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**Petroleum and natural gas industries - Design and operation of subsea production systems - Part 11:
Flexible pipe systems for subsea and marine applications**

Petroleum and natural gas industries - Design and operation of subsea production systems - Part 11:
Flexible pipe systems for subsea and marine applications

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EUROPEAN STANDARD
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English Version

**Petroleum and natural gas industries - Design and operation of
subsea production systems - Part 11: Flexible pipe systems for
subsea and marine applications (ISO 13628-11:2007)**

Industries du pétrole et du gaz naturel - Conception et exploitation des systèmes de production immersés - Partie 11: Systèmes de canalisations flexibles pour applications sous-marines et en milieu marin (ISO 13628-11:2007)

Erdöl- und Erdgasindustrie - Auslegung und Betrieb von Unterwasser-Produktionssystemen - Teil 11: Flexible Rohrleitungssysteme für Unterwasser- und meerestechnische Anwendung (ISO 13628-11:2007)

This European Standard was approved by CEN on 16 May 2008.

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Foreword

The text of ISO 13628-11:2007 has been prepared by Technical Committee ISO/TC 67 "Materials, equipment and offshore structures for petroleum and natural gas industries" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 13628-11:2008 by 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of an identical text or by endorsement, at the latest by December 2008, and conflicting national standards shall be withdrawn at the latest by December 2008.

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Endorsement notice

The text of ISO 13628-11:2007 has been approved by CEN as a EN ISO 13628-11:2008 without any modification.

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Introduction

This part of ISO 13628 is based on API RP 17B and on matching ISO procedures and API procedures. This ISO standard has been technically updated and revised to cater for the needs of the international oil and natural gas industries. This part of ISO 13628 provides information complementary to ISO 13628-2 and ISO 13628-10.

Users of this International Standard should be aware that further or differing requirements can be needed for individual applications. This International Standard is not intended to inhibit a vendor from offering, or the purchaser from accepting, alternative equipment or engineering solutions for the individual application. This can be particularly applicable where there is innovative or developing technology. Where an alternative is offered, the vendor should identify any variations from this International Standard and provide details.

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

Part 11: Flexible pipe systems for subsea and marine applications

1 Scope

This part of ISO 13628 provides guidelines for the design, analysis, manufacture, testing, installation and operation of flexible pipes and flexible pipe systems for onshore, subsea and marine applications. This part of ISO 13628 supplements ISO 13628-2 and ISO 13628-10, which specify minimum requirements for the design, material selection, manufacture, testing, marking and packaging of unbonded and bonded flexible pipe, respectively.

This part of ISO 13628 applies to flexible pipe assemblies, consisting of segments of flexible pipe body with end fittings attached to both ends. Both bonded and unbonded pipe types are covered. In addition, this part of ISO 13628 applies to flexible pipe systems, including ancillary components.

The applications covered by this part of ISO 13628 are sweet- and sour-service production, including export and injection applications. This part of ISO 13628 applies to both static and dynamic flexible pipe systems used as flowlines, risers and jumpers. This part of ISO 13628 does cover, in general terms, the use of flexible pipes for offshore loading systems.

NOTE Refer also to Reference [30] for offshore loading systems.

This part of ISO 13628 does not cover flexible pipes for use in choke and kill lines or umbilical and control lines.

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 13628-2:2006, *Petroleum and natural gas industries — Design and operation of subsea production systems — Part 2: Unbonded flexible pipe systems for subsea and marine applications*

ISO 13628-3:2000, *Petroleum and natural gas industries — Design and operation of subsea production systems — Part 3: Through flowline (TFL) systems*

ISO 13628-10:2005, *Petroleum and natural gas industries — Design and operation of subsea production systems — Part 10: Specification for bonded flexible pipe*

NACE TM0177, *Laboratory testing of metals for resistance to sulfide stress cracking and stress corrosion cracking in H₂S environments*