



BERMUDA MERCHANT SHIPPING GUIDANCE NOTICE

Periodic Inspection and Testing of Seamless Steel Pressurised Gas Cylinders

This Notice is intended for: Ship Owners, Managers, Masters and Operators

References:

MCA Guidance Note MGN 374 (M+F) – Periodic Inspection and Testing of Seamless Steel Pressurised Gas Cylinders
MSC.1/Circ.1318 – Guidelines for the Maintenance and Inspection of Fixed Carbon Dioxide Fire-Extinguishing Systems
MSC.1/Circ.1432 – Revised Guidelines for the Maintenance and Inspection of Fire Protection Systems and Appliances
BS EN 1968:2002 – Transportable Gas Cylinders – Periodic Inspection and Testing of Seamless Steel Gas Cylinders

Summary:

This Bermuda Shipping Guidance Notice is issued to provide guidance on the periodical inspection and testing requirements of steel pressurised gas cylinders.

Note that this guidance notice does not apply to steel pressurised gas cylinders that form part of a fixed fire extinguishing system. For guidance on the inspection and testing requirements for these please see Bermuda Shipping Notices 021 and 027.

This Notice was issued on 30 October 2019

1. Introduction

- (1) IMO guidance on the requirements for periodical inspection and testing of steel pressurised gas cylinders have been developed for the following systems:
 - (a) Carbon dioxide fixed fire-extinguishing systems – MSC.1/Circ.1318
 - (b) Other fixed fire-extinguishing systems and portable fire extinguishers – MSC.1/Circ.1432
 - (c) Breathing apparatus cylinders – MSC.1/Circ.1432
- (2) There is currently no specific guidance from IMO relating to the periodical inspection and testing requirements for steel pressurised gas cylinders incorporated into systems other than those listed above, or used for other purposes on a ship.

(3) This guidance notice is intended to provide guidance as it relates to the periodical inspection and testing of steel pressurised gas cylinders utilised in systems other than those detailed in 1.1.

(4) Such gas cylinders and systems include, but are not limited to:

(a) Nitrogen cylinders providing the reserve source of power for survival craft davits, as required by 6.1.1.3 of the LSA Code.

Note: This excludes any associated accumulator

(b) Nitrogen cylinders providing the reserve source of power for watertight doors in passenger ships, as required by SOLAS/II-1, 13.7.3

Note: This excludes any associated accumulator

(c) Lifeboat breathing air cylinders as required by SOLAS/III, 31.1.6

2. Requirements

(1) All steel pressurised gas cylinders not covered by the alternate requirements listed above are to be internally inspected and hydraulically tested at the intervals provided in table 1.

Note: Table 1 does not apply to acetylene cylinders. See 2.2

Table 1: Intervals Between Periodic Inspection and Test

Description	Gas Type (Examples) ^a	Internal Inspection and Hydraulic Test Period (Years)
Compressed Gases	Ar, N ₂ , He, etc.	10
	Air, O ₂	10
	Self Contained Air (SCBA, Lifeboat Air as per SOLAS/III.31.1.6)	5
	CO	5
	SCUBA ^b	5
Liquefied Gases	CO ₂ , N ₂ O etc	10
Gas Mixtures	All mixtures except mixtures completely in the gaseous state containing toxic and/or very toxic components.	3 years for groups TC, TFC, TOC 5 years for groups T, TF, TO 10 years for groups A, O, F TC = Toxic, Corrosive TFC = Toxic, Flammable, Corrosive TOC = Toxic, Oxidising, Corrosive T = Toxic TF = Toxic, Flammable TO = Toxic, Oxidising A = Asphyxiant O = Oxidising F = Flammable

a – Not an exhaustive list. A full list of gases can be found in the International Carriage of Dangerous Goods by Rail (RID) and the International Carriage of Dangerous Gases by Road (ADR) regulations.

b – Self contained underwater breathing apparatus cylinders are to be internally inspected every 2.5 years, in addition to the internal inspection and hydraulic test every 5 years

- (2) Dissolved acetylene cylinders contain a porous mass and a solvent in which the acetylene is dissolved. Reference should be made to BS EN 12863:2002 for the periodic inspection and maintenance of dissolved acetylene cylinders.
- (a) Due to the presence of the porous mass neither a pressure test nor a visual inspection of the internal surface of the cylinder is required by this notice.
 - (b) An acetylene cylinder shall fall due for periodic inspection and testing by the filler/supplier after the expiry of the interval of 5 years for non-monolithic massed cylinders, or 10 years for monolithic massed cylinders.

Chief Surveyor
Bermuda Shipping and Maritime Authority