

Subject

Medical Oxygen Cylinder onboard Marshall Islands
flagged vessels

ClassNK

Technical Information

No. TEC-1197
Date 24 December 2019

To whom it may concern

The Marshall Islands Government has published a Notice of the special requirements for carriage of Medical Oxygen Cylinders onboard the Marshall Islands flagged vessels (Marine Notice No.2-011-2 Rev. Nov/2019). The underlined parts in the below texts are changes from the previous Notice (Rev. 1/15).

This Technical Information supersedes the previous ClassNK Technical Information No.TEC-1035 dated 1 July 2015.

The main points of the Notice are as follows.

1. Vessels that fall under Column A or B of the MFAG Appendix 14 – List of Equipment, are required to carry a minimum of 44 L/200 bar oxygen as follows:
"Column A" means the requirement for the vessels when casualties cannot be hospitalized on shore within 24 hours, and "Column B" means the requirement for the vessels when casualties can be hospitalized on shore within 2 to 24 hours.
 - (1) one 40 L/200 bar Medical Oxygen Cylinder located in the vessel's hospital, assembled for direct use, equipped with one flowmeter unit (two ports) for supplying oxygen for two persons simultaneously; and
 - (2) one complete portable set, ready for use, with a 2 L/200 bar Medical Oxygen Cylinder and a spare cylinder (also 2 L/200 bar).
2. The single 40 L/200 bar Medical Oxygen Cylinder may be substituted with either two 20 L/200 bar cylinders or four 10 L/200 bar cylinders, provided the equipment/flowmeter units are arranged to supply oxygen to two persons simultaneously.

(To be continued)

NOTES:

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3. Medical oxygen cylinders with less than a 200 bar filling pressure may be used provided that the total volume of oxygen delivered by multiple cylinders is at least equal to that contained in a 40 L/200 bar cylinder or a 2 L/200 bar cylinder. To ensure that the correct volume is substituted, consultation with the manufacturer is required prior to their use onboard the vessel. Additionally:
 - (1) the filling pressure for all cylinders is to be the same;
 - (2) the cylinders are to be stored in a fixed position to prevent movements during bad weather conditions;
 - (3) the cylinders are to be fitted with a pressure regulating unit and pressure gauge, with one extra key to open the cylinder; and
 - (4) all cylinders are to be the same connectors and color.
4. The cylinders are to be hydrostatically tested every five years, or at an interval specified by the manufacturer, whichever occurs sooner.
5. The contents of the cylinders are to be checked and changed as required according to manufacturer's requirements, or every three years, whichever occurs sooner.
6. The entire system is to be inspected annually by a competent person in accordance with manufacturer's instructions.
7. MFAG is applicable to all vessels carrying cargoes which have a UN number. In this respect, it is to be noted that the preamble of the MFAG states that it should be used in conjunction with the information provided in the IMDG Code, the IMSBC Code, the Emergency Procedures for Ships Carrying Dangerous Goods (EmS), IBC Code and IGC Code.
8. It is acceptable that a vessel issued with a valid Document of Compliance for Dangerous Goods need not carry Medical Oxygen Cylinders while not actually loading, carrying or discharging any such dangerous goods.
9. Compliance with above 1. to 7. on Medical Oxygen Cylinders is to be applied to new gas carriers and chemical tankers constructed on or after 1 July 2016.
10. For existing gas carriers and chemical tankers, which are not currently provided with medical oxygen in accordance with above 1. to 7., compliance is to be required at the next intermediate or renewal survey after 1 July 2016.

Compliance with the above on Medical Oxygen Cylinders is verified at periodical SE surveys and initial survey on or after 1 July 2016.

(To be continued)

For any questions about the above, please contact:

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1. Marine Notice No.2-011-2 Rev. Nov/2019



REPUBLIC OF
THE MARSHALL ISLANDS
MARITIME ADMINISTRATOR

Marine Notice
No. 2-011-2
Rev. Nov/2019

**TO: ALL SHIPOWNERS, OPERATORS, MASTERS AND OFFICERS OF
MERCHANT SHIPS, AND RECOGNIZED ORGANIZATIONS**

**SUBJECT: International Maritime Dangerous Goods Code and Medical Oxygen
Cylinder Requirements**

- References:**
- (a) **SOLAS**, *International Convention for the Safety of Life at Sea*, Consolidated Edition 2014, as amended
 - (b) **IMDG Code**, *International Maritime Dangerous Goods Code and Supplement*, 2018 Edition, as amended
 - (c) **IMSBC Code**, *International Maritime Solid Bulk Cargoes Code*, 2016 Edition, as amended
 - (d) **IGC Code**, *International Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk*, 2016 Edition, as amended
 - (e) **RMI Maritime Act (MI-107)**, Chapter 4, Part I, §404
 - (f) **RMI Maritime Regulations (MI-108)**, §2.13.4

PURPOSE

This Notice provides the International Maritime Dangerous Goods Code (“IMDG Code” or “Code”) requirements for Republic of the Marshall Islands (RMI)-flagged vessels. It supersedes Rev. Dec/2016 and reflects the decision of the RMI Maritime Administrator (the “Administrator”) to allow 200 bar oxygen cylinders to be replaced with those of an equivalent capacity. This is due to the regulations in an increasing number of countries that limit the filling pressure of medical oxygen to below the 200 bar recommended in the Medical First Aid Guide (MFAG).

APPLICABILITY

The provisions in the IMDG Code apply to all vessels to which the International Convention for the Safety of Life at Sea (SOLAS), as amended, applies and which are carrying dangerous goods (as defined in Chapter VII-1, Part A of that Convention). Dangerous goods means the substances, materials, and articles covered by the IMDG Code.

All vessels, regardless of type and size, carrying substances, material, or articles identified in the IMDG Code as marine pollutants are subject to the provisions of this Code. Marine pollutants are substances subject to the provisions of the International Convention for the Prevention of Pollution from Ships, 1973 (MARPOL), Annex III (*Regulations for the Prevention of Pollution*

by *Harmful Substances Carried by Sea in Packaged Form*), as amended.

REQUIREMENTS

1.0 General

- 1.1 Dangerous goods and marine pollutants must be carried and shipped in accordance with the IMDG Code, as amended.
- 1.2 The IMDG Code is a mandatory instrument under Chapter VII of SOLAS. However, some provisions in the Code (contained in Chapter 1.1) remain recommendatory and should be treated as such.
- 1.3 Compliance is required with all relevant requirements of SOLAS, Chapter II-2: *Construction – Fire Protection, Fire Detection, and Fire Extinction*, as amended.

2.0 Carriage of Publications

- 2.1 The IMDG Code (Volume 1, Volume 2, and the Supplement) must be carried on board all RMI vessels to which the IMDG Code applies. Electronic or hard copy versions are acceptable.

3.0 Medical Oxygen Cylinders

- 3.1 Vessels that fall under Column A or B of the MFAG Appendix 14 (IMDG Code, Supplement) – List of Equipment, are required to carry a minimum of 44 liters/200 bar oxygen as follows:
 - 3.1.1 one 40 liter/200 bar medical oxygen cylinder located in the vessel's hospital, assembled for direct use, equipped with one flowmeter unit (with two ports) for supplying oxygen for two persons simultaneously; and
 - 3.1.2 one complete portable set, ready for use, with a 2 liter/200 bar medical oxygen cylinder **and** a spare cylinder (also 2 liter/200 bar).
- 3.2 The single 40 liter/200 bar medical oxygen cylinder may be substituted with either two 20 liter/200 bar cylinders or four 10 liter/200 bar cylinders, provided the equipment/flowmeter units are arranged to supply oxygen to two persons simultaneously.
- 3.3 Medical oxygen cylinders with less than a 200-bar filling pressure may be used provided that the total volume of oxygen delivered by multiple cylinders is at least equal to that contained in a 40 liter/200 bar cylinder or a 2 liter/200 bar cylinder as required by §3.1 of this Notice. This can be achieved by the supply of additional cylinder(s). To ensure that the correct volume is substituted, consultation with the manufacturer is required prior to their use onboard the vessel. Additionally:
 - 3.3.1 the filling pressure for all cylinders must be the same;

- 3.3.2 the cylinders must be stored in a fixed position to prevent movements during bad weather conditions;
- 3.3.3 the cylinders must be fitted with a pressure regulating unit and pressure gauge, with one extra key to open the cylinder; and
- 3.3.4 all cylinders must have the same connectors and color.
- 3.4 The cylinders must be hydrostatically tested every five years, or at an interval specified by the manufacturer, whichever occurs sooner.
- 3.5 The contents of the cylinders must be checked and changed as required by the manufacturer's requirements, or every three years, whichever occurs sooner.
- 3.6 The entire system must be inspected annually by a competent person in accordance with manufacturer's instructions.
- 3.7 It is acceptable that a vessel issued with a valid Document of Compliance for Dangerous Goods need not carry medical oxygen cylinders while not actually loading, carrying or discharging any such dangerous goods. The shipboard Safety Management System (SMS) must include provisions to ensure that the cylinders and system will be provided onboard before the vessel begins any of these operations with dangerous goods.
- 3.8 The Administrator interprets the MFAG as applicable to all vessels carrying cargoes which have a United Nations (UN) number. The MFAG is intended to be used in conjunction with the IMDG Code, the IMSBC Code, the Emergency Procedures for Ships Carrying Dangerous Goods (EmS), the International Bulk Chemical (IBC) Code, and the International Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk (IGC Code).
- 3.9 The revised IGC Code¹, which entered into force on 01 January 2016 for new ships, refers to the MFAG in the text of paragraph 14.2.2, effectively making it mandatory for gas carriers:

14.2.2 The ship shall have onboard medical first aid equipment, including oxygen resuscitation equipment, based on the requirements of the Medical First Aid Guide (MFAG) for the cargoes listed on the International Certificate of Fitness for the Carriage of Liquefied Gases in Bulk shown in appendix 2.

Because of this text, the Administrator considers that the IMO's intention was that the medical oxygen carriage requirements of the MFAG should be applied to gas carriers and chemical tankers as well.

¹ Adopted by IMO Resolution [MSC.370\(93\)](#), *Amendments to the International Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk (IGC Code)*.

- 3.10 With IMO Resolution [MSC.370\(93\)](#), on or after **01 July 2016**, the IGC Code became applicable to ships whose keels were laid, or which were at a similar stage of construction where:
- 3.10.1 construction identifiable with the ship began; and
 - 3.10.2 assembly of that ship commenced, comprising at least 50 tonnes or 1% of the estimated mass of all structural material, whichever is less.
- 3.11 The requirements of §3.0 of this Notice on Medical Oxygen Cylinders apply to new gas carriers and chemical tankers constructed on and after **01 July 2016**.
- 3.12 For existing gas carriers and chemical tankers, not currently provided with medical oxygen, compliance is required at the next intermediate or renewal survey after **01 July 2016**.