CGA P-82—2019

STANDARD FOR MAINTENANCE OF TRANSFER HOSES

FIRST EDITION

CGA
Compressed Gas Association
The Standard For Safety Since 1913

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Work Item 13-106
Bulk Distribution Equipment and Standards Committee

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Contents **Page**

Tables

Figure

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1 Introduction

This publication provides industry wide procedures for the inspection and testing of transfer hoses. It is a standard for transfer hose users when establishing inspection procedures and contains acceptance criteria appropriate for use during product transfers and routine maintenance. This publication represents the best industry practice currently available, but does not cover every possible hose design, installation, or compressed gas. Each user may apply this publication to suit individual installations and conditions of service. Acceptance for continued service in accordance with this publication does not guarantee that a hose or coupling assembly cannot fail.

Workplace safety necessitates the inspection and maintenance of transfer hoses and coupling assemblies. These hoses are subject to wear and damage in the course of normal use. In-service inspections performed in addition to the inspections required during periodic maintenance shall be an integral part of the product transfer operations when hoses are used.

Not every requirement for a specific hose will be appropriate for all of the hoses mentioned in this publication.

2 Scope

This publication applies to bulk compressed gas or cryogenic liquid product delivery and vapor return hose assemblies that are temporarily connected between the tank or any tank-mounted accessory and the point of supply or receipt during loading or off-loading. Transfer hoses may be stored on the transport vehicle or at the storage vessel.

This publication applies to transfer hoses with internal diameters ranging from 0.25 in to 4 in (6.4 mm to 102 mm) including:

- Uninsulated gas transfer hoses—Commonly used for tube trailer transfer of argon, nitrogen, helium, hydrogen and oxygen;
- Corrugated metal hoses (uninsulated cryogenic hoses and uninsulated gas transfer hose)—Commonly used for liquid argon, liquid nitrogen, liquid oxygen, and liquified natural gas;
- Vacuum-jacketed cryogenic hose—Commonly used for liquid hydrogen and liquid helium; and
- Composite transfer hoses—Commonly used for liquid carbon dioxide and gas transfer hoses.

NOTE—At times the terms for these four types of transfer hoses may be used interchangeably, e.g., a corrugated metal hose can also be referred to as an uninsulated cryogenic hose. This would also apply for composite transfer hoses and uninsulated gas transfer hoses.

This publication does not cover:

- cylinder pigtails;
- hose assemblies such as flexible joints or expansion joints in rigid piping systems that are part of the piping system and are pressure tested in accordance with ASME B31.3, *Process Piping* [1];[1] or
- hose assemblies for hydrogen, liquefied petroleum gas, natural gas, or other fueling applications where the compressed gas or cryogenic fluid is transferred from a stationary vessel to a motor vehicle, fork truck, or other vehicle used for transportation.

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