CGA P-11—2013

METRIC PRACTICE GUIDE FOR THE COMPRESSED GAS INDUSTRY

FOURTH EDITION

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NOTE—Technical changes from the previous edition are underlined.

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

FOURTH EDITION: 2013
THIRD EDITION: 2008
SECOND EDITION: 1998
FIRST EDITION: 1980

Contents **Page**

Tables

Appendix

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1 Introduction

Following the adoption of the *Metric Conversion Act of 1975* by the U.S. Congress, the Compressed Gas Association (CGA) undertook consideration of the problems facing the industry in the United States and Canada as it prepared for the changeover from customary to SI (International System of Units). This publication is the result of work by a committee of CGA members formed to create a conversion standard for the compressed gas industry.

Following regulatory and commercial action by the Canadian government in the late 1970s, the industrial gas industry in that country proceeded to its metrication. In the United States, the process is still ongoing.

The following guidelines were agreed upon:

- The costs of conversion to the industry should be kept to a minimum, consistent with the voluntary acceptance of the need to work in an SI milieu;
- Gases traded and used by the compressed gas industry should have one SI unit of measurement; and
- Since gas cylinders represent one of the major expense items of the industry and have a relatively long life expectancy, existing cylinders in compliance with appropriate regulations will remain in service.

2 Scope

This publication, along with IEEE/ASTM SI 10, *American National Standard for Metric Practice* and CSA-Z234.1, *Metric Practice Guide*, govern when metric or SI units of measure are used for: all gases sold and used by the compressed gas industry whether in gaseous or liquid form at the point of sale or use; all vessels, cylinders, and other containers used for packaging, storage, and transportation of these gases; and all ancillary equipment included in the sale and use of these gases [1, 2].[1]

This publication does not apply to units of measure when metric or SI units are not used.

3 Implementation phase

The implementation phase is the period during which both customary and SI units of measurement may be used for billing and shipping for selling purposes.

4 Definitions/Terms

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

4.1 kPa

In CGA publications, kPa shall indicate gauge pressure unless otherwise noted as (kPa, abs) for absolute pressure and (kPa, differential) for differential pressure.

4.2 Quantities (SI units)

4.2.1 Pressure

Stated in kilopascal (kPa)

4.2.2 Temperature

Stated in degree Celsius (°C)

4.3 Reference conditions

Standard reference conditions are:

- pressure of 101.325 kPa, abs; and
- temperature of 15 °C (288.15 K).

[1] References are shown by bracketed numbers and are listed in order of appearance in the reference section.