



SLOVENSKI STANDARD SIST EN ISO 21593:2020

01-januar-2020

Ladijska in pristaniška tehnologija - Tehnične zahteve za suhe spoje za priklop in odklop pri polnjenju plovil na utekočinjeni zemeljski plin (ISO 21593:2019)

Ship and marine technology - Technical requirements for dry-disconnect/connect couplings for bunkering liquefied natural gas (ISO 21593:2019)

Schiff- und Meerestechnik- Trockene Anschluss- und Trennkupplung(en) für das Bunkern flüssigerdgasbetriebener Schiffe (ISO 21593:2019)

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Ta slovenski standard je istoveten z: EN ISO 21593:2019

ICS:

47.020.99	Drugi standardi v zvezi z ladjedelnštvom in konstrukcijami na morju	Other standards related to shipbuilding and marine structures
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EUROPEAN STANDARD

EN ISO 21593

NORME EUROPÉENNE

EUROPÄISCHE NORM

September 2019

ICS 47.020.99

English Version

Ship and marine technology - Technical requirements for dry-disconnect/connect couplings for bunkering liquefied natural gas (ISO 21593:2019)

Navires et technologie maritime - Exigences techniques
relatives au couplage de connexion et de déconnexion à
sec pour le soutage de gaz naturel liquéfié (ISO
21593:2019)

Schiff- und Meerestechnik- Trockene Anschluss- und
Trennkupplung(en) für das Bunkern
flüssigerdgasbetriebener Schiffe (ISO 21593:2019)

This European Standard was approved by CEN on 19 January 2019.

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European foreword

This document (EN ISO 21593:2019) 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of an identical text or by endorsement, at the latest by March 2020, and conflicting national standards shall be withdrawn at the latest by March 2020.

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

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INTERNATIONAL
STANDARD

ISO
21593

First edition
2019-07

**Ships and marine technology —
Technical requirements for dry-
disconnect/connect couplings for
bunkering liquefied natural gas**

*Navires et technologie maritime — Exigences techniques relatives au
couplage de connexion et de déconnexion à sec pour le soutage de gaz
naturel liquéfié*

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Reference number
ISO 21593:2019(E)

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Published in Switzerland

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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).

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

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.

This document was prepared by Technical Committee ISO/TC 8, *Ships and marine technology*.

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.

Ships and marine technology — Technical requirements for dry-disconnect/connect couplings for bunkering liquefied natural gas

1 Scope

This document specifies the design, minimum safety, functional and marking requirements, as well as the interface types and dimensions and testing procedures for dry-disconnect/connect couplings for LNG hose bunkering systems intended for use on LNG bunkering ships, tank trucks and shore-based facilities and other bunkering infrastructures. It is not applicable to hydraulically operated quick connect/disconnect couplers (QCDC) used for hard loading arms, which is covered in ISO 16904.

Based on the technology used in industrial manufacturing at the time of development of this document, it is applicable to sizes of couplings ranging from DN 25 to DN 200.

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 amendment) applies.

ISO 3834 (all parts), *Quality requirements for fusion welding of metallic materials*

ISO 5208:2015, *Industrial valves — Pressure testing of metallic valves*

EN 1092-1, *Flanges and their joints* <https://standards.iteh.ai/catalog/standards/sist/73fb93bc-4bce-4fe3-868f-a9c5f6c4b28b/sist-en-iso-21593-2020>

EN 12266-1:2012, *Industrial valves — Testing of metallic valves — Part 1: Pressure tests, test procedures and acceptance criteria — Mandatory requirements*

ASME B16.5-2009, *Pipe flanges and flanged fittings*

ASME B31.3-2018, *Process piping*

3 Terms and definitions

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

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>

3.1

bunkering

operation of transferring LNG fuel to a vessel

[SOURCE: ISO 20519:2017, 3.1, modified — Note 1 to entry has been deleted.]