

Subject

Medical Oxygen Cylinders onboard Isle of Man flagged vessels

ClassNK

Technical Information

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To whom it may concern

The Isle of Man Government has noticed ClassNK of the special requirements for carriage of Medical Oxygen Cylinders onboard the Isle of Man flagged vessels (Industry Circular No.11).

For carriage of medical oxygen cylinders required by MFAG regarding IMDG Code/IBC Code/IGC Code, see Industry Circular No.11 (Revised February 2007) and the following items.

1. Where the required amount (40L) of medical oxygen are provided in a number of smaller capacity (e.g. 4 cylinders of approximately 10L each, or equivalent), one of the cylinders is to be stored in the hospital ready for immediate use. The other remaining cylinders are to be securely stored in a suitable space outside the accommodation, where the cylinders will be protected from deterioration and where the risk of fire and explosion is minimised.
2. The use of the 40L medical oxygen cylinder can be stored in either of the following locations:
 - (1) Outside the accommodation block, as close to the hospital as is reasonably possible, in a secure and weather protected cabinet.
 - (2) Inside the accommodation block in the hospital beside the bed(s), provided the cylinder is securely locked in a frame connected directly to the steel structure of the ship.

For any questions about the above, please contact:

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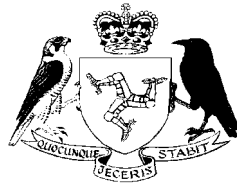
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Attachment: Industry Circular No.11 (Revised February 2007)

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Government of the Isle of Man

Department of Trade and Industry

Notice to Surveyors, Shipowners, Managers and Classification Societies

Carriage of Medical Oxygen Cylinders

The Medical First Aid Guide (MFAG), requires vessels carrying dangerous goods to carry 40 litre@200bar oxygen cylinder(s) in the ships hospital. The Ship Registry considers carrying such large quantities of oxygen inside the accommodation may pose both fire and safety issues. As a result of further and recent consultation with industry this circular offers guidance to IOM vessels on how such quantities of oxygen can be safely installed.

The MFAG for use in accidents involving dangerous goods came into force on the 01 July 2002 and applies to all vessels to which SOLAS applies.

Vessels to which the MFAG apply due to respective code requirements are:-

- a) vessels carrying substances stated in the general index of the International Maritime Dangerous Goods Code (IMDG Code)
- b) vessels complying with the International Code for the Construction and Equipment of ships carrying Dangerous Chemicals in Bulk (IBC Code as amended.)
- c) vessels complying with the International Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk (IGC Code)

In order for a vessel to comply with Column A or B of Appendix 14 of the MFAG the following quantities of oxygen available in the ship's hospital for resuscitation purposes are required:

- 40 litre@200 bar, medical oxygen cylinder in ships hospital assembled for direct use with 1 flow meter unit with two ports for supplying oxygen for 2 persons at the same time. If more than 1 non-portable oxygen cylinder is

used there must be 2 flow meter units for supplying oxygen for 2 persons at the same time.

- One complete portable set with 2litre@200 bar of oxygen ready for use and a spare cylinder of 2litre@200 bar.

All other vessels that do not have to comply with the MFAG are only required to carry a 2litre@200 bar portable oxygen set, and a spare cylinder of 2litre@200 bar.

Storage of Medical Oxygen Cylinders

The Ship Registry considers that the storage of large quantities of oxygen in an accommodation space is potentially dangerous and that it may pose a fire and safety hazard.

In order to resolve the conflict between the intentions of MFAG and the fire and safety issues the Ship Registry recommends that compliance with the MFAG requirements can be achieved by :-

1. The supply of smaller cylinders inside the accommodation

The required amount (40L@200bar) of medical oxygen in a number of smaller capacity (e.g. 4 cylinders of approximately 10 litres@200bar each, or equivalent) for use inside the accommodation.

One of the cylinders should be stored in the hospital ready for immediate use. The other remaining cylinders are to be securely stored in a suitable space outside the accommodation, where the cylinders will be protected from deterioration and where the risk of fire and explosion is minimised.

As a consequence of the difficulty that can be experienced in obtaining and refilling 10 litre cylinders, in the event that a 40 litre cylinder is installed it is recommended the following guidance is used :

2. Use of a single 40 Litre Cylinder

The use of the 40 litre@200bar medical oxygen cylinder can be stored in either of the following locations:

- i/ Outside the accommodation block, as close to the hospital as is reasonably possible, in a secure and weather protected cabinet.
- ii/ Inside the accommodation block in the hospital beside the bed(s), provided the cylinder is securely locked in a frame connected directly to the steel structure of the ship.

The Ship Registry recommends that a 40 litre oxygen cylinder situated either inside or outside the accommodation block should be fitted with the following safety device to prevent accidental release of high pressure oxygen into the hospital:

The oxygen regulator in the pipework from the 40 litre cylinder should have a relief valve fitted with a discharge line piped outside the hospital to free air. This ensures that if there is a fault in the system, high pressure oxygen cannot escape into the low pressure side of the system, and will be vented outside of the accommodation.

3. All systems should be maintained and inspected as follows:

- inspected annually on board by a competent person in compliance with the manufacturer's instructions. *Note: a competent person may be a senior member of the ships staff.*
- medical oxygen has a limited shelf life of 3 years and should be landed ashore for re-charging at the expiry date.
- the cylinders are to be hydrostatically tested every 5 years, or at an interval specified by the manufacturer, whichever occurs sooner.
- oxygen pressure regulators should be serviced at least every 5 years.
- grease or oil should not be used to lubricate high pressure oxygen fittings.
- all high pressure pipes from the bottle to the regulator should be subject to a pressure test every 3 years by the manufacturer or his appointed agents.
- the hospital ventilation system should be maintained as per the manufacture's instructions and operating correctly at all times.
- there should be a warning sign on the hospital door stating 'high concentrations of oxygen may be present'.
- there should be a sign in the hospital adjacent to the oxygen installation stating, 'all system valves to be shut when not in use'.

Isle of Man Ship Registry
Revised February 2007

Please note - The Isle of Man Ship Registry cannot give Legal Advice. Where this document provides guidance on the law it should not be regarded as definitive. The way the law applies to any particular case can vary according to circumstances - for example, from vessel to vessel. You should consider seeking independent legal advice if you are unsure of your own legal position.