

**Installation and equipment for liquefied natural gas
- Design and testing of marine transfer systems -
Part 3: Offshore transfer systems**

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 1474-3:2009 sisaldab Euroopa standardi EN 1474-3:2008 ingliskeelset teksti.

Standard on kinnitatud Eesti Standardikeskuse 29.01.2009 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.

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ICS 75.200

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English Version

Installation and equipment for liquefied natural gas - Design and testing of marine transfer systems - Part 3: Offshore transfer systems

Installations et équipements de gaz naturel liquéfié -
Conception et essais des systèmes de transfert marins -
Partie 3: Systèmes de transfert offshore

Anlagen und Ausrüstung für Flüssigerdgas - Auslegung und
Prüfung von Schiffsübergabesystemen - Teil 3: Offshore-
Übergabesysteme

This European Standard was approved by CEN on 1 November 2008.

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Foreword

This document (EN 1474-3:2008) has been prepared by 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of an identical text or by endorsement, at the latest by June 2009, and conflicting national standards shall be withdrawn at the latest by June 2009.

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.

This European Standard consists in 3 parts:

EN 1474-1: *Installation and equipment for liquefied natural gas — Design and testing of marine transfer systems — Part 1: Design and testing of transfer arms*

EN 1474-2: *Installation and equipment for liquefied natural gas — Design and testing of marine transfer systems — Part 2: Design and testing of transfer hoses*

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

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

1 Scope

This European Standard gives general guidelines for the design of liquefied natural gas (LNG) transfer systems intended for use on offshore transfer facilities or on coastal weather exposed transfer facilities. The transfer facilities considered may be between floating units, or between floating and fixed units. The specific component details of the LNG transfer systems are not covered by this European Standard.

Reference is made to EN 1474-1 and EN 1474-2 where appropriate.

As a general statement the present standard applies to all transfer systems given in the scope. However, some transfer system designs may require a deviation from the full standard as described in normative Annex A.

2 Normative references

The following referenced documents are indispensable for the application 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.

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

EN 1474-1:2008, *Installation and equipment for liquefied natural gas — Part 1: Design and testing of transfer arms*

EN 1474-2:2008, *Installation and equipment for liquefied natural gas — Part 2: Design and testing of transfer hoses*

EN 1532, *Installation and equipment for liquefied natural gas — Ship to shore interface*

EN 61511-1, *Functional safety — Safety instrumented systems for the process industry sector — Part 1: Framework, definitions, system, hardware and software requirements (IEC 61511-1:2003 + corrigendum 2004)*

EN 61511-2, *Functional safety — Safety instrumented systems for the process industry sector — Part 2: Guidelines for the application of IEC 61511-1 (IEC 61511-2:2003)*

EN 61511-3, *Functional safety — Safety instrumented systems for the process industry sector — Part 3: Guidance for the determination of the required safety integrity levels (IEC 61511-3:2003 + corrigendum 2004)*

EN ISO 9000, *Quality management systems — Fundamentals and vocabulary (ISO 9000:2005)*

EN ISO 9001, *Quality management systems — Requirements (ISO 9001:2000)*

3 Terms and definitions

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

3.1

attitude

various modes of use and/or location of the transfer system (i.e. manoeuvring, stowed, connected, washing, hydrostatic test and maintenance). The transfer system may take several positions for each attitude

NOTE Transfer system see 3.18.