

CGA C-22—2018

**WATER CORROSION OF
COMPOSITE CYLINDERS WITH
AA6061 LINERS**

SECOND EDITION

CGA
Compressed Gas Association

The Standard For Safety Since 1913

PREFACE

As a part of a program of harmonization of industry standards, the Compressed Gas Association (CGA) has adopted the European Industrial Gases Association (EIGA) Doc 72, *Water Corrosion of Composite Cylinders with AA 6061 Liners*.

This publication is intended as an international harmonized standard for the worldwide use and application of all members of the Asia Industrial Gases Association (AIGA), Compressed Gas Association (CGA), European Industrial Gases Association (EIGA), and Japan Industrial and Medical Gases Association (JIMGA). Each association's technical content is identical, except for regional regulatory requirements and minor changes in formatting and spelling.

PLEASE NOTE:

The information contained in this document was obtained from sources believed to be reliable and is based on technical information and experience currently available from members of the Compressed Gas Association, Inc. and others. However, the Association or its members, jointly or severally, make no guarantee of the results and assume no liability or responsibility in connection with the information or suggestions herein contained. Moreover, it should not be assumed that every acceptable commodity grade, test or safety procedure or method, precaution, equipment or device is contained within, or that abnormal or unusual circumstances may not warrant or suggest further requirements or additional procedure.

This document is subject to periodic review, and users are cautioned to obtain the latest edition. The Association invites comments and suggestions for consideration. In connection with such review, any such comments or suggestions will be fully reviewed by the Association after giving the party, upon request, a reasonable opportunity to be heard. Proposed changes may be submitted via the Internet at our web site, www.cganet.com.

This document should not be confused with federal, state, provincial, or municipal specifications or regulations; insurance requirements; or national safety codes. While the Association recommends reference to or use of this document by government agencies and others, this document is purely voluntary and not binding.

A listing of all publications, audiovisual programs, safety and technical bulletins, and safety posters is available via the Internet at our website at www.cganet.com. For more information contact CGA at Phone: 703-788-2700, ext. 799. E-mail: customerservice@cganet.com

Work Item 15-003
Cylinder Specifications Committee

SECOND EDITION: 2018
FIRST EDITION: 2012

© 2018 – Reproduced with permission from, the European Industrial Gases Association. All rights reserved.

Contents	Page
1 Introduction.....	1
2 Scope and purpose	1
3 Definitions.....	1
4 Current findings	1
5 Preliminary discussion.....	2
6 Recommendations	4
7 References	4
Figure	
Figure 1—Hoop-wrapped cylinders (AA6061) fatigue crack initiated from a corrosion pit.....	2
Figure 2—AA7060 cylinder metallographic examination according to the intergranular test as per ISO 7866.....	3
Figure 3—Hoop-wrapped AA6061 cylinder metallographic examination according to the intergranular test as per ISO 7866.....	3