

# CGA

Compressed Gas Association

The Standard For Safety Since 1913

**CGA C-6.3-2019  
STANDARD FOR VISUAL  
INSPECTION OF LOW  
PRESSURE ALUMINUM ALLOY  
COMPRESSED GAS  
CYLINDERS**

**FOURTH EDITION**

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Work Item 18-004  
Cylinder Specifications Committee

NOTE—Technical changes from the previous edition are underlined.

FOURTH EDITION: 2019  
THIRD EDITION: 2013  
REAFFIRMED: 2005  
SECOND EDITION: 1999

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## 1 Introduction

Title 49 of the U.S. *Code of Federal Regulations* (49 CFR), Parts 100-180 of the Department of Transportation (DOT) as well as the *Transportation of Dangerous Goods Regulations* of Transport Canada (TC) and Canadian national standard CSA B339, *Cylinders, spheres, and tubes for the transportation of dangerous goods* require that a cylinder be condemned when it leaks or when internal or external corrosion, denting, bulging, or evidence of rough usage exists to the extent that the cylinder is likely to be weakened appreciably [1, 2, 3].<sup>1</sup> In addition, these regulations and standards identify the periodic inspection and hydrostatic test requirements for cylinders used in transportation. Cylinders identified with ICC stampings are also covered by DOT regulations in the United States. In Canada, cylinders approved by previous agencies are identified by CTC, BTC, and CRC markings and are currently subject to TC regulations.

## 2 Scope

This publication covers the periodic inspection of aluminum alloy compressed gas cylinders with service pressures of 500 psi (35 bar) or less. This publication may not cover all circumstances for each individual cylinder type or lading. Inspection agencies may find it necessary to amplify these requirements to fit their condition of service if the service is more severe than encountered in transportation.

Other publications offered by the Compressed Gas Association (CGA) that discuss visual inspection of cylinders are:

- C-1, *Methods for Pressure Testing Compressed Gas Cylinders* [4];
- C-6, *Standard for Visual Inspection of Steel Compressed Gas Cylinders* [5];
- C-6.1, *Standard for Visual Inspection of High Pressure Aluminum Alloy Compressed Gas Cylinders* [6];
- C-6.2, *Standard for Visual Inspection and Requalification of Fiber Reinforced High Pressure Cylinders* [7]; and
- P-22, *The Responsible Management and Disposition of Compressed Gases and Their Containers* [8].

Experience in the inspection of cylinders is an important factor in determining the acceptability of a given cylinder for continued service. Users who lack this experience and have questionable cylinders shall return them to a manufacturer of the same type of cylinders or to a competent requalification facility for reinspection.

## 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

Used only to indicate the future, not a degree of requirement.

<sup>1</sup>References are shown by bracketed numbers and are listed in order of appearance in the reference section.