

---

---

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

**Part 7:  
Completion/workover riser systems**

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

*Partie 7: Systèmes de liaison surface/fond de mer pour  
complétion/reconditionnement*



Reference number  
ISO 13628-7:2005(E)

© ISO 2005

**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 2005

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 22 749 09 47  
E-mail [copyright@iso.org](mailto:copyright@iso.org)  
Web [www.iso.org](http://www.iso.org)

Published in Switzerland

# Contents

Page

Foreword.....	v
Introduction .....	vi
<b>1</b> <b>Scope</b> .....	<b>1</b>
<b>2</b> <b>Normative references</b> .....	<b>2</b>
<b>3</b> <b>Terms, definitions, abbreviated terms and symbols</b> .....	<b>4</b>
<b>3.1</b> <b>Terms and definitions</b> .....	<b>4</b>
<b>3.2</b> <b>Abbreviated terms</b> .....	<b>22</b>
<b>3.3</b> <b>Symbols</b> .....	<b>23</b>
<b>4</b> <b>System requirements</b> .....	<b>32</b>
<b>4.1</b> <b>Purpose</b> .....	<b>32</b>
<b>4.2</b> <b>Description of C/WO riser systems</b> .....	<b>32</b>
<b>4.3</b> <b>System engineering</b> .....	<b>32</b>
<b>4.4</b> <b>System definition</b> .....	<b>34</b>
<b>4.5</b> <b>System design</b> .....	<b>34</b>
<b>4.6</b> <b>System review</b> .....	<b>35</b>
<b>4.7</b> <b>Modes of operation</b> .....	<b>36</b>
<b>4.8</b> <b>Design principles</b> .....	<b>44</b>
<b>4.9</b> <b>Operational principles</b> .....	<b>44</b>
<b>4.10</b> <b>Safety principles</b> .....	<b>44</b>
<b>4.11</b> <b>Barrier requirements</b> .....	<b>45</b>
<b>4.12</b> <b>Regulations, codes and standards</b> .....	<b>45</b>
<b>4.13</b> <b>Operational requirements</b> .....	<b>47</b>
<b>4.14</b> <b>Requirements for organization and personnel qualifications</b> .....	<b>49</b>
<b>4.15</b> <b>Quality system</b> .....	<b>49</b>
<b>4.16</b> <b>Documentation, records and traceability</b> .....	<b>49</b>
<b>4.17</b> <b>Verification</b> .....	<b>49</b>
<b>4.18</b> <b>Purchaser/user's responsibility</b> .....	<b>50</b>
<b>4.19</b> <b>Manufacturer's responsibility</b> .....	<b>50</b>
<b>5</b> <b>Functional requirements</b> .....	<b>50</b>
<b>5.1</b> <b>Purpose</b> .....	<b>50</b>
<b>5.2</b> <b>System functional requirements</b> .....	<b>50</b>
<b>5.3</b> <b>Drift requirements</b> .....	<b>51</b>
<b>5.4</b> <b>Component requirements</b> .....	<b>52</b>
<b>5.5</b> <b>Workover control system</b> .....	<b>71</b>
<b>6</b> <b>Design requirements</b> .....	<b>80</b>
<b>6.1</b> <b>Purpose</b> .....	<b>80</b>
<b>6.2</b> <b>Design principles</b> .....	<b>80</b>
<b>6.3</b> <b>Loads and load effects</b> .....	<b>83</b>
<b>6.4</b> <b>Component design criteria</b> .....	<b>94</b>
<b>6.5</b> <b>Pipe design criteria</b> .....	<b>100</b>
<b>6.6</b> <b>Connectors</b> .....	<b>107</b>
<b>6.7</b> <b>Design criteria for miscellaneous components</b> .....	<b>111</b>
<b>7</b> <b>Materials and fabrication</b> .....	<b>112</b>
<b>7.1</b> <b>Introduction</b> .....	<b>112</b>
<b>7.2</b> <b>General material requirements</b> .....	<b>112</b>
<b>7.3</b> <b>Products</b> .....	<b>120</b>
<b>7.4</b> <b>Manufacture and fabrication</b> .....	<b>123</b>
<b>7.5</b> <b>Visual inspection and non-destructive testing</b> .....	<b>126</b>