First edition 2000-06-15

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

## Part 9: Remotely Operated Tool (ROT) intervention systems

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

Partie 9: Systèmes d'intervention utilisant des dispositifs à commande à distance (ROT)



#### **PDF disclaimer**

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.

© ISO 2000

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office Case postale 56 • CH-1211 Geneva 20 Tel. + 41 22 749 01 11 Fax + 41 22 734 10 79 E-mail copyright@iso.ch Web www.iso.ch

## Contents

| Forewordiv               |  |        |  |
|--------------------------|--|--------|--|
| Introduction             |  | v      |  |
| 1                        | Scope  | 1      |  |
| 2<br>2.1<br>2.2          | Terms, definitions and abbreviated terms<br>Terms and definitions<br>Abbreviated terms   | 1<br>2 |  |
| 3<br>3.1                 | System selection   | 3<br>3 |  |
| 3.2<br>3.3<br>3.4<br>3.5 | Deck handling equipment<br>Intervention control system (ICS)<br>Deployment/landing equipment<br>Tools for primary intervention tasks | 5<br>7 |  |
| 4<br>4.1                 | Functional requirements and recommendations  | 8      |  |
| 4.2<br>4.3               | Deployment and landing requirements and recommendations1   | 9<br>0 |  |
| 4.4<br>4.5<br>4.6        | Control system requirements and recommendations  | 5      |  |
| 5                        | Test requirements and recommendations1   | 9      |  |
| 6                        | Interfaces1  |        |  |
| Bibliog                  | Bibliography24   |        |  |

### 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 3.

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 part of ISO 13628 may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

International Standard ISO 13628-9 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*.

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 control umbilicals
- Part 6: Subsea production control systems
- Part 7: Workover/completion riser systems
- Part 8: Remotely Operated Vehicle (ROV) interfaces on subsea production systems
- Part 9: Remotely Operated Tool (ROT) intervention systems

### Introduction

This part of ISO 13628 is considered to be closely related to ISO 13628-1 and ISO 13628-8. ISO 13628-1 provides general requirements and overall recommendations for development of complete subsea production systems for the petroleum and natural gas industries, from design to decommissioning, and gives a description of how the ROT intervention systems relate to the total subsea production system.

The objective of subsea intervention systems, including vessel and deck handling equipment, is to facilitate safe and efficient intervention on subsea installations.