CGA P-5—2019

CARE OF HIGH PRESSURE CYLINDERS FOR UNDERWATER BREATHING

SEVENTH EDITION

CGA
Compressed Gas Association
The Standard For Safety Since 1913

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Work Item 17-024
Cylinder Specifications Committee

NOTE—Technical changes from the previous edition are underlined.

SEVENTH EDITION: 2019
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1 Introduction

Steel and aluminum alloy compressed gas cylinders used for underwater diving service in self-contained underwater breathing apparatus (SCUBA) are exposed to extremely harsh conditions. Corrosion caused by seawater can weaken cylinders and residue from corrosion can clog valves and regulators resulting in reduced or blocked airflow. Proper maintenance ensures a long life, satisfactory service, safety, and reliability for cylinders used in underwater diving.

2 Scope

This publication provides recommendations for the care of high pressure cylinders for underwater breathing. In recognition of the extreme conditions to which compressed gas cylinders used for underwater diving service are exposed, this publication supplements information contained in the references listed in Section 8.

This publication is not intended to give detailed or specific recommended procedures for cleaning, paint stripping, inspection, valve maintenance, etc., that would be better provided by the cylinder manufacturer or distributor of the compressed gas underwater equipment.

This publication also recognizes that other types of SCUBA do exist. Closed circuit oxygen and mixed gas systems have special cylinder requirements. All requests for information concerning such equipment should be directed to the cylinder manufacturer.

3 Definitions

For the purpose of this publication, the following definitions apply.

3.1 Publication terminology

3.1.1 Shall
Indicates that the procedure is mandatory. It is used wherever the criterion for conformance to specific recommendations allows no deviation.

3.1.2 Should
Indicates that a procedure is recommended.

3.1.3 May
Indicates that the procedure is optional.

3.1.4 Will
Is used only to indicate the future, not a degree of requirement.

3.1.5 Can
Indicates a possibility or ability.

4 Description of cylinders

4.1 Cylinder types

4.1.1 Regulatory crown markings on SCUBA cylinders

A variety of cylinders are in SCUBA diving service in the United States and Canada, all of which have the following in common:

- A marking denoting the regulatory authority that governs the specification. For example, for U.S. cylinders, the regulatory marking of ICC was used prior to January 1, 1970 and DOT or UN/ISO has been used since. In Canada, regulatory markings of CRC, BTC, and CTC were used prior to 1993, and TC or UN/ISO has been used since. CTC/DOT has been used in dual regulatory marking of cylinders;