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Standards

Irish Standard  
I.S. EN ISO 20519:2017

# Ships and marine technology - Specification for bunkering of liquefied natural gas fuelled vessels (ISO 20519:2017)

## I.S. EN ISO 20519:2017

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## National Foreword

I.S. EN ISO 20519:2017 is the adopted Irish version of the European Document EN ISO 20519:2017, Ships and marine technology - Specification for bunkering of liquefied natural gas fuelled vessels (ISO 20519:2017)

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EUROPEAN STANDARD

EN ISO 20519

NORME EUROPÉENNE

EUROPÄISCHE NORM

February 2017

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ICS 47.020.99; 75.200

English Version

## Ships and marine technology - Specification for bunkering of liquefied natural gas fuelled vessels (ISO 20519:2017)

Navires et technologie maritime - Spécification pour le  
soutage des navires fonctionnant au gaz naturel  
liquéfié (ISO 20519:2017)

Schiff- und Meerestechnik - Spezifikation für das  
Bunkern flüssigerdgasbetriebener Schiffe (ISO  
20519:2017)

This European Standard was approved by CEN on 5 February 2017.

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**EN ISO 20519:2017 (E)**

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## European foreword

This document (EN ISO 20519:2017) has been prepared by Technical Committee ISO/TC 8 "Ships and marine technology" 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of an identical text or by endorsement, at the latest by August 2017, and conflicting national standards shall be withdrawn at the latest by August 2017.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

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### Endorsement notice

The text of ISO 20519:2017 has been approved by CEN as EN ISO 20519:2017 without any modification.

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ISO  
20519

First edition  
2017-02

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**Ships and marine technology —  
Specification for bunkering of  
liquefied natural gas fuelled vessels**

*Navires et technologie maritime — Spécification pour le soutage des navires fonctionnant au gaz naturel liquéfié*



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## ISO 20519:2017(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 World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

The committee responsible for this document is ISO/TC 8, *Ships and marine technology*.

## **Introduction**

This document has been produced to meet an industry need identified by the International Maritime Organization (IMO). This document has been designed to support the IMO International Code of Safety for Ships using Gases or other Low-flashpoint Fuels (IGF Code).

Due to numerous economic and environmental factors, the use of liquefied natural gas (LNG) as a vessel's fuel has increased. While LNG fuelled ships and vessels have been in service for over 10 years, most of these vessels have operated within small defined areas using LNG bunkering operations designed for that particular vessel service. The increase in LNG fuelled vessels corresponds with an increase in the number of the regions that these vessels will service. Therefore, there is a need to standardize LNG bunkering operations internationally to a reasonable degree so that vessel operators will have the tools to select vessel fuel providers that meet set safety and fuel quality standards and LNG bunkering operations will be conducted safely. This document can be used for both vessels involved in international and domestic service regardless of size.

This document does not replace existing laws or regulations. It is flexible so that it can be applied in many situations and under various regulatory regimes as long as the requirements of this document are met. If, however, local regulations preclude its use and do not provide the safety specified in this document, compliance with this document should not be claimed.



# Ships and marine technology — Specification for bunkering of liquefied natural gas fuelled vessels

## 1 Scope

This document sets requirements for LNG bunkering transfer systems and equipment used to bunker LNG fuelled vessels, which are not covered by the IGC Code. This document includes the following five elements:

- a) hardware: liquid and vapour transfer systems;
- b) operational procedures;
- c) requirement for the LNG provider to provide an LNG bunker delivery note;
- d) training and qualifications of personnel involved;
- e) requirements for LNG facilities to meet applicable ISO standards and local codes.

## 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 16904, *Petroleum and natural gas industries — Design and testing of LNG marine transfer arms for conventional onshore terminals*

ASME B16.5, *Pipe flanges and flanged fittings: NPS 1/2 through NPS 24 metric/inch standard*

BS 4089, *Specification for metallic hose assemblies for liquid petroleum gases and liquefied natural gases*

EN 1474-2, *Installation and equipment for liquefied natural gas — Design and testing of marine transfer systems — Design and testing of transfer hose*

EN 1474-3, *Installation and equipment for liquefied natural gas — Design and testing of marine transfer systems — Offshore transfer systems*

EN 12434, *Cryogenic vessels — Cryogenic flexible hoses*

IEC 60079-10-1, *Explosive atmospheres — Part 10-1: Classification of areas — Explosive gas atmospheres*

*IMO International Code of Safety for Ships using Gases or other Low-flashpoint Fuels (IGF Code)*

*IMO International Code of the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk (IGC Code)*

OIL COMPANIES INTERNATIONAL MARINE FORUM. *Design and Construction Specification for Marine Loading Arms*. Third edition, 1999. London, England: Oil Companies International Marine Forum

SOCIETY OF INTERNATIONAL GAS TANKER AND TERMINAL OPERATORS (SIGTTO). *ESD Arrangements & Linked Ship/Shore Systems for Liquefied Gas Carriers* [online]. First edition, 2009. Scotland, UK: Witherby Seamanship International Ltd

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