

SLOVENSKI STANDARD
oSIST prEN ISO 13628-6:2012
01-april-2012

Industrija za predelavo nafte in zemeljskega plina - Načrtovanje in delovanje podvodnih proizvodnih sistemov - 6. del: Krmilni sistemi za proizvodnjo pod vodo (ISO/DIS 13628-6:2012)

Petroleum and natural gas industries - Design and operation of subsea production systems - Part 6: Subsea production control systems (ISO/DIS 13628-6:2012)

Erdöl- und Erdgasindustrie - Auslegung und Betrieb von Unterwasser-Produktionssystemen - Teil 6: Steuersysteme für die Unterwasser-Produktion (ISO/DIS 13628-6:2012)

Industries du pétrole et du gaz naturel - Conception et exploitation des systèmes de production immergés - Partie 6: Commandes pour équipements immergés (ISO/DIS 13628-6:2012)

Ta slovenski standard je istoveten z: prEN ISO 13628-6

ICS:

75.180.10	Oprema za raziskovanje in odkopavanje	Exploratory and extraction equipment
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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

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prEN ISO 13628-6

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Will supersede EN ISO 13628-6:2006

English Version

Petroleum and natural gas industries - Design and operation of subsea production systems - Part 6: Subsea production control systems (ISO/DIS 13628-6:2012)

Industries du pétrole et du gaz naturel - Conception et exploitation des systèmes de production immergés - Partie 6 : Commandes pour équipements immergés (ISO/DIS 13628-6:2012)

Erdöl- und Erdgasindustrie - Auslegung und Betrieb von Unterwasser-Produktionssystemen - Teil 6: Steuersysteme für die Unterwasser-Produktion (ISO/DIS 13628-6:2012)

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.

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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.

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Contents

Page

Foreword.....3

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Foreword

This document (prEN ISO 13628-6:2012) 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.

This document will supersede EN ISO 13628-6:2006.

Endorsement notice

The text of ISO/DIS 13628-6:2012 has been approved by CEN as a prEN ISO 13628-6:2012 without any modification.

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DRAFT INTERNATIONAL STANDARD ISO/DIS 13628-6

ISO/TC 67/SC 4

Secretariat: ANSI

Voting begins on
2012-01-12Voting terminates on
2012-06-12

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 6: Subsea production control systems

*Industries du pétrole et du gaz naturel — Conception et exploitation des systèmes de production immergés —
Partie 6: Commandes pour équipements immergés*

[Revision of second edition (ISO 13628-6:2006)]

ICS 75.180.10

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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.

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Contents

	Page
1	Scope 1
2	Normative references 2
3	Terms and definitions 4
4	Symbols and abbreviated terms 8
5	System requirements 9
6	Surface equipment..... 33
7	Subsea equipment..... 42
8	Interfaces 55
9	Materials and fabrication 58
10	Quality Error! Bookmark not defined.
11	Testing 60
12	Marking, packaging, storage and shipping..... 72
Annex A (informative)	Types and selection of control system..... 75
Annex D (informative)	Operational considerations with respect to flow line pressure exposure 109
Annex E (informative)	Analogue devices, level 1 111
Annex F (normative)	Digital serial devices, level 2..... 112
Annex G (normative)	Intelligent well devices, IWIS 118
Annex H (normative)	Ethernet TCP/IP devices, level 3..... 129
Annex I (normative)	Insulation resistance (IR) testing 137

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 13628-6 was prepared by Technical Committee ISO/TC 67, *Materials, equipment and offshore structures for petroleum and natural gas industries*, Subcommittee SC 4, *Drilling and production equipment*.

This second edition cancels and replaces the first edition (ISO 13628-6:2000) which has been technically revised.

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: *Unbonded 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 systems*
- Part 7: *Completion/workover riser systems*
- Part 8: *Remotely Operated Vehicle (ROV) interfaces on subsea production systems*
- Part 9: *Remotely Operated Tools (ROT) intervention systems*
- Part 10: *Specification for bonded flexible pipe*
- Part 11: *Flexible pipe systems for subsea and marine applications*
- Part 12: *Dynamic production risers (in preparation)*
- Part 13: *Remotely operated tools and interfaces on subsea production systems (in preparation)*
- Part 14: *High integrity pressure protection system (HIPPS) (in preparation)*

ISO/DIS 13628-6:20XX

- *Part 15: Subsea structures and manifolds*
- *Part 16: Specifications for flexible pipes ancillary equipment (in preparation)*
- *Part 17: Recommended practice for flexible pipes ancillary equipment (in preparation)*

Introduction

Description of hardware is included in this part of ISO 13628 to illustrate functional requirements. This part of ISO 13628 should not be interpreted in a way which would limit new solutions with documented improved life-cycle benefits.

This part of ISO 13628 establishes design standards for systems, subsystems, components and operating fluids in order to provide for the safe and functional control of subsea production equipment.

This part of ISO 13628 contains various types of information related to subsea production control systems.

They are

- informative data that provide an overview of the architecture and general functionality of control systems for the purpose of introduction and information,
- basic prescriptive data that apply to by all types of control system,
- selective prescriptive data that are control-system-type sensitive and apply only where relevant,
- optional data or requirements that need be adopted only when considered necessary either by the purchaser or the vendor.

In view of the diverse nature of the data provided, control system purchasers and specifiers are advised to select from this part of ISO 13628 only the provisions needed for the application at hand. Failure to adopt a selective approach to the provisions contained herein can lead to the subsea control system being over specified and higher purchase costs.

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

Part 6: Subsea production control systems

1 Scope

This part of ISO 13628 is applicable to design, fabrication, testing, installation and operation of subsea production control systems.

This part of ISO 13628 covers surface control system equipment, subsea-installed control system equipment and control fluids. This equipment is utilized for control of subsea production of oil and gas and for subsea water and gas injection services. Where applicable, this part of ISO 13628 can be used for equipment on multiple-well applications.

Rework and repair of used equipment are beyond the scope of this part of ISO 13628.

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2 Normative references

The following referenced documents are indispensable for the application 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.

ISO 3722, *Hydraulic fluid power — Fluid sample containers — Qualifying and controlling cleaning methods*

ISO 4406:1999, *Hydraulic fluid power — Fluids — Method for coding the level of contamination by solid particles*

ISO 4407, *Hydraulic fluid power — Fluid contamination — Determination of particulate contamination by the counting method using an optical microscope*

ISO 7498 (all parts), *Information processing systems — Open Systems Interconnection — Basic Reference Model*

ISO/IEC 8802-3, *Information technology — Telecommunications and information exchange between systems — Local and metropolitan area networks — Specific requirements — Part 3: Carrier sense multiple access with collision detection (CSMA/CD) access method and physical layer specifications*

ISO 9606-1, *Approval testing of welders — Fusion welding — Part 1: Steels*

ISO 9606-2, *Qualification test of welders — Fusion welding — Part 2: Aluminium and aluminium alloys*

ISO 10423, *Petroleum and natural gas industries — Drilling and production equipment — Wellhead and christmas tree equipment*

ISO 10945, *Hydraulic fluid power — Gas-loaded accumulators — Dimensions of gas ports*

ISO/TR 10949, *Hydraulic fluid power — Component cleanliness — Guidelines for achieving and controlling cleanliness of components from manufacture to installation*

ISO 11500, *Hydraulic fluid power -- Determination of the particulate contamination level of a liquid sample by automatic particle counting using the light-extinction principle*

ISO 11898-3, *Road Vehicles — Controller Area Network (CAN) — Part 3: Low-Speed, Fault-Tolerant, Medium-Dependent Interface*

ISO 15607, *Specification and qualification of welding procedures for metallic materials — General rules*

ISO 15609-2, *Specification and qualification of welding procedures for metallic materials — Welding procedure specification — Part 2: Gas welding*

ISO 15610, *Specification and qualification of welding procedures for metallic materials — Qualification based on tested welding consumables*

ISO 15611, *Specification and qualification of welding procedures for metallic materials — Qualification based on previous welding experience*

ISO 15612, *Specification and qualification of welding procedures for metallic materials — Qualification by adoption of a standard welding procedure*

ISO 15613, *Specification and qualification of welding procedures for metallic materials — Qualification based on pre-production welding test*

ISO 15614-1, *Specification and qualification of welding procedures for metallic materials — Welding procedure test — Part 1: Arc and gas welding of steels and arc welding of nickel and nickel alloys*

ISO 16889, *Hydraulic fluid power — Filters — Multi-pass method for evaluating filtration performance of a filter element*

ISO 21018, *Hydraulic fluid power — Monitoring the level of particulate contamination of the fluid — Part 1: General principles*

ANSI/ASME B31.3, *Process Piping*

ANSI/TIA/EIA-568-B, *Commercial Building Telecommunications Cabling Standard*

AS 4059, *Aerospace fluid power — Cleanliness classification for hydraulic fluids*

ASME Boiler and Pressure Vessel Code, Section VIII, Division 1, *Rules for the Construction of Pressure Vessels*

ASME Boiler and Pressure Vessel Code, Section IX, *Welding and Brazing Qualifications*

ASME Boiler and Pressure Vessel Code, Section V, *Non-destructive Examination*

ASTM D97, *Standard Method for Pour Point of Petroleum Products*

ASTM D445, *Standard Test Method for Kinematic Viscosity of Transparent and Opaque Liquids (and the Calculation of Dynamic Viscosity)*

ASTM D1141, *Standard Practice for the Preparation of Substitute Ocean Water*

ASTM D1401, *Water Separability of Petroleum Oils and Synthetic Fluids*

ASTM D3233, *Standard Test Methods for Measurement of Extreme Pressure Properties of Fluid Lubricants (Falex Pin and Vee Block Methods)*

ASTM G1:2003, *Standard Practice for Preparing, Cleaning, and Evaluating Corrosion Test Specimens*

BS 7201-1, *Hydraulic fluid power — Gas loaded accumulators — Specification for seamless steel accumulator bodies above 0,5 l water capacity*

CiA 309-1, *Interfacing CANopen with TCP/IP — Part 1: General Principles and Services*

CiA 309-3, *Interfacing CANopen with TCP/IP — Part 3: ASCII Mapping*

CiA 443, *CANopen Profile for SIIIS Level-2 Devices*

DIN 41612-2, *Special contacts for multi two-part connectors; concentric contacts (type C)*

IEEE 802.3, *CSMA/CD Ethernet*

Internet RFC 791, *Internet Protocol*, <http://www.faqs.org/rfcs/rfc791.html>

Internet RFC 793, *The Transmission Control Protocol (TCP)*, <http://www.faqs.org/rfcs/rfc793.html>

Internet RFC 1332, *The PPP Internet Protocol Control Protocol (IPCP)*, <http://www.ietf.org/rfc/rfc1332.txt>

Internet RFC 1661, *The Point-to-Point Protocol (PPP)*, <http://www.faqs.org/rfcs/rfc1661.html>

Internet RFC 768, *User Datagram Protocol*