



# SLOVENSKI STANDARD SIST EN ISO 16903:2015

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Nadomešča:  
SIST EN 1160:1998

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## Industrija nafte in zemeljskega plina - Vpliv lastnosti utekočinjenega zemeljskega plina na načrtovanje in izbor materialov (ISO 16903:2015)

Petroleum and natural gas industries - Characteristics of LNG, influencing the design, and material selection (ISO 16903:2015)

Erdöl- und Erdgasindustrie - Eigenschaften von Flüssigerdgas mit Einfluss auf die Auslegung und die Materialauswahl (ISO 16903:2015)

Pétrole et industries du gaz naturel - Caractéristiques du GNL influant sur la conception et le choix des matériaux (ISO 16903:2015)

Ta slovenski standard je istoveten z: EN ISO 16903:2015

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### ICS:

75.060	Zemeljski plin	Natural gas
75.180.01	Oprema za industrijo nafte in zemeljskega plina na splošno	Equipment for petroleum and natural gas industries in general

SIST EN ISO 16903:2015

en,fr,de

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EUROPEAN STANDARD

EN ISO 16903

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## Petroleum and natural gas industries - Characteristics of LNG, influencing the design, and material selection (ISO 16903:2015)

Pétrole et industries du gaz naturel - Caractéristiques du GNL influant sur la conception et le choix des matériaux (ISO 16903:2015)

Erdöl- und Erdgasindustrie - Eigenschaften von Flüssigerdgas mit Einfluss auf die Auslegung und die Materialauswahl (ISO 16903:2015)

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COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

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## European foreword

This document (EN ISO 16903:2015) has been prepared by Technical Committee ISO/TC 67 "Materials, equipment and offshore structures for petroleum, petrochemical and natural gas industries" in collaboration with Technical Committee CEN/TC 282 "Installation and equipment for LNG" the secretariat of which is held by AFNOR.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by December 2015, and conflicting national standards shall be withdrawn at the latest by December 2015.

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**Petroleum and natural gas industries —  
Characteristics of LNG, influencing the  
design, and material selection**

*Pétrole et industries du gaz naturel — Caractéristiques du GNL  
influant sur la conception et le choix des matériaux*

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Ch. de Blandonnet 8 • CP 401  
CH-1214 Vernier, Geneva, Switzerland  
Tel. +41 22 749 01 11  
Fax +41 22 749 09 47  
copyright@iso.org  
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## ISO 16903:2015(E)

### Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: [Foreword - Supplementary information](#)

The committee responsible for this document is ISO/TC 67, *Materials, equipment and offshore structures for petroleum, petrochemical and natural gas industries*.

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# Petroleum and natural gas industries — Characteristics of LNG, influencing the design, and material selection

## 1 Scope

This International Standard gives guidance on the characteristics of liquefied natural gas (LNG) and the cryogenic materials used in the LNG industry. It also gives guidance on health and safety matters. It is intended to act as a reference document for the implementation of other standards in the liquefied natural gas field. It is intended as a reference for use by persons who design or operate LNG facilities.

## 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies

EN 1473, *Installation and equipment for liquefied natural gas — Design of onshore installations*

NFPA 59A, *Standard for the production, storage, and handling of liquefied natural gas (LNG)*

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## 3 Terms and definitions (standards.iteh.ai)

For the purposes of this document, the following terms and definitions apply.

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**boil-off gas**

gas generated during the storage or handling of volatile liquefied gases

### 3.2

#### **condensate**

hydrocarbon liquid that forms by condensation from natural gas, consisting primarily of pentanes (C<sub>5</sub>H<sub>12</sub>) and heavier components

Note 1 to entry: There will be some propane and butane dissolved within the mixture.

### 3.3

#### **liquefied natural gas**

##### **LNG**

colourless and odourless cryogenic fluid in the liquid state at normal pressure composed predominantly of methane which can contain minor quantities of ethane, propane, butane, nitrogen, or other components normally found in natural gas

### 3.4

#### **liquefied petroleum gas**

##### **LPG**

gaseous hydrocarbons at normal temperatures and pressures, but that readily turns into liquids under moderate pressure at normal temperatures, e.g. propane and butane

### 3.5

#### **natural gas liquids**

##### **NGL**

liquid hydrocarbons, such as ethane, propane, butane, pentane, and natural gasoline, extracted from field natural gas