CGA P-17—2011

PROCEDURE FOR PNEUMATIC RETESTING OF CARGO AND PORTABLE TANKS

FOURTH EDITION

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Work Item 08-012
Bulk Distribution Equipment and Standards Committee

NOTE—Technical changes from the previous edition are underlined.

NOTE—Appendix A (Normative) is a requirement

FOURTH EDITION: 2011
THIRD EDITION: 2004
SECOND EDITION: 1998
FIRST EDITION: 1991

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Appendix Table

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1 Introduction

Transportation regulations in the United States and Canada require the retesting of cargo and portable tanks at prescribed intervals. Retesting may also be necessary when performing repairs and/or modifications to cargo and portable tanks. Personnel meeting the requirements of the regulations of a tank's base country shall perform the retesting at facilities approved by the appropriate authorities.

2 Scope

This procedure is a recommended method for performing pneumatic retesting of cargo and portable tanks at prescribed intervals. It supplements the applicable requirements of Title 49 of the U.S. *Code of Federal Regulations* (49 CFR) and CSA B620, *Highway Tanks and Portable Tanks for the Transportation of Dangerous Goods* [1, 2].[1]

3 Safety considerations

Pneumatic testing shall be carried out at pressures set by applicable regulations; however, test pressure shall not exceed the pressures calculated using Appendix A.

WARNING**:** *This procedure can be hazardous to personnel because of a possible catastrophic failure of the tank and/or its accessories.*

There should be safeguards in place to protect employees and other personnel if a tank failure occurs. These safeguards should take into consideration test pressure, size of the tank, proximity of occupied areas, equipment, and material storage.

Before testing, tanks containing flammable gases, oxidizers, or toxic or corrosive gases shall be drained of all liquefied gas and purged to a safe level with an inert, oil-free, dry gas such as nitrogen, carbon dioxide, or helium. Additionally, oil-free, dry air is a suitable purge gas for tanks containing nitrous oxide provided a visual internal examination finds no oil contamination after the purge.

Tanks containing nonflammable gases shall be drained of all liquefied product before testing. This may require purging with warm gas.

All required safety and environmental considerations shall be addressed when draining, purging, testing, and refilling tanks.

4 Procedure

4.1 Installing the test pressure relief device

The minimum capacity of the test pressure relief device shall equal the capacity of the equipment used to pressurize the tank.

For tanks with a single pressure relief device assembly (not using a three-way valve):

a) reduce the tank pressure to atmospheric level; and

b) remove the pressure relief devices and replace them with a pressure relief device that does not exceed 110% of test pressure.

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