict liability offence.
- (6) A person is liable to a civil penalty if the person contravenes subsection (1), (2) or (3).

Civil penalty: 50 penalty units.

**21 Instructions and periodic inspection**

- (1) The owner of a vessel must ensure that each of the following appliances and fittings are marked with instructions on how to operate it safely and effectively:
- (a) any watertight door;
  - (b) any mechanism, indicator or warning device for a watertight door;

- (c) the means of communication for any watertight door that cannot be closed from a central control station;
  - (d) any valve required for the operation of damage-control cross-connections or for ensuring the watertight integrity of any space within the vessel.
- Penalty: 50 penalty units.
- (2) The master of a vessel must ensure that each appliance and fitting mentioned in subsection (1) is inspected at least once a week, whether the vessel is at sea or in port.
- Penalty: 50 penalty units.
- (3) An offence against subsection (1) or (2) is a strict liability offence.
- (4) A person is liable to a civil penalty if the person contravenes subsection (1) or (2).
- Civil penalty: 50 penalty units.

## **22 Official logbook entries**

- (1) The master of a vessel must ensure that, before the start of each voyage, the following information is recorded in the official logbook:
  - (a) the time of the last closing and securing of each applicable item mentioned in subsection 17(1);
  - (b) the time of any unlocking or opening of an applicable item allowed under paragraph 17(3)(b).
- Penalty: 50 penalty units.
- (2) The master of a vessel must ensure that the following information is recorded in the official logbook:
  - (a) the time of the first unlocking or opening, after the start of the voyage, of any applicable item mentioned in subsection 17(1);
  - (b) the time of the last closing and securing, if any, before the vessel goes to sea, and the time of the next subsequent unlocking or opening, of each of the vessel openings mentioned in subsection 16(1);
  - (c) whether a portable plate over an opening in the internal watertight structure of the vessel is fitted when the vessel proceeds to sea;
  - (d) for a portable plate mentioned in paragraph (c) — the time of any removal or replacement while the vessel is at sea;
  - (e) for a test or inspection mentioned in section 20 or 21:
    - (i) the time it is carried out; and
    - (ii) whether each applicable item, appliance and fitting concerned is in good working order; and
    - (iii) if it is not — the action taken to put it in good working order.
- Penalty: 50 penalty units.
- (3) An offence against subsection (1) or (2) is a strict liability offence.
- (4) A person is liable to a civil penalty if the person contravenes subsection (1) or (2).
- Civil penalty: 50 penalty units.

## 23 Means of access to vessels in port — construction and other requirements

- (1) The means of embarkation and disembarkation for a vessel constructed on or after 1 January 2010 must be in accordance with all of the following:
  - (a) regulation 3-9 of Chapter II-1 of SOLAS;
  - (b) the Annex to IMO Circular MSC.1/Circ.1331 *Guidelines for construction, installation maintenance and inspection/survey of means of embarkation and disembarkation*, as approved on 11 June 2009, or as revised or replaced from time to time;
  - (c) all of the following standards published by the International Organization for Standardization, as in force from time to time:
    - (i) ISO 5488 *Ships and marine technology—Accommodation ladders*;
    - (ii) ISO 7061 *Ships and marine technology—Aluminium shore gangways for seagoing vessels*;
    - (iii) ISO 7364 *Ships and marine technology—Deck machinery – Accommodation ladder winches*;
  - (d) Schedule 2 to this Marine Order.

*Note* In 2023, the current editions of the ISO standards mentioned in paragraph (c) were:

- (a) ISO 5488:2015 *Ships and marine technology—Accommodation ladders*;
- (b) ISO 7061:2015 *Ships and marine technology—Aluminium shore gangways for seagoing vessels*;
- (c) ISO 7364:2016: *Ships and marine technology—Deck machinery – Accommodation ladder winches*.

In 2023, these ISO standards could be found and purchased from the International Organization for Standardization's website (<https://www.iso.org>).

- (2) The means of embarkation and disembarkation for a vessel constructed before 1 January 2010 must comply with Schedule 2 to this Marine Order.
- (3) However, if an accommodation ladder, gangway or associated davit or fitting is replaced on a vessel constructed before 1 January 2010, the replacement part must comply with the requirements for that part as if the vessel were constructed on or after 1 January 2010.

## 24 Access to vessels in port — responsibilities of master

- (1) The master of a vessel must ensure that the vessel's means of access is as follows:
  - (a) of sufficient strength to support the weight placed on it;
  - (b) clean and free of damage, degradation or wear that may affect its strength;
  - (c) secured to prevent accidental displacement;
  - (d) illuminated sufficiently for people to use it safely at night;
  - (e) clear of the path of cargo being loaded or unloaded from the vessel or any other vessel;
  - (f) kept clean and free of any material that could make the vessel's use unsafe;
  - (g) properly rigged and adjusted to allow for any changes in tidal levels and the vessel's trim and freeboard;
  - (h) at an angle allowing safe access to the vessel;

- (i) firmly landed and clear of the wharf edge and other potential hazards.
- (2) A gangway may be placed on a bulwark or side rail of a vessel only if the master of the vessel is satisfied that the bulwark or side rail is of sufficient strength to bear the weight of the gangway and persons using it.
- (3) A telescopic accommodation ladder may be used as a means of access to a vessel only if the master is satisfied that its sections are locked together to prevent variation in length.
- (4) The master of a vessel must take reasonable and practical measures, including using safety netting, to protect persons from injury caused by falling from an accommodation ladder or a gangway on the vessel.
- (5) The master of a vessel must ensure that safety netting is provided along the length of the accommodation ladder or gangway to protect users from falling between the vessel and the quayside.
- (6) If a means of access to a vessel is provided by a port authority or other person, the master of the vessel must ensure that any operational action necessary to ensure the safety of users is brought to the attention of:
  - (a) the person providing access; and
  - (b) any person requiring access to or from the vessel.
- (7) If access is provided between 2 adjacent vessels, the master of the vessel with the higher weather deck must ensure that the means of access between the vessels is safe.
- (8) The master of a vessel must ensure that the means of passage between the vessel's deck and the upper end of a gangway resting on a bulwark or side rail of the vessel is a ladder consisting of a set of substantial steps, with handrails, allowing a person to safely ascend to or from the top of the bulwark or side-rail.

Note This is known as a bulwark ladder.
- (9) If the master of a vessel at anchor or at a mooring considers that the use of an accommodation ladder is impracticable, the master may provide a pilot ladder as a means of access to or from the vessel if the master ensures that only pilots and other persons required on the business of the vessel use the ladder.
- (10) However, for the purposes of subsection (9), the master may allow another person to use the ladder in an emergency.
- (11) The master of a vessel may allow a cargo access ramp to be used as a means of access to and from the vessel in the following circumstances:
  - (a) a non-slip surface is provided and marked for pedestrian use;
  - (b) the sides of the ramp have guard rails or equivalent arrangements to prevent pedestrians from falling from the ramp;
  - (c) either:
    - (i) the pedestrian area is effectively and protectively separated from the vehicular area; or
    - (ii) pedestrians are permitted to use the ramp only when the ramp is not in use by vehicles.



- (12) The master of a vessel must ensure that any safety net on the vessel:
- (a) is secured in position at each corner, and at intermediate points if required, by secured lengths of framing rope; and
  - (b) has the corners of its mesh secured to prevent movement.

**25 Access to vessels in port — responsibility of persons boarding or disembarking**

- (1) A person boarding or leaving a vessel must use the means of access provided or identified by the master.

Penalty: 50 penalty units.

- (2) An offence against subsection (1) is a strict liability offence.

- (3) A person is liable to a civil penalty if the person contravenes subsection (1).

Civil penalty: 50 penalty units.

## Schedule 1 Regulated Australian vessels — additional requirements

(paragraph 9(1)(b))

### 1.1 Openings in watertight bulkheads

- (1) A cargo vessel must comply with all of the following provisions of regulation 13 of Chapter II-1 of SOLAS, unless subsection (2) applies:
  - (a) paragraph 13.2.3;
  - (b) paragraph 13.3;
  - (c) paragraph 13.4;
  - (d) paragraph 13.5.2;
  - (e) paragraph 13.5.3;
  - (f) paragraph 13.7.2;
  - (g) paragraph 13.7.3;
  - (h) paragraph 13.7.4;
  - (i) paragraph 13.8.1.
- (2) For a vessel that is classed by a recognised organisation, equivalent arrangements may be made that comply with IACS Unified Interpretation Doors in watertight bulkheads of cargo ships and passenger ships, IACS UI SC 156, as in force from time to time.

*Note* In 2023, the current edition of the IACS Unified Interpretation (Rev. 2 Jan 2021) was available from the International Association of Classification Societies Ltd website at <https://www.iacs.org.uk>.

### 1.2 Fire precautions

A cargo vessel must comply with paragraph 2 of regulation 47 of Chapter II-1 of SOLAS.

### 1.3 Machinery spaces in passenger vessels—attendance

- (1) A machinery space in a passenger vessel must not be unattended, except in accordance with AMSA's approval under this section.
- (2) The owner of a passenger vessel may apply to AMSA, in accordance with the application process set out in *Marine Order 1 (Administration) 2013*, for approval for a machinery space to be left unattended periodically.
- (3) AMSA may impose conditions on an approval given for the purposes of this section.

*Note* This clause is included for the purposes of regulation 54 of Chapter II-1 of SOLAS.

### 1.4 Lifts

A lift on a vessel must comply with AS 1735.1.1 *Lifts, escalators and moving walks, Part 1.1: General requirements*, as in force from time to time, or equivalent requirements.

*Note* In 2023 the current editions of the standard mentioned in this clause was AS 1735.1.1:2022, *Lifts, escalators and moving walks, Part 1.1: General requirements*.

In 2023, this Standard could be found and purchased from the Standards Australia website (<https://store.standards.org.au>).

## **1.5 Lifting gear and machinery space cranes—non-classed vessels**

- (1) For lifting gear, including any machinery space crane, being used on a vessel that is not classed by a recognised organisation — the vessel must meet standards that are equivalent to standards that would apply to the lifting gear if the vessel were classed.
- (2) This section does not apply to lifting gear that is cargo handling equipment.

## **1.6 Conduct of inclining experiment — heeling by transfer of liquid**

- (1) If heeling is achieved for a vessel by the transfer of liquid in accordance with paragraph 2.3.4 of Annex 1 of the IS Code, details of arrangements for the transfer of liquids and the recording system to be used must be given to AMSA at least 2 weeks before the experiment.
- (2) If this method is used:
  - (a) each integral tank of the vessel or non-integral tank that is used as a heeling tank, must be fully calibrated over the full range of soundings to be used during the experiment; and
  - (b) the weight, transverse, vertical and longitudinal positions of the centre of gravity and the free surface moments of the contents must be accurately established taking account of the trim and heel of the vessel at inclining; and
  - (c) the density of the liquid used for testing the heeling of the vessel must be determined using a hydrometer calibrated:
    - (i) if it is made of metal — within the preceding 2 years; or
    - (ii) if it is made of glass — within the preceding 5 years; and
  - (d) the way that liquid is transferred from one tank to the other must be simple and direct so that the transfer is done in a reasonable time and with minimum leakage; and
  - (e) the transfer system must be purged to ensure that the system is working satisfactorily before the inclining experiment is started; and
  - (f) a calibrated sight board must be set up in each tank to measure the liquid level; and
  - (g) the sight boards must be accessible and adequately lit so that accurate liquid level readings can be taken.

*Note for paragraph (f)* The work of calculation is reduced and the accuracy increased if the sight boards are placed at the intersection of the longitudinal and transverse centres of the liquid surfaces. Therefore, in a rectangular tank, the preferred position of the sight board is at the vertical axis of the tank.

- (3) If sight boards do not enable an accurate measurement of the liquid in a heeling tank, the vessel's owner may use sounding tubes for measuring the liquid level in the tank, as an equivalent to the requirements in paragraphs (2)(f) and (g).

## 1.7 Conduct of inclining experiment — results

### Definitions

- (1) For this clause:

*w* means weight.

*d* means distance.

*x* means pendulum deflection.

**GM** means the initial transverse metacentric height when one or more tank is slack, commonly known as the metacentric height.

### Additional procedures

- (2) In addition to the requirements of section 4.3 of Annex 1 to the IS Code, the following procedures must be applied to the results of the inclining experiment:
- (a) for each pendulum, the ratio of applied heeling moment to the pendulum deflection ( $w.d/x$ ) must be calculated and recorded;
  - (b) if any individual  $w.d/x$  value deviates by more than 5% from the average ratio for that pendulum, the following must be checked and rectified, if possible and appropriate:
    - (i) that the vessel is still clear of the berth and that the moorings are still slack;
    - (ii) the pendulum readings, making sure that the pendulums are free to swing;
    - (iii) the value of the weight last moved and the distance through which it was moved;
    - (iv) that nothing aboard the vessel has moved due to heeling;
    - (v) that the vessel is not aground.

*Note* A running average  $w.d/x$  ratio computed during the conduct of the inclining experiment is often a good early indicator that there is a problem.

- (3) An inclining experiment must be discontinued if it is found that:
- (a) the pendulum readings of the vessel in the upright position are erratic; or
  - (b) the pendulum deflexions are greater than expected; or
  - (c) there is an inconsistency in the values of the pendulum deflexions for equal weight movements in opposite directions; or
  - (d) the vessel appears to have an unexplained initial list that cannot be corrected.
- (4) If an inclining experiment is discontinued for any of these reasons, AMSA must be notified as soon as practicable.
- (5) If none of the circumstances mentioned in subclause (3) exist, and the reason for a  $w.d/x$  ratio deviation cannot be identified:
- (a)  $w.d/x$  ratios must be converted into values of measured GM; and
  - (b) the as-inclined GM value for the vessel is the lower bound of a 95% confidence interval of the Normal statistical distribution of those measured GM values.

## Schedule 2 Accommodation ladders, gangways and safety nets

(paragraph 23(1)(d), subsection 23(2))

### 1.1 Accommodation ladders

- (1) An accommodation ladder:
  - (a) may be single-flight, multi-flight or telescopic; and
  - (b) if it is multi-flight — must have any intermediate platforms self-levelling and supported so that it remains horizontal in use; and
  - (c) if it is telescopic — must have the means to allow the ladder sections to be locked together to prevent variation in length.
- (2) The upper end of an accommodation ladder must be hinged from a fixed or revolving platform that is secured to the vessel and supported so that it remains horizontal in use.
- (3) The lower end of an accommodation ladder must be fitted with a platform that is supported so that it remains horizontal in use.
 

*Note* It is recommended that the lower end of an accommodation ladder resting on a wharf in use is fitted with wheels or rollers to enable free movement.
- (4) The sides of every platform, except access openings, must be fenced in accordance with subclause (7).
- (5) The treads of an accommodation ladder must:
  - (a) be at least 550 mm in clear width; and
  - (b) have a non-slip surface of a depth that avoids clogging; and
  - (c) be equally spaced so that the ladder may be easily used; and
  - (d) subject to paragraph (b) — be of a shape and design that gives a person using it a flat or curved surface to step on.
- (6) If a vessel constructed before 25 May 1980 has an accommodation ladder with fixed flat treads and a person using it has to step on a corner edge of the tread, the ladder must be securely fitted with cleated duckboards.
- (7) An accommodation ladder must be fenced on each side of its entire length with upper and intermediate side rails.
- (8) The height of a side rail must be measured from the surface of the treads, perpendicular to the longitudinal axis of the ladder.
- (9) Side rails must not be more than 0.61 m apart and the upper rail must be at a height of at least 1.07 m.
- (10) However, for a foreign vessel, an inspector may allow the use of a side rail that does not comply with subclause (9) if the inspector considers that it provides adequate protection.
- (11) A side rail may be a fixed rail or a taut rope or chain and must be supported by stanchions spaced not more than 2 m apart.
- (12) Any covering material used on a rope or chain must be removable to allow inspection of the condition of the rope or chain.

## 1.2 Gangways

- (1) A gangway must:
  - (a) have a closely boarded walkway, at least 550 mm in clear width, that is fitted with transverse treads at suitable and equally spaced intervals; and
  - (b) be fenced on each side of its entire length with upper and intermediate side rails that comply with clause 1.1; and
  - (c) if a derrick or crane is needed to position or stow it —have lifting attachments that balance it while it is freely suspended.
- (2) The upper end of a gangway must be fitted with suitable means to secure it effectively to a vessel.
- (3) The lower end of a gangway must be fitted with wheels or rollers to ensure free movement when resting on a wharf.

## 1.3 Safety nets

A safety net must:

- (a) be long and wide enough to provide adequate protection, given the length and width of accommodation ladders and gangways on the vessel; and
- (b) have apertures of its mesh not more than 190 mm, measured between opposite knots when the mesh is hung or cut to make it square mesh; and
- (c) be made of framing rope and netting, of at least 400 kgwt and 125 kgwt breaking strain, that is resistant to actinic degradation.

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### Note

1. All legislative instruments and compilations of legislative instruments are registered on the Federal Register of Legislation under the *Legislation Act 2003*. See <https://www.legislation.gov.au>.