

Liquefied natural gas (LNG) — Production, storage, and handling



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Preface

This is the ninth edition of CSA Z276, *Liquefied natural gas (LNG) — Production, storage, and handling*. It supersedes the previous editions published in 2007, 2001, 1994, 1989, 1981, 1978, 1973, and 1972.

This Standard contains basic reference data relating to design, supplemented by specific requirements, where necessary, to establish a uniform interpretation of the design requirements.

This Standard was prepared by the Technical Committee on Liquefied Natural Gas, under the jurisdiction of the Strategic Steering Committee on Petroleum and Natural Gas Industry Systems and has been formally approved by the Technical Committee.

December 2011

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Z276-11

Liquefied natural gas (LNG) — Production, storage, and handling

0 Introduction

This Standard establishes essential requirements and minimum standards for the design, installation, and safe operation of liquefied natural gas (LNG) facilities. It is not a design handbook, and competent engineering judgment is necessary for its proper use.

1 Scope

1.1

This Standard applies to the

- (a) design;
- (b) location;
- (c) construction;
- (d) operation; and
- (e) maintenance

of facilities for the liquefaction of natural gas and facilities for the storage, vaporization, transfer, handling, and truck transport of LNG. It also contains requirements for the training of personnel.

1.2

For facilities that load or unload LNG from a marine vessel, this Standard contains requirements for the interconnecting piping between the loading/unloading arm flange and the storage tank(s), and other piping and appurtenances on the pier or jetty itself.

1.3

This Standard applies to all containers for the storage of LNG, including those with insulation systems applying a vacuum.

1.4

This Standard does not apply to frozen ground containers.

1.5

This Standard includes non-mandatory guidelines for small LNG facilities (see the definition of “small facility” in [Clause 3](#) and see [Annex B](#)).

1.6

This Standard does not apply to the following:

- (a) the transportation of refrigerants by any means;
- (b) the transportation of LNG by railcar or marine vessel;
- (c) the transportation of LNG or regasified LNG by pipeline beyond the facility boundary, except as specified in [Clause 1.2](#); and
- (d) facilities designed to allow the use of LNG as a fuel for highway vehicles, railroad locomotives, or marine vessels.