SLOVENSKI STANDARD
SIST EN ISO 13702:2015

01-oktober-2015

Nadomešča:
SIST EN ISO 13702:2000

Industrija za predelavo nafte in zemeljskega plina - Nadzor in zajezitev požarov in eksplozij na plavajočih proizvodnih objektih - Zahteve in smernice (ISO 13702:2015)

Petroleum and natural gas industries - Control and mitigation of fires and explosions on offshore production installations - Requirements and guidelines (ISO 13702:2015)

Erdöl und Erdgasindustrien - Überwachung und Eindämmung von Feuer und Explosionen auf Offshore-Produktionsplattformen - Anforderungen und Richtlinien (ISO 13702:2015)

Industries du pétrole et du gaz naturel - Contrôle et atténuation des feux et des explosions dans les installations en mer - Exigences et lignes directrices (ISO 13702:2015)

Ta slovenski standard je istoveten z: **EN ISO 13702:2015**

ICS:

13.220.01	Varstvo pred požarom na splošno	Protection against fire in general
75.180.10	Oprema za raziskovanje in odkopavanje	Exploratory and extraction equipment

SIST EN ISO 13702:2015 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 13702

August 2015

ICS 75.180.10

Supersedes EN ISO 13702:1999

English Version

Petroleum and natural gas industries - Control and mitigation of fires and explosions on offshore production installations - Requirements and guidelines (ISO 13702:2015)

Industries du pétrole et du gaz naturel - Contrôle et atténuation des feux et des explosions dans les installations en mer - Exigences et lignes directrices (ISO 13702:2015)

Erdöl und Erdgasindustrie - Überwachung und Eindämmung von Feuer und Explosionen auf Offshore-Produktionsplattformen - Anforderungen und Leitlinien (ISO 13702:2015)

This European Standard was approved by CEN on 27 May 2015.

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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
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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European foreword

This document (EN ISO 13702:2015) has been prepared by Technical Committee ISO/TC 67 "Materials, equipment and offshore structures for petroleum, petrochemical and natural gas industries" in collaboration with Technical Committee CEN/TC 12 “Materials, equipment and offshore structures for petroleum, petrochemical and natural gas industries” 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 February 2016, and conflicting national standards shall be withdrawn at the latest by February 2016.

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 document supersedes EN ISO 13702:1999.

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Endorsement notice

The text of ISO 13702:2015 has been approved by CEN as EN ISO 13702:2015 without any modification.

INTERNATIONAL STANDARD

ISO 13702

Second edition
2015-08-01

Petroleum and natural gas industries — Control and mitigation of fires and explosions on offshore production installations — Requirements and guidelines

Industries du pétrole et du gaz naturel — Contrôle et atténuation des feux et des explosions dans les installations en mer — Exigences et lignes directrices

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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 on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information.

This second edition cancels and replaces the first edition (ISO 13702:1999), which has been technically revised.

The committee responsible for this document is ISO/TC 67, *Materials, equipment and offshore structures for petroleum, petrochemical and natural gas industries*, Subcommittee SC 6, *Processing equipment and systems*.

Introduction

The successful development of the arrangements required to promote safety and environmental protection during the recovery of hydrocarbon resources requires a structured approach to the identification and management of health, safety, and environmental hazards applied during the design, construction, operation, inspection, maintenance, and decommissioning of a facility.

This International Standard has been prepared primarily to assist in the development of new installations through their lifecycle. For existing installations that predate this International Standard, not all requirements are necessarily appropriate. Retrospective application of this International Standard can be undertaken where it is reasonably practicable to do so. During the planning for a major change to an installation, there will be more opportunity to implement the requirements. A careful review of this International Standard will determine those sections which can be utilized in the change.

The technical content of this International Standard is arranged as follows.

— **Objectives**: lists the goals to be achieved by the control and mitigation measures being described.

— **Functional requirements**: represent the minimum criteria to meet the stated objectives. The functional requirements are performance-orientated measures and, as such, are applicable to the variety of offshore installations utilized for the development of hydrocarbon resources throughout the world.

— **Annex A (informative)**: typical fire and explosion hazardous events.

— **Annex B (informative)**: describes recognized practices to be considered in conjunction with statutory requirements, industry standards, and individual operator philosophy to determine that the measures necessary are implemented for the control and mitigation of fires and explosions. The guidelines are limited to principal elements and are intended to provide specific guidance which, due to the wide variety of offshore operating environments, cannot be applicable in some circumstances.

— **Annex C (informative)**: typical examples of design requirements for large integrated offshore installations.

— **Bibliography**: lists documents to which informative reference is made in this International Standard.

Petroleum and natural gas industries — Control and mitigation of fires and explosions on offshore production installations — Requirements and guidelines

1 Scope

This International Standard describes the objectives and functional requirements for the control and mitigation of fires and explosions on offshore installations used for the development of hydrocarbon resources.

This International Standard is applicable to the following:

— fixed offshore structures;

— floating systems for production, storage, and offloading;

— petroleum and natural gas industries.

Mobile offshore units as defined in this International Standard and subsea installations are excluded, although many of the principles contained in this International Standard can be used as guidance.

This International Standard is based on an approach where the selection of control and mitigation measures for fires and explosions is determined by an evaluation of hazards on the offshore installation. The methodologies employed in this assessment and the resultant recommendations will differ depending on the complexity of the production process and facilities, type of facility (i.e. open or enclosed), manning levels, and environmental conditions associated with the area of operation.

NOTE Statutory requirements, rules, and regulations can, in addition, be applicable for the individual offshore installation concerned.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO/IEC Guide 73, *Risk management — Vocabulary*

3 Terms, definitions, and abbreviated terms

3.1 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO/IEC Guide 73 and the following apply.

3.1.1
abandonment
act of personnel onboard leaving an installation in an emergency

3.1.2
accommodation
place where personnel onboard sleep and spend their off-duty time

Note 1 to entry: It can include dining rooms, recreation rooms, lavatories, cabins, offices, sickbay, living quarters, galley, pantries, and similar permanently enclosed spaces.

3.1.3
active fire protection
AFP
equipment, systems, and methods which, following initiation, can be used to control, mitigate, and extinguish fires

3.1.4
area classification
division of an installation into hazardous areas and non-hazardous areas and the sub-division of hazardous areas into zones

Note 1 to entry: This classification is based on the materials which can be present and the probability of a flammable atmosphere developing. Area classification is primarily used in the selection of electrical equipment to minimize the likelihood of ignition if a release occurs.

3.1.5
cellulosic fire
CF
fire involving combustible material such as wood, paper, furniture, etc.

3.1.6
class of fire
type of fire
classification of fires, based on the nature of the fuel

Note 1 to entry: ISO 3941 describes the classes of fires.

3.1.7
control
<of hazards> limiting the extent or duration of a hazardous event

Note 1 to entry: The definition of control is specific in this International Standard and other definitions are used in other standards.

3.1.8
control station
place on the installation from which personnel can monitor the status of the installation, initiate appropriate shutdown actions, and undertake any emergency communication

3.1.9
deluge system
system to apply fire-water through an array of open spray nozzles by operation of a valve on the inlet to the system

3.1.10
embarkation area
place from which personnel leave the installation during evacuation

EXAMPLE Helideck and associated waiting area or a lifeboat/liferaft boarding area.

3.1.11
emergency depressurization
EDP
controlled disposal of pressurized fluids to a flare or vent system when required to avoid or minimize a hazardous situation

3.1.12
emergency response
action taken by personnel on or off the installation to control or mitigate a hazardous event or initiate and execute abandonment

3.1.13
emergency response team
group of personnel who have designated duties in an emergency

3.1.14
emergency shutdown
ESD
control actions undertaken to shut down equipment or processes in response to a hazardous situation

3.1.15
escalation
spread of impact from fires, explosions, toxic gas releases to equipment or other areas thereby causing an increase in the consequences of a hazardous event

3.1.16
escape
act of personnel moving away from a hazardous event to a place where its effects are reduced or removed

3.1.17
escape route
route from an area of an installation leading to a muster area, temporary refuge (TR), embarkation area, or means of escape to the sea

3.1.18
critical safety system
any system which has a major role in the control and mitigation of fires and explosions and in any subsequent evacuation, escape, and rescue activities

3.1.19
evacuation
planned method of leaving the installation in an emergency

3.1.20
evacuation, escape, and rescue
EER
range of possible actions including escape, muster, refuge, evacuation, escape to the sea, and rescue/recovery

3.1.21
evacuation route
escape route which leads from the temporary refuge (TR) to the place(s) used for evacuation from the installation

3.1.22
explosion

3.1.22.1
gas explosion
combustion of a flammable gas or mist which generates blast waves due to confinement of the combustion-induced flow or the acceleration of the flame front by obstacles in the flame path

3.1.22.2
physical explosion
explosion arising from the sudden release of stored energy such as from failure of a pressure vessel