

<b>STN P</b>	<b>Usmernenie na vykonávanie hodnotenia rizika pri navrhovaní zariadení LNG na pevnine vrátane rozhrania medzi loďou a pevninou (ISO/TS 16901: 2022)</b>	<b>STN P CEN ISO/TS 16901</b>  38 6646
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Guidance on performing risk assessment in the design of onshore LNG installations including the ship/shore interface (ISO/TS 16901:2022)

Táto norma obsahuje anglickú verziu európskej normy.

This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 08/25

Táto predbežná slovenská technická norma je určená na overenie. Prípadné pripomienky pošlite do mája 2027 Úradu pre normalizáciu, metrológiu a skúšobníctvo Slovenskej republiky.

Obsahuje: CEN ISO/TS 16901:2025, ISO/TS 16901:2022

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Úrad pre normalizáciu, metrológiu a skúšobníctvo Slovenskej republiky, 2025

Slovenská technická norma a technická normalizačná informácia je chránená zákonom č. 60/2018 Z. z. o technickej normalizácii v znení neskorších predpisov.

TECHNICAL SPECIFICATION  
SPÉCIFICATION TECHNIQUE  
TECHNISCHE SPEZIFIKATION

**CEN ISO/TS 16901**

May 2025

ICS 75.180.01

English Version

**Guidance on performing risk assessment in the design of  
onshore LNG installations including the ship/shore  
interface (ISO/TS 16901:2022)**

Recommandations sur l'appréciation du risque dans la  
conception d'installations terrestres pour le GNL en  
incluant l'interface terre/navire (ISO/TS 16901:2022)

Leitfaden zur Durchführung von Risikobewertungen  
bei der Planung von LNG-Anlagen an Land,  
einschließlich der Schnittstelle zwischen Schiff und  
Land (ISO/TS 16901:2022)

This Technical Specification (CEN/TS) was approved by CEN on 11 May 2025 for provisional application.

The period of validity of this CEN/TS is limited initially to three years. After two years the members of CEN will be requested to submit their comments, particularly on the question whether the CEN/TS can be converted into a European Standard.

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**CEN ISO/TS 16901:2025 (E)**

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## **European foreword**

The text of ISO/TS 16901:2022 has been prepared by Technical Committee ISO/TC 67 "Oil and gas industries including lower carbon energy" of the International Organization for Standardization (ISO) and has been taken over as CEN ISO/TS 16901:2025 by Technical Committee CEN/TC 282 "Installation and equipment for LNG" the secretariat of which is held by AFNOR.

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## **Endorsement notice**

The text of ISO/TS 16901:2022 has been approved by CEN as CEN ISO/TS 16901:2025 without any modification.

# TECHNICAL SPECIFICATION

# ISO/TS 16901

Second edition  
2022-12

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## **Guidance on performing risk assessment in the design of onshore LNG installations including the ship/ shore interface**

*Recommandations sur l'évaluation des risques dans la conception  
d'installations terrestres pour le GNL en incluant l'interface terre/  
navire*



Reference number  
ISO/TS 16901:2022(E)

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## 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)).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

This document was prepared by Technical Committee ISO/TC 67, *Oil and gas industries including lower carbon energy*, Subcommittee SC 9, *Production, transport and storage facilities for cryogenic liquefied gases*.

This second edition cancels and replaces the first edition (ISO/TS 16901:2015), which has been technically revised.

The main changes are as follows:

- reference to IGF code added to the scope;
- references updated in [Clause 2](#) and the bibliography;
- definitions added for HSE critical activity and HSE critical element.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at [www.iso.org/members.html](http://www.iso.org/members.html).

# Guidance on performing risk assessment in the design of onshore LNG installations including the ship/shore interface

## 1 Scope

This document provides a common approach and guidance to those undertaking assessment of the major safety hazards as part of the planning, design, and operation of LNG facilities onshore and at shoreline using risk-based methods and standards, to enable a safe design and operation of LNG facilities. The environmental risks associated with an LNG release are not addressed in this document.

This document is applicable both to export and import terminals but can be applicable to other facilities such as satellite and peak shaving plants.

This document is applicable to all facilities inside the perimeter of the terminal and all hazardous materials including LNG and associated products: LPG, pressurized natural gas, odorizers, and other flammable or hazardous products handled within the terminal.

The navigation risks and LNG tanker intrinsic operation risks are recognised, but they are not in the scope of this document. Hazards arising from interfaces between port and facility and ship are addressed and requirements are normally given by port authorities. It is assumed that LNG carriers are designed according to the IGC code, and that LNG fuelled vessels receiving bunker fuel are designed according to IGF code.

Border between port operation and LNG facility is when the ship/shore link (SSL) is established.

This document is not intended to specify acceptable levels of risk; however, examples of tolerable levels of risk are referenced.

See IEC 31010 and ISO 17776 with regard to general risk assessment methods, while this document focuses on the specific needs scenarios and practices within the LNG industry.

## 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO Guide 73, *Risk management — Vocabulary*

**koniec náhľadu – text ďalej pokračuje v platenej verzii STN**