INTERNATIONAL STANDARD

ISO 10417

First edition
1993-12-15

Petroleum and natural gas industries — Subsurface safety valve systems — Design, installation, operation and repair

Industries du pétrole et du gaz naturel — Systèmes de vannes de protection de fond de puits — Étude, installation, fonctionnement et réparation

Reference number
ISO 10417:1993(E)

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.

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.

International Standard ISO 10417 was prepared by the American Petroleum Institute (API) (as RP 14B, 3rd edition) and was adopted, under a special "fast-track procedure", by Technical Committee ISO/TC 67, *Materials, equipment and offshore structures for petroleum and natural gas industries*, in parallel with its approval by the ISO member bodies.

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Introduction

International Standard ISO 10417:1993 reproduces the content of API RP 14B, 3rd edition, 1981 and its Supplement 1 (January 1, 1993). ISO, in endorsing these API documents, recognizes that in certain respects they do not comply with all current ISO rules on the presentation and content of an International Standard. Therefore, the relevant technical body, within ISO/TC 67, will review ISO 10417:1993 and reissue it, when practicable, in a form complying with these rules.

This standard is not intended to obviate the need for sound engineering judgement as to when and where this standard should be utilized and users of this standard should be aware that additional or differing requirements may be needed to meet the needs for the particular service intended.

Standards referenced herein may be replaced by other international or national standards that can be shown to meet or exceed the requirements of the referenced standards.

Appendices A to G form an integral part of this standard.

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Petroleum and natural gas industries — Subsurface safety valve systems — Design, installation, operation and repair

1 Scope

This International Standard lays down the recommended practice for system design calculations, instructions for safe installation, and guidelines for operating and testing subsurface safety valve systems.

2 Requirements

Requirements are specified in:

> "API Recommended Practice (RP 14B), Third Edition, January 1, 1990 with Supplement 1 (January 1, 1993) — *Recommended Practice for Design, Installation, Repair and Operation of Subsurface Safety Valve Systems*",

which is adopted as ISO 10417.

For the purposes of international standardization, however, modifications shall apply to specific clauses and paragraphs of publication API RP 14B. These modifications are outlined below.

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Information given in the POLICY is relevant to the API publication only.

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Subclause 1.4, Referenced standards

The standards listed hereafter are available under ISO references:

API Spec 14A as ISO 10432
API Spec 14D as ISO 10433
API RP 14H as ISO 10419.

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Appendix A The content shall be replaced by the following text:

Throughout publication API RP 14B the conversion of English units shall be made in accordance with ISO 31, in particular for the quantities listed hereafter.

LENGTH	1 inch (in)	= 25,4 mm (exactly)
PRESSURE	1 pound-force per square inch (lbf/in^2)	= 6 894,757 Pa
	NOTE 1 bar = 10^5 Pa	
STRENGTH OR STRESS	1 pound-force per square inch (lbf/in^2)	= 6 894,757 Pa
IMPACT ENERGY	1 foot-pound force (ft·lbf)	= 1,355 818 J
TORQUE	1 foot-pound force (ft·lbf)	= 1,355 818 N·m
TEMPERATURE	The following formula was used to convert degrees Fahrenheit (°F) to degrees Celsius (°C): °C = 5/9 (°F − 32)	
VOLUME	1 cubic foot	= 0,028 316 8 m^3 or 28,316 8 dm^3
	1 gal (US)	= 0,003 785 4 m^3 or 3,785 4 dm^3
	1 barrel (US)	= 0,158 987 m^3 or 158,987 dm^3
MASS	1 pound (lb)	= 0,453 592 37 kg (exactly)
FORCE	1 pound-force (lbf)	= 4,448 222 N
FLOW RATE	1 barrel/day	= 0,158 987 m^3/day
	1 cubic foot per minute (ft^3/min)	= 0,028 316 85 m^3/min or 40,776 192 m^3/day

Recommended Practice for Design, Installation, Repair and Operation of Subsurface Safety Valve Systems

API RECOMMENDED PRACTICE 14B (RP 14B)
THIRD EDITION, JANUARY 1, 1990

American Petroleum Institute
1220 L Street, Northwest
Washington, DC 20005

Supplement 1
(January 1, 1993)

Recommended Practice for Design, Installation, Repair and Operation of Subsurface Safety Valve Systems

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Foreword

This supplement covers changes in API RP 14B, Third Edition, January 1, 1990, adopted by letter ballot following the June 1992 Standardization Conference.

Page 19, Section 4.2 — *Add the following item to 4.2.b:*

2. Repair records should be maintained for a minimum of five years.

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