

# DIN EN ISO 10417:2005-07 (E)

Petroleum and natural gas industries - Subsurface safety valve systems - Design, installation, operation and redress (ISO 10417:2004); English version EN ISO 10417:2004

---

## Contents

|   | Page |
|---|------|
| Foreword .....  | 4    |
| Endorsement notice.....   | 4    |
| Introduction .....  | 5    |
| 1 Scope.....  | 6    |
| 2 Normative references .....  | 6    |
| 3 Terms and definitions .....   | 6    |
| 4 Abbreviated terms.....  | 9    |
| 5 System configuration .....  | 9    |
| 5.1 General .....   | 9    |
| 5.2 System requirements.....  | 11   |
| 5.2.1 General .....   | 11   |
| 5.2.2 Installation .....  | 11   |
| 5.2.3 System test .....   | 13   |
| 5.2.4 System quality .....  | 14   |
| 5.3 Equipment requirements.....   | 15   |
| 5.3.1 Selection .....   | 15   |
| 5.3.2 Handling.....   | 17   |
| 5.3.3 Redress .....   | 17   |
| 5.4 Documentation and data control.....   | 18   |
| 5.4.1 General .....   | 18   |
| 5.4.2 Retained documentation .....  | 18   |
| 5.4.3 SSSV redress documentation.....   | 19   |
| 5.4.4 Failure reporting documentation.....  | 19   |
| Annex A (normative) SSSV Redress report (minimum data requirements).....                                  | 20   |
| A.1 General data.....   | 20   |
| A.2 Redress test summary.....   | 20   |
| A.2.1 SCSSVs .....  | 20   |
| A.2.2 SSCSVs .....  | 20   |
| Annex B (informative) Installation.....   | 21   |
| B.1 General .....   | 21   |
| B.2 Surface-controlled subsurface safety valve.....   | 21   |
| B.2.1 Control line — Single completion.....   | 21   |
| B.2.2 Control line — Multiple completions.....  | 22   |
| B.3 Surface control system .....  | 22   |
| B.4 Subsurface-controlled subsurface safety valves — Application to multiple and single completions ..... | 23   |
| Annex C (informative) Operations.....   | 24   |
| C.1 General .....   | 24   |
| C.2 Operation and testing .....   | 24   |
| C.3 Recommendations and required documentation .....  | 24   |
| C.4 Review and responsibilities of ESD system testing.....  | 25   |
| C.5 Important information on system shutdown.....   | 25   |
| Annex D (informative) Sizing of subsurface-controlled safety valves .....                                 | 26   |
| D.1 General .....   | 26   |
| D.2 Velocity-type SSCSV .....   | 26   |
| D.3 Low-tubing-pressure-type SSCSV.....   | 27   |
| D.3.1 General .....   | 27   |
| D.3.2 Flowing oil and gas wells .....   | 27   |
| D.3.3 Gas-lift oil wells .....  | 28   |

|   |           |
|---|-----------|
| <b>Annex E (informative) SSSV Testing</b> .....   | <b>31</b> |
| <b>E.1 Procedure for testing installed surface-controlled subsurface safety valves — Standard depth</b> .....       | <b>31</b> |
| <b>E.2 Test procedure for installed surface-controlled subsurface safety valves — Deepwater installations</b> ..... | <b>32</b> |
| <b>E.3 Test procedure for installed subsurface-controlled subsurface safety valves</b> .....                        | <b>33</b> |
| <b>Annex F (normative) Failure reporting</b> .....  | <b>34</b> |
| <b>F.1 Failure reporting</b> .....  | <b>34</b> |
| <b>F.2 Minimum information</b> .....  | <b>34</b> |
| <b>Bibliography</b> .....   | <b>36</b> |