CGA
Compressed Gas Association
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1ST EDITION

CGA H-7 — 2024

STANDARD PROCEDURES FOR HYDROGEN SUPPLY SYSTEMS

PREFACE

As part of a program of harmonization of industry standards, the Compressed Gas Association (CGA) has published CGA H-7, *Standard Procedures for Hydrogen Supply Systems*, jointly produced by members of the International Harmonization Council.

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

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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 website, www.cganet.com.

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Hydrogen Technologies Committee

NOTE—Appendix A (Normative) is a requirement.

NOTE—Appendix B (Normative for U.S. facilities).

NOTE—Appendix C (Informative) is for information only.

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1 Introduction

With the increased emphasis on renewable and clean energy, the hydrogen space is seeing tremendous growth both in activities and in entrants to the space. Much of that growth is taking place in near-consumer locations, such as gas stations and convenience stores, as opposed to the more traditional industrial settings historically associated with the use of hydrogen. Additionally, more personnel are becoming involved with the use of hydrogen.

It is important that these new entrants learn the best practices for working safely with and around hydrogen. The general public has concerns about the safety of hydrogen and must be comfortable with the work of those in the hydrogen space.

2 Scope

This publication provides recommended best practices and standardized procedures for personnel using hydrogen supply systems. The practices and procedures are limited to bulk gaseous and cryogenic liquid hydrogen and do not address nonbulk (cylinders) supply systems. This publication addresses processes for commissioning, filling, decommissioning, maintaining, and operating hydrogen supply systems.

This publication assumes that the hydrogen supply system has been designed and installed in accordance with the appropriate codes, standards, and local permits, as well as having an emergency preparedness plan in place. Users are encouraged to read the applicable codes and standards listed in Section 6 and Section 7 before undertaking any work on a hydrogen supply system. This publication does not replace the content found in those standards but is intended to supply best practices for working around hydrogen and with equipment in hydrogen service.

This publication contains general guidelines for any equipment that is storing, processing, or transporting hydrogen that otherwise has no procedural guidance. It is not intended to replace any system-specific standards or guidelines.

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.

3.2 Technical definitions

3.2.1 Authority having jurisdiction (AHJ)
Organization, office, or individual responsible for enforcing the requirements of a code or standard or responsible for approving equipment, materials, installations, or procedures.

NOTE—There may be multiple AHJs with various levels of responsibility and authority.