ICS 75.020 SLOVENSKÁ TECHNICKÁ NORMA Júl 2016

STN	**Ropný a plynárenský priemysel. Príbrežné plošiny manipulujúce s tokom s vysokým obsahom CO2 pri vysokom tlaku (ISO 17349: 2016).**	**STN EN ISO 17349** 45 1503

Petroleum and natural gas industries - Offshore platforms handling streams with high content of CO2 at high pressures (ISO 17349:2016)

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 06/16

Obsahuje: EN ISO 17349:2016, ISO 17349:2016

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 17349

March 2016

ICS 75.020

English Version

Petroleum and natural gas industries - Offshore platforms handling streams with high content of CO_2 at high pressures (ISO 17349:2016)

Industries du pétrole et du gaz naturel - Plates-formes en mer traitant des courants à fort teneur en CO_2 à haute pression (ISO 17349:2016)

Erdöl-, petrochemische und Erdgasindustrie - Dampf mit hohem CO_2 Gehalt bei hohen Drücken und hohen Durchflussraten - Richtlinien (ISO 17349:2016)

This European Standard was approved by CEN on 10 January 2016.

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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 17349:2016) 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 NEN.

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of an identical text or by endorsement, at the latest by September 2016, and conflicting national standards shall be withdrawn at the latest by September 2016.

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Endorsement notice

The text of ISO 17349:2016 has been approved by CEN as EN ISO 17349:2016 without any modification.

INTERNATIONAL STANDARD

ISO 17349

First edition
2016-02-15

Petroleum and natural gas industries — Offshore platforms handling streams with high content of CO_2 at high pressures

Industries du pétrole et du gaz naturel — Plates-formes en mer traitant des courants à fort teneur en CO_2 à haute pression

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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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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.

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

Introduction

In recent years, the oil industry has been facing challenges in developing and operating high-CO_2 content offshore fields. The CO_2-rich streams, separated from the produced natural gas, can be injected to enhance oil recovery from the reservoirs. Even in cases where the oil recovery increase is not so significant, operators have to consider the CO_2-rich stream compression and injection, in order to avoid its venting to the atmosphere.

Main concerns comprise surface safety system and material selection areas, which lack specific standards and regulations for this scenario. The commercial tools available, for instance, to model the dispersion of gases, need to be validated for CO_2 and CO_2/hydrocarbon mixtures, which have distinctive thermodynamic behaviour. This will affect the choice of materials and plant design.

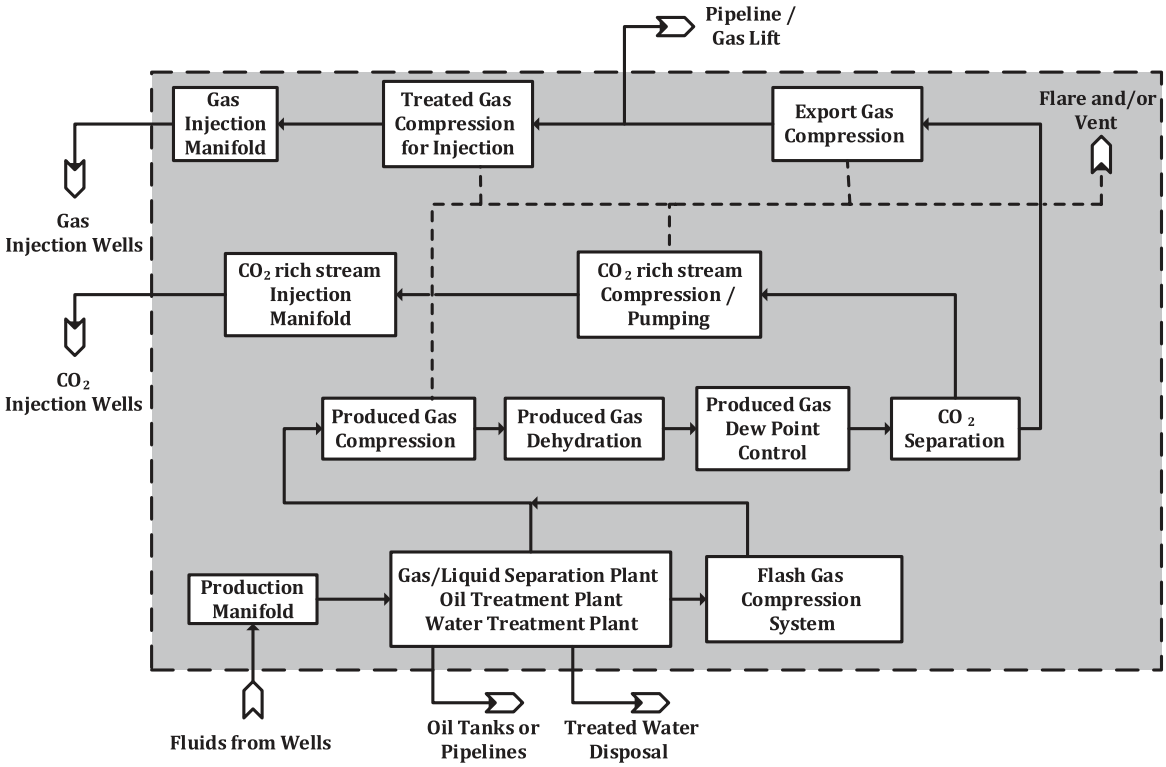
This International Standard addresses concepts and criteria for processing CO_2-rich streams, as a supplement to existing standards for offshore installations.

Petroleum and natural gas industries — Offshore platforms handling streams with high content of CO_2 at high pressures

1 Scope

This International Standard contains provisions for design of topside facilities for offshore plants handling CO_2-rich streams at high pressures; i.e. CO_2 molar concentration above 10 %. The surface systems include usual offshore process unit operations, as shown in Figure 1.

This International Standard is applicable only to topside facilities of fixed and floating oil and gas production offshore units up to the last barrier, such as an ESDV. Subsea production systems and Cryogenic CO_2 separation are not covered.



NOTE This example is within the scope of this International Standard.

Figure 1 — Example of a Process Flow Diagram (in grey zone)

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

ISO 15156 (all parts), *Petroleum and natural gas industries — Materials for use in H_2S-containing environments in oil and gas production*

ISO 21457, *Petroleum, petrochemical and natural gas industries — Materials selection and corrosion control for oil and gas production systems*

ISO 23936-1, *Petroleum, petrochemical and natural gas industries — Non-metallic materials in contact with media related to oil and gas production — Part 1: Thermoplastics*

ISO 23936-2:2011, *Petroleum, petrochemical and natural gas industries — Non-metallic materials in contact with media related to oil and gas production — Part 2: Elastomers*

API STD 521, *Pressure-relieving and Depressuring Systems, API Standard, January 2014*