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REAFFIRMED 2015

RECOMMENDED HOSE MANAGEMENT PRACTICE FOR COMPRESSED GAS TRANSFER HOSES

FIRST EDITION

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Work Item 15-007
Bulk Distribution Equipment and Standards Committee

NOTE—No technical information has been changed from the 2010 edition. This reaffirmed edition may include minor editorial changes.

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1 Introduction

Common, contract, and private motor carriers are concerned about the possible failure of hoses used for transfer of compressed gases. 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.

2 Scope

This publication is a hose management document for noncryogenic compressed gas transfer hoses for maximum allowable working pressures (MAWP) from 500 psi to 3000 psi (3450 kPa to 20 680 kPa), with hose internal diameter ranging from 0.25 in to 4 in (6.4 mm to 102 mm).[1, 2] This publication provides industry wide procedures for the inspection and testing of compressed gas transfer hose. It is a guide for transfer hose users when they establish inspection procedures. It contains acceptance criteria appropriate for use during product transfers and routine maintenance. It represents the best currently available industry practice, but does not cover every possible hose design, installation, and lading. Each user can apply this publication to suit individual installation and conditions of service. Acceptance for continued service in accordance with this publication does not guarantee that a hose or coupling assembly is not dangerous or cannot fail.

This publication does not apply to vacuum-insulated hoses.

3 Definitions

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

3.1 Bulge
Deformation caused by deterioration or damage to the reinforcement braid.

3.2 Compressed gas

3.2.1 Flammable gas
Any material that is a gas at 20 °C (68 °F) or less and 101.3 kPa (14.7 psia) of pressure (a material that has a boiling point of 20 °C [68 °F] or less at 101.3 kPa [14.7 psia]) which:

- is ignitable at 101.3 kPa (14.7 psia) when in a mixture of 13% or less by volume with air; or
- has a flammable range at 101.3 kPa (14.7 psia) with air of at least 12% regardless of the lower limit.

The limits specified above shall be determined at 101.3 kPa (14.7 psia) of pressure and a temperature of 20 °C (68 °F) in accordance with ASTM E681-85, *Standard Test Method for Concentration Limits of Flammability of Chemicals* or other approved equivalent methods [2].

3.2.2 Nonflammable gas
Any material (or mixture) that:

- exerts in the packaging a gauge pressure of 200 kPa (29 psi, 43.8 psia) or greater at 20 °C (68 °F); and
- does not meet the definition of a flammable gas or gas poisonous by inhalation.

3.3 Cryogenic liquid
Refrigerated, liquefied gas having a boiling point colder than −130 °F at 14.7 psia (−90 °C at 101.3 kPa, abs).

NOTE—Oxygen, nitrogen, and argon can be supplied in liquid form.

[1] kPa shall indicate gauge pressure unless otherwise noted as (kPa, abs) for absolute pressure or (kPa, differential) for differential pressure. All kPa values are rounded off per CGA P-11, *Metric Practice Guide for the Compressed Gas Industry* [1].

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