SLOVENSKI STANDARD

oSIST prEN ISO 13628-14:2012

01-januar-2012

Industrija za predelavo nafte in zemeljskega plina - Načrtovanje in obratovanje podvodnih proizvodnih sistemov - 14. del: Podvodni integrirani visokotlačni zaščitni sistemi (HIPPS) (ISO/DIS 13628-14:2011)

Petroleum and natural gas industries - Design and operation of subsea production systems - Part 14: Subsea high integrity pressure protection systems (HIPPS) (ISO/DIS 13628-14:2011)

Erdöl- und Erdgasindustrie - Auslegung und Betrieb von Unterwasser-Produktionssystemen - Teil 14: Integriertes Drucksicherungssystem für den Unterwassereinsatz (HIPPS) (ISO/DIS 13628-14:2011)

Industries du pétrole et du gaz naturel - Conception et exploitation des systèmes de production immergés - Partie 14: Systèmes immergés de protection contre les pressions à haute intégrité (ISO/DIS 13628-14:2011)

Ta slovenski standard je istoveten z: **prEN ISO 13628-14**

ICS:

75.180.10	Oprema za raziskovanje in odkopavanje	Exploratory and extraction equipment

oSIST prEN ISO 13628-14:2012 **en,fr**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

DRAFT
prEN ISO 13628-14

October 2011

ICS 75.180.10

English Version

Petroleum and natural gas industries - Design and operation of subsea production systems - Part 14: Subsea high integrity pressure protection systems (HIPPS) (ISO/DIS 13628-14:2011)

Industries du pétrole et du gaz naturel - Conception et exploitation des systèmes de production immergés - Partie 14: Systèmes immergés de protection contre les pressions à haute intégrité (ISO/DIS 13628-14:2011)

Erdöl- und Erdgasindustrie - Auslegung und Betrieb von Unterwasser-Produktionssystemen - Teil 14: Integriertes Drucksicherungssystem für den Unterwassereinsatz (HIPPS) (ISO/DIS 13628-14:2011)

This draft European Standard is submitted to CEN members for parallel enquiry. It has been drawn up by the Technical Committee CEN/TC 12.

If this draft becomes a European Standard, 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.

This draft European Standard was established by CEN 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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

Warning : This document is not a European Standard. It is distributed for review and comments. It is subject to change without notice and shall not be referred to as a European Standard.

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

Management Centre: Avenue Marnix 17, B-1000 Brussels

Ref. No. prEN ISO 13628-14:2011: E

Contents

Page

Foreword

This document (prEN ISO 13628-14:2011) 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 document is currently submitted to the parallel Enquiry.

Endorsement notice

The text of ISO/DIS 13628-14:2011 has been approved by CEN as a prEN ISO 13628-14:2011 without any modification.

DRAFT INTERNATIONAL STANDARD ISO/DIS 13628-14

ISO/TC **67**/SC **4** Secretariat: **ANSI**

Voting begins on **2011-10-13** Voting terminates on **2012-03-13**

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

Petroleum and natural gas industries — Design and operation of subsea production systems —

Part 14:
Subsea high integrity pressure protection systems (HIPPS)

Industries du pétrole et du gaz naturel — Conception et exploitation des systèmes de production immergés —

Partie 14: Systèmes immergés de protection contre les pressions à haute intégrité

ICS 75.180.10

ISO/CEN PARALLEL PROCESSING

This draft has been developed within the International Organization for Standardization (ISO), and processed under the **ISO-lead** mode of collaboration as defined in the Vienna Agreement.

This draft is hereby submitted to the ISO member bodies and to the CEN member bodies for a parallel five-month enquiry.

Should this draft be accepted, a final draft, established on the basis of comments received, will be submitted to a parallel two-month approval vote in ISO and formal vote in CEN.

In accordance with the provisions of Council Resolution 15/1993 this document is circulated in the English language only.

Conformément aux dispositions de la Résolution du Conseil 15/1993, ce document est distribué en version anglaise seulement.

To expedite distribution, this document is circulated as received from the committee secretariat. ISO Central Secretariat work of editing and text composition will be undertaken at publication stage.

Pour accélérer la distribution, le présent document est distribué tel qu'il est parvenu du secrétariat du comité. Le travail de rédaction et de composition de texte sera effectué au Secrétariat central de l'ISO au stade de publication.

THIS DOCUMENT IS A DRAFT CIRCULATED FOR COMMENT AND APPROVAL. IT IS THEREFORE SUBJECT TO CHANGE AND MAY NOT BE REFERRED TO AS AN INTERNATIONAL STANDARD UNTIL PUBLISHED AS SUCH.

IN ADDITION TO THEIR EVALUATION AS BEING ACCEPTABLE FOR INDUSTRIAL, TECHNOLOGICAL, COMMERCIAL AND USER PURPOSES, DRAFT INTERNATIONAL STANDARDS MAY ON OCCASION HAVE TO BE CONSIDERED IN THE LIGHT OF THEIR POTENTIAL TO BECOME STANDARDS TO WHICH REFERENCE MAY BE MADE IN NATIONAL REGULATIONS.

RECIPIENTS OF THIS DRAFT ARE INVITED TO SUBMIT, WITH THEIR COMMENTS, NOTIFICATION OF ANY RELEVANT PATENT RIGHTS OF WHICH THEY ARE AWARE AND TO PROVIDE SUPPORTING DOCUMENTATION.

Contents

Page

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.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 13628-14 was prepared by Technical Committee ISO/TC 67, *Materials, equipment and offshore structures for the petroleum, petrochemical and natural gas industries*, Subcommittee SC 4, *Drilling and production equipment*.

This is the first edition of ISO 13628-14.

ISO 13628 consists of the following parts, under the general title *Petroleum and natural gas industries — Design and operation of subsea production systems*:

— *Part 1: General requirements and recommendations*

— *Part 2: Flexible pipe systems for subsea and marine applications*

— *Part 3: Through flowline (TFL) systems*

— *Part 4: Subsea wellhead and tree equipment*

— *Part 5: Subsea umbilicals*

— *Part 6: Subsea production control sytems*

— *Part 7: Completion/workover riser systems*

— *Part 8: Remotely Operated Vehicle (ROV) interfaces on subsea production systems*

— *Part 9 Remotely Operated Tool (ROT) intervention systems* (combined into Part 8)

— *Part 10: Specification for bonded flexible pipe*

— *Part 11: Flexible pipe systems for subsea and marine applications*

— *Part 12: Dynamic production risers* (under preparation)

— *Part 13:* Vacant

— *Part 14: Subsea high integrity pressure protection systems (HIPPS)*

— *Part 15: Subsea structures and man ifolds (under preparation)*

— *Part 16 Recommended practice for flexib le pipe ancilliary equipment* (under preparation)

— *Part 17: Specification for flexible pipe ancillary equipment* (under preparation)

Introduction

The part of International Standard ISO 13628 has been prepared to provide general recommendations and overall guidance for the designa and operation of remotely operated tools comprising ROT and ROV tooling, used on subsea production systems for the petroleum and natural gas indsutries worldwide.

Specific design requirements are used where a standard design or operating principle has been adopted in the industry for a period of time. Requirements valid for certain geographic areas or environmental conditions, are included where applicable.

The functional recommendations for the tooling systems and interfaces on the subsea production system allow alternative solutions to suite field specific requirements. The intention is to facilitate and complement the decision process rather than replace individual engineering judgement and, where requirements are non-mandatory, to provide positive guidance for hte selection of an optimum solution.

Petroleum and natural gas industries — Design and operation of subsea production systems —

Part 14:
Subsea high integrity pressure protection systems (HIPPS)

1 Scope

This part of the International Standard ISO 13628 series addresses the requirements for the use of high integrity pressure protection systems (HIPPS) for subsea applications. ISO 10418, IEC 61508, and IEC 61511 specify the requirements for onshore, topsides, and subsea safety instrumented systems (SIS's) and are applicable to HIPPS, which are designed to autonomously isolate downstream facilities from overpressure situations. This International Standard integrates these requirements to address the specific needs of subsea production. These requirements cover the HIPPS pressure sensors, logic solver, shutdown valves, and ancillary devices including testing, communications, and monitoring subsystems.

2 Normative references

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

ISO 10418, *Petroleum and natural gas industries – Offshore production installations – Basic surface safety systems*

ISO 10423 [1)] , *Petroleum and natural gas industries,*

ISO 13628-1[2)], *Petroleum and natural gas industries, Design and operation of subsea production systems, General requirements and recommendations*

ISO 13628-3[3)], *Petroleum and natural gas industries, Design and operation of subsea production systems, Through flowline (TFL) systems*

ISO 13628-4[4)], *Petroleum and natural gas industries, Design and operation of subsea production systems, Subsea wellhead and Christmas tree equipment*

ISO 13628-6[5)], *Petroleum and natural gas industries, Design and operation of subsea production systems, Subsea Production Control Systems*

---

1) API 6A, *Specification Wellhead and Christmas Tree Equipment*, is equivalent to ISO 10423.
2) API 17A, *Design and Operation of Subsea Production Systems—General Requirements and Recommendations, is* equivalent to ISO 13628-1.
3) API 17C, *Recommended Practice on TFL (Through Flowline) Systems*, is equivalent to ISO 13628-3.
4) API 17D, *Recommended Practice on Subsea Wellhead and Christmas Tree Equipment*, is equivalent to ISO 13628-4.
5) API 17F, *Specification for Subsea Production Control Systems*, is equivalent to ISO13628-6.