CGA G-19.1—2020

STANDARD FOR NATURAL GAS SUPPLY SYSTEMS

SECOND EDITION

CGA
Compressed Gas Association
The Standard For Safety Since 1913

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Work Item 23-010
Natural Gas Technology Committee

SECOND EDITION: 2020
FIRST EDITION: 2018

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1 Scope

This publication is intended to cover the design, installation, maintenance and removal of liquefied natural gas (LNG) and compressed natural gas (CNG) supply systems. It is expected that the reader has a basic understanding of pressure vessel and piping design or operations. This publication is not intended to cover pipeline gas equipment.

This publication provides general information concerning systems that store and supply natural gas in its liquid state, gaseous state, or both. It provides direction for site selection and system considerations, regulatory compliance, selection and installation of equipment, startup, operation, and maintenance of the system.

This publication is not intended to provide requirements for the transportation of natural gas (see CGA G-19.2, *Standard for Natural Gas Transportation and Transfer*) or the liquefaction of natural gas [1].[1]

For information regarding health hazards and other general safety considerations, see CGA G-19, *Guideline for Natural Gas Safe Handling and Operations* [2].

Many standards exist for the design, construction, installation, inspection, and examination of natural gas equipment and facilities. A complete list describing the applicability of each standard is beyond the scope of this publication.

Where an applicable standard does exist, its rules shall be followed in conjunction with local codes and regulations.

Natural gas is a combination of several gases in differing concentrations. The guidelines contained in this publication assume that pipeline quality natural gas as defined in CGA G-19 is in use [2]. This publication assumes a liquid natural gas density of 3.57 lb/gal (0.43 kg/L).

2 Definitions

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

2.1 Publication terminology

2.1.1 Shall
Indicates that the procedure is mandatory. It is used wherever the criterion for conformance to specific recommendations allows no deviation.

2.1.2 Should
Indicates that a procedure is recommended.

2.1.3 May
Indicates that the procedure is optional.

2.1.4 Will
Is used only to indicate the future, not a degree of requirement.

2.1.5 Can
Indicates a possibility or ability.

2.2 Technical definitions

2.2.1 Asphyxiation
To become unconscious or die from the lack of oxygen.

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