



# SLOVENSKI STANDARD SIST EN ISO 15138:2008

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**Industrija nafte in zemeljskega plina - Plavajoči proizvodni objekti - Ogrevanje, prezračevanje in klimatizacija (ISO 15138:2007)**

Petroleum and natural gas industries - Offshore production installations - Heating, ventilation and air-conditioning (ISO 15138:2007)

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Erdöl- und Erdgasindustrie - Offshore-Produktionsanlagen - Heizung, Lüftung und Klimatisierung (ISO 15138:2007)

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Industries du pétrole et du gaz naturel - Installations en mer - Chauffage, ventilation et climatisation (ISO 15138:2007)

**Ta slovenski standard je istoveten z: EN ISO 15138:2007**

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**ICS:**

75.180.10	Oprema za raziskovanje in odkopavanje	Exploratory and extraction equipment
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EUROPEAN STANDARD

EN ISO 15138

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English Version

## Petroleum and natural gas industries - Offshore production installations - Heating, ventilation and air-conditioning (ISO 15138:2007)

Industries du pétrole et du gaz naturel - Plates-formes de production en mer - Chauffage, ventilation et climatisation (ISO 15138:2007)

Erdöl- und Erdgasindustrie - Offshore-Produktionsanlagen - Heizung, Lüftung und Klimatisierung (ISO 15138:2007)

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## Foreword

This document (EN ISO 15138:2007) has been prepared by Technical Committee ISO/TC 67 "Materials, equipment and offshore structures for petroleum 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.

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## ISO/DIS 15138

## 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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

ISO 15138 was prepared by Technical Committee ISO/TC 67, *Materials, equipment and offshore structures for petroleum and natural gas industries*, Subcommittee SC 6, *Processing equipment and systems*.

This second edition cancels and replaces the first edition (ISO 15138, First edition 2000-11-01). The standard has been technically revised.

Annexes A through F of this International Standard are for information only.

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# Petroleum and natural gas industries — Offshore production installations — Heating, ventilation and air-conditioning

## 1 Scope

This International Standard specifies requirements and provides guidance for design, testing, installation and commissioning of heating, ventilation, air-conditioning and pressurization systems and equipment on all offshore production installations for the petroleum and natural gas industries which are:

- new and existing;
- normally occupied by personnel and not normally occupied by personnel;
- fixed or floating but registered as an offshore production installation.

NOTE For installations that could be subject to "Class" or "IMO/MODU Codes & Resolutions", the user is referred to HVAC requirements under these rules and resolutions. Should these requirements be of a lesser degree than those being considered for a fixed installation, then this International Standard, i.e. requirements for fixed installation, should be utilized.

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## 2 Normative references

The following referenced document is indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced standard (including any amendments) applies.

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ISO 8861, *Shipbuilding — Engine-room ventilation in diesel-engined ships — Design requirements and basis of calculations.*

ISO 13702, *Petroleum and natural gas industries — Control and mitigation of fires and explosions on offshore production installations — Requirements and guidelines*

IEC 60079-10, *Electrical apparatus for explosive gas atmospheres — Part 10: Classification of hazardous areas.*

## 3 Terms and definitions

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

### 3.1

#### **adequate ventilation**

reference is made to the classification code

### 3.2

#### **displacement ventilation**

movement of air within a space in piston- or plug-type motion

NOTE No mixing of room air occurs in ideal displacement flow, which is desirable for removing pollutants generated within a space.

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**3.3****fixed offshore installation**

all **facilities** located and installed on **fixed offshore structures**, which are provided to extract oil and gas hydrocarbons from subsea oil and gas reservoirs

**3.4****fixed offshore structure**

structure permanently fixed to or located on the sea bed, including moored ships and hulls, which is held in position by anchors or tensioned cables and is provided to (structurally) support topsides facilities

NOTE Vessels and drilling rigs, etc. which are in transit or engaged in exploration and appraisal activities are specifically excluded from this definition.

**3.5****fugitive emission**

emission which is always present on a molecular scale from all potential leak sources in a plant under normal operating conditions

NOTE As a practical interpretation, a fugitive emission is one which cannot be detected by sight, hearing or touch but may be detected using bubble-test techniques or tests of a similar sensitivity.

**3.6****open area**

area in an open-air situation where vapours are readily dispersed by wind

NOTE Typical air velocities in such areas should rarely be less than 0,5 m/s and should frequently be above 2 m/s.

**3.7****temporary refuge****TR**

place where personnel can take refuge for a **pre-determined period** whilst investigations, emergency response and evacuation pre-planning are undertaken

[ISO 13702:1999, definition 2.1.52]

**3.8****stagnant area**

area where the ventilation rate is less than adequate

**4 Abbreviated terms**

AC	Alternating Current
AC/h	Air Changes per hour
AHU	Air Handling Unit
AMCA	Air Movement and Control Association Inc.
API	American Petroleum Institute
ASHRAE	American Society of Heating, Refrigerating and Air-Conditioning Engineers
BS	British Standard
CCR	Central Control Room
CFD	Computational Fluid Dynamics

CIBSE	Chartered Institution of Building Services
CMS	Control and Monitoring System
CVU	Constant-Volume Terminal Reheat Unit
DC	Direct Current
DE	Driven End
DX	Direct Expansion
EN	European Standard
ESD	Emergency Shutdown
F&G	Fire and Gas
GWP	Global Warming Potential
HAZOP	Hazard and Operability Study
HSE	Health, Safety and Environment
HVAC	Heating, Ventilation and Air Conditioning
HVCA	Heating and Ventilating Contractors' Association
IEC	International Electrotechnical Commission
IMO	International Maritime Organization
IP	Institute of Petroleum
IP	Integrity Protection
LFL	Lower Flammable Limit
LQ	Living Quarters
MODU	Mobile Offshore Drilling Unit
NDE	Non-driven End
NFPA	National Fire Protection Association
NS	Norsk Standard (Norwegian Standard)
ODP	Ozone Depletion Potential
QRA	Quantitative Risk Analysis
r.m.s.	Root mean square

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