SLOVENSKI STANDARD
SIST EN 15399:2019

01-februar-2019

Nadomešča:

SIST-TS CEN/TS 15399:2008

Infrastruktura za plin - Sistemi varnega upravljanja plinovodnih omrežij z najvišjim delovnim tlakom do vključno 16 bar

Gas infrastructure - Safety Management Systems for gas networks with maximum operating pressure up to and including 16 bar

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

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

Ta slovenski standard je istoveten z: EN 15399:2018

ICS:

91.140.40	Sistemi za oskrbo s plinom	Gas supply systems

SIST EN 15399:2019 en,fr,de

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 15399

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 operting pressure up to and including 16 bar

Infrastructures gazières - Systémes de management de sécurité pour des reseaux 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.

CEN members are the national standards bodies of 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 United Kingdom.

EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Ref. No. EN 15399:2018 E

Contents

Page

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 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]

3.4
maintenance
combination of all technical and associated administrative actions intended to keep an item in, or restore it to, a state in which it can perform its required function

[SOURCE: EN 1594:2013, 3.21]

3.5
safety
condition of the gas infrastructure being acceptable for the population, for the environment and for the continuity of supply ensured by the adoption of adequate measures in the design, construction, operation, maintenance and abandonment of the gas infrastructure

[SOURCE: EN 16348:2013, 3.5, modified]

3.6
safety aspect
element or event that, if not properly managed, can cause a potential hazard for the population, the environment and for the gas infrastructure

EXAMPLE Examples of safety aspects:

— design and modifications;

— operating procedures;

— workforce competence;

— human factors;

— emergency arrangements;

— protective devices, instrumentation and alarms;

— inspection and maintenance;

— permit to work;

— asset records and data quality;

— third party activities.

3.7
safety management system
SMS
set of appropriate activities and practices by which a gas network operator preserves a safe and reliable gas transmission or distribution system and mitigates the consequences of incidents

[SOURCE: EN 16348:2013, 3.7, modified]

3.8
hazard
anything which is a source of potential loss of inventory or damage of the gas infrastructure

4 Context of the organization

4.1 Understanding the organization and its context

The gas network operator shall establish, implement and maintain a safety management system (SMS) for its gas infrastructure, by fulfilling the requirements of this Clause 4. The safety management system shall form a part of the overall company management systems.

The organization shall determine external and internal issues that are relevant to the purpose of the SMS and that affect its ability to achieve the intended outcome(s).

4.2 Understanding the needs and expectations of interested parties

The organization shall determine:

— the interested parties that are relevant to the SMS;

— the relevant requirements of these interested parties.

4.3 Safety Management System (SMS)

4.3.1 General

The gas network operator shall define the policy, objectives and the organization of its safety management system. As a minimum it shall include the following:

— safety of the public;

— safety of personnel;

— protection of urban, natural or industrial environment;

— service life and reliability of gas infrastructure.

4.3.2 Determining the scope of the SMS

To enable the gas network operator to achieve the required safety and reliability of the gas distribution infrastructure, the SMS shall consider the safety aspects of gas distribution activities:

a) the main processes being the life cycle stages of gas infrastructure,

   1) — design,

   2) — construction (including testing),

   3) — commissioning/decommissioning,

   4) — operation (including emergency plans, see 8.1.7)

   5) — maintenance,

   6) — abandonment.

NOTE The terms main processes and technical activities are equivalent in this document.

b) the enabling processes which support the main processes and which typically comprise the following:

   1) training;