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Gas infrastructure - Safety Management System for Gas Networks with maximum operating pressure up to and including 16 bar

## EESTI STANDARDI EESSÕNA

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ICS 03.100.70, 91.140.40

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EUROPEAN STANDARD

EN 15399

NORME EUROPÉENNE

EUROPÄISCHE NORM

December 2018

ICS 03.100.70; 91.140.40

Supersedes CEN/TS 15399:2007

English Version

## Gas infrastructure - Safety Management System for Gas Networks with maximum operating pressure up to and including 16 bar

Infrastructures gazières - Systèmes de management de sécurité pour des réseaux de gaz pour pression maximale de service inférieure ou égale à 16 bar

Gasinfrastruktur - Sicherheits-Management System für Gasnetze mit maximalem Betriebsdruck bis einschließlich 16 bar

This European Standard was approved by CEN on 26 October 2018.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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EUROPEAN COMMITTEE FOR STANDARDIZATION  
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## European foreword

This document (EN 15399:2018) has been prepared by Technical Committee CEN/TC 234 "Gas infrastructure", the secretariat of which is held by DIN.

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of an identical text or by endorsement, at the latest by June 2019, and conflicting national standards shall be withdrawn at the latest by June 2019.

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.

This document supersedes CEN/TS 15399:2007.

There is a complete suite of functional standards prepared by CEN/TC 234 "Gas infrastructure" to cover all parts of the gas infrastructure system from the input of gas to the distribution infrastructure starting at the boundary of the delivery station on the premises of the gas network operator, up to the point of delivery of the customers, whether domestic, commercial or industrial.

In preparing this document, a basic understanding of Management Systems and gas infrastructure by the user has been assumed.

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

## Introduction

This document provides guidance on the establishment, implementation and maintenance of a safety management system, all in order to provide an efficient gas distribution infrastructure for the safe and secure distribution of gas; specifically, infrastructure operating at pressures up to and including 16 bar.

The provisions refer to a general organisational scheme in which:

- safety and
- efficiency

of gas distribution activity are addressed.

This European Standard supports a gas network operator in the implementation of a management system following the Plan-Do-Check-Act (PDCA) methodology (see Annex A). It can be used in conjunction with ISO Management Systems and also in case of assessment or certification by a third party.

The main objectives of this document are to provide the necessary requirements:

- to be included in a management system related to safety and efficiency of technical activities (design, construction, testing and commissioning/decommissioning, operation and maintenance, abandonment) for all of the gas network operator's gas distribution assets. In practice, this is expressed on methodologies and organisational features as well as technical aspects;
- in demonstrating the competencies required in the activities mentioned above.

It is at the gas network operator's discretion to include other objects and structures in their own management system.

This European Standard also deals with the required competences for employees and any contractors involved in gas distribution activities.

The structure of this document is based on the ISO High Level Structure of standard on Management Systems (ISO/IEC Directives, Part 1, Consolidated ISO Supplement, 2015, Annex SL (normative) Proposals for management system standards).

The technical contents are in line with EN 12007 (all parts).

## 1 Scope

This document specifies requirements on the development and implementation of a safety management system for operators of a gas network with a maximum operating pressure up to and including 16 bar according to EN 12007 (all parts).

This document refers to all activities and processes related to safety aspects and performed by gas operators of a gas network with a maximum operating pressure up to and including 16 bar, including those activities entrusted to contractors. It includes safety-related provisions on operation of the gas network.

The described safety management system is applicable to infrastructure for the distribution of processed, non-toxic and non-corrosive gas of the 2nd gas family as classified in EN 437, including injected gases from non-conventional sources.

NOTE 1 Gases from non-conventional resources can be bio methane, hydrogen, shale gas, synthetic gases and others.

This document can also apply for gas infrastructure conveying only gases from non-conventional sources, such as bio methane grids or gases of the 3rd family as classified in EN 437.

For safety management and pipeline integrity management systems of gas networks with a maximum operating pressure above 16 bar generally EN 16348 applies.

NOTE 2 If minor sections of the gas network are operated with a maximum operating pressure above 16 bar, these can also be managed by an SMS according to this document. For the pipeline integrity management EN 16348 applies.

NOTE 3 If minor sections of a gas transmission network are operated with a maximum operating pressure up to and including 16 bar, this document or EN 16348 can be applied. In any case, for the pipeline integrity management system EN 16348 applies.

Specific requirements for occupational health and safety are excluded from this document. National legislation and other European and/or international standards, e.g. OHSAS 18001, apply.

This document specifies common basic principles for gas infrastructure. It is important that users of this standard are aware that more detailed national standards and/or code of practice may exist in the CEN member countries. This document is intended to be applied in association with these national standards and/or codes of practice setting out the above-mentioned basic principles.

In the event of conflicts in terms of more restrictive requirements in national legislation/regulation with the requirements of this standard, the national legislation/regulation takes precedence as illustrated in CEN/TR 13737 (all parts).

NOTE 4 CEN/TR 13737 (all parts) contains:

- clarification of relevant legislation/regulations applicable in a country;
- if appropriate, more restrictive national requirements;
- national contact point for the latest information.

## 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.

EN 12007-1, *Gas infrastructure — Pipelines for maximum operating pressure up to and including 16 bar — Part 1: General functional requirements*

EN 12007-2, *Gas infrastructure — Pipelines for maximum operating pressure up to and including 16 bar — Part 2: Specific functional requirements for polyethylene (MOP up to and including 10 bar)*

EN 12007-3, *Gas infrastructure — Pipelines for maximum operating pressure up to and including 16 bar — Part 3: Specific functional requirements for steel*

EN 12007-4, *Gas infrastructure — Pipelines for maximum operating pressure up to and including 16 bar — Part 4: Specific functional requirements for renovation*

EN 12007-5, *Gas infrastructure — Pipelines for maximum operating pressure up to and including 16 bar — Part 5: Service lines — Specific functional requirements*

EN 12186, *Gas infrastructure — Gas pressure regulating stations for transmission and distribution — Functional requirements*

EN 12327, *Gas infrastructure — Pressure testing, commissioning and decommissioning procedures — Functional requirements*

### 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:

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

#### 3.1

##### **gas network operator**

private or public organisation authorised to design, construct and/or operate and maintain the gas infrastructure

Note 1 to entry: Synonyms are: pipeline operator (see EN 1594), grid operator.

[SOURCE: EN 1594:2013, 3.3.1, modified]

#### 3.2

##### **gas infrastructure**

pipeline system including pipework and their associated stations or plants for the transmission and distribution of gas

#### 3.3

##### **inspection**

process of measuring, examining, testing, gauging or otherwise determining the status of items of the pipeline system or installation and comparing it with the applicable requirements

[SOURCE: EN 1594:2013, 2.18]