



CGA P-8.10—2021
INDUSTRIAL GAS
PIPELINE INTEGRITY
MANAGEMENT

FIRST EDITION

PREFACE

As part of a program of harmonization of industry standards, the Compressed Gas Association (CGA) has published CGA P-8.10, *Industrial Gas Pipeline Integrity Management*, 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.

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Work Item 16-100
Atmospheric Gases and Equipment Committee

NOTE—Appendix A (Normative) is a requirement.

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1 Introduction

Operation and maintenance guidelines for transmission pipelines are an important requirement due to the hazardous nature of certain gases and the presence of the pipelines through the public domain.

2 Scope and purpose

2.1 Scope

This publication covers the integrity of industrial gas transmission pipelines for gaseous nitrogen, oxygen, argon, helium, hydrogen, carbon monoxide, and Syngas. This publication addresses the integrity of industrial gas pipelines in the public domain including maintenance and operation as appropriate.

This publication covers active or in-service pipelines. Out of service or abandoned pipelines are not covered in this publication. However, the information contained in this publication may be applicable to those pipelines.

This publication addresses land-based pipelines and does not specifically address offshore pipelines.

This publication does not cover:

- Carbon dioxide, steam, natural gas, or water;
- Liquid pipelines;
- Pipelines fabricated from nonmetallic material such as plastic or composite material; and
- Design of pipelines. For information on design, see CGA G-5.6, *Hydrogen Pipeline Systems*; CGA G-5.7, *Carbon Monoxide and Syngas Pipeline Systems*; and CGA G-4.4, *Oxygen Pipeline and Piping Systems* [1, 2, 3].¹

To the extent that they exist, national laws can supersede the practices included in this publication. It should be noted that all local regulations, tests, safety procedures, or methods are not included in this publication and that abnormal or unusual circumstances could warrant additional requirements.

2.2 Purpose

Managing the integrity of a gas pipeline system is one of the goals of every pipeline system operator. Pipeline system operators' primary goal is the safe and reliable continuous operation of the pipeline to provide safe and reliable delivery of industrial gas to their customers without interruptions, adverse effects on employees, the public, or the environment.

The goal of an integrity management program is to provide a set of safety management, operations, maintenance, evaluation, and assessment processes that are implemented in a manner to ensure pipeline system operators provide enhanced protection of pipeline assets.

The purpose of this publication is to guide individuals and teams charged with planning, implementing, and improving a pipeline integrity management program. The pipeline integrity team typically consists of managers, engineers, and operating personnel with specific competence in detection, prevention, and mitigation activities.

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