

INTERNATIONAL  
STANDARD

**ISO**  
**10428**

First edition  
1993-12-15

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**Petroleum and natural gas industries —  
Sucker rods (pony rods, polished rods,  
couplings and sub-couplings) —  
Specification**

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*Industries du pétrole et du gaz naturel — Tiges de pompage —  
Spécifications*

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Reference number  
ISO 10428:1993(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 10428 was prepared by the American Petroleum Institute (API) (as Spec 11B, 24th 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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International Organization for Standardization

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## Introduction

International Standard ISO 10428:1993 reproduces the content of API Spec 11B, 24th edition, 1990, and its Supplement 1 (April 1, 1991). 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 10428:1993 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.

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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.

Appendix A to the API document shall not be regarded as being part of the requirements of this standard.  
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# Petroleum and natural gas industries — Sucker rods (pony rods, polished rods, couplings and sub-couplings) — Specification

## 1 Scope

This International Standard specifies the requirements for the dimensional characteristics, chemical and mechanical properties and gauging practice of sucker rods (pony rods, polished rods, couplings and sub-couplings) used in the petroleum and natural gas industries.

## 2 Requirements

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Requirements are specified in:

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“API Specification 11B (Spec 11B), Twenty-fourth Edition, October 1, 1990 — *Specification for Sucker Rods (Pony Rods, Polished Rods, Couplings and Subcouplings)*”,

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which is adopted as ISO 10428.

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For the purposes of international standardization, however, modifications shall apply to specific clauses and paragraphs of publication API Spec 11B. These modifications are outlined below.

Throughout publication API Spec 11B, the conversion of English units shall be made in accordance with ISO 31.

LENGTH	1 inch (in)	= 25,4 mm (exactly)
	1 foot (ft)	= 304,8 mm or 0,304 8 m (exactly)
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)	

$$^{\circ}\text{C} = 5/9 (^{\circ}\text{F} - 32)$$

Page 12

### Suggestion for ordering sucker rods

The option to place an order in accordance with ISO 10428 shall be added.

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

Page 14

### Scope

Information given in subclauses 1.3 through 1.6 is relevant to the API publication only.

Page 18

### Subclause 4.3.2.2

The reference to MIL-STD-105D shall be replaced by a reference to ISO 2859-1.

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### Subclause 4.3.7

The reference to MIL-STD-105D shall be replaced by a reference to ISO 2859-1.

### Table 4.4 and Table 4.5

The reference to MIL-STD-105D shall be replaced by a reference to ISO 2859-1.

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### Subclause 6.2

Reference to class X tolerance according to National Bureau of Standards<sup>1)</sup> Handbook H28 should be supplemented by reference to the equivalent ISO tolerance class, if available.

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### Section 8, Gauge certification

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The gauge certification system specified in this section is not considered as an integral part of this International Standard. This system shall be subject of a further study by ISO/TC 67 with a view to establishing an ISO or ISO/API certification scheme. The registration of certification agencies and reference master gauges should then be carried out in accordance with Annex N of Part 1 of the ISO/IEC Directives.

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### Section 10 — “Marking, packaging and thread protection”

#### Subclauses 1c., 2c.

The option to mark the product with “ISO 10428” shall be added. Moreover, the “identification code marks” described in the examples to subclauses 1e., 2e., 3 and 10.2 respectively, may be used on a provisional basis. In the future edition of this International Standard marking should comply with the provisions of annex E of the ISO/IEC Directives, part 2.

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### Subclause 12.9

The reference to MIL-STD-105D shall be replaced by a reference to ISO 2859-1.

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### Subclause 12.10, Footnote\*

This information is relevant to the API document only.

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1) Replace “National Bureau of Standards” by “National Institute of Standards and Technology”.

**Subclause 12.10c.**

The option to mark the product with “ISO 10428” shall be added.

**Table 12.3**

The reference to MIL-STD-105D shall be replaced by a reference to ISO 2859-1.

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**Appendix A, Use of API monogram**

Appendix A, as well as any other clauses that refer to the use of the API monogram, shall not be considered as an integral part of this International Standard.

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# Specification for Sucker Rods (Pony Rods, Polished Rods, Couplings and Subcouplings)

API SPECIFICATION 11B (SPEC 11B)  
TWENTY-FOURTH EDITION, OCTOBER 1, 1990

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Supplement 1  
(April 1, 1991)

# Specification for Sucker Rods (Pony Rods, Polished Rods, Couplings and Subcouplings)

API SPECIFICATION 11B (SPEC 11B)  
TWENTY-FOURTH EDITION, OCTOBER 1, 1990

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**Foreword**

This supplement covers changes in API Spec 11B (Twenty-Fourth Edition, October 1, 1990): *Specification for Sucker Rods (Pony Rods, Polished Rods, Couplings and Subcouplings)*, adopted at the 1990 Standardization Conference as reported in Circ PS-1920 and approved by letter ballot.

**Page 13, Table 5.3:** *Revise the following  $D_c$  and  $C_f$  dimensions.*

Size of Rod		$D_c$
1	(25.4)	1.865 (47.37)
1 $\frac{1}{8}$	(28.6)	2.110 (53.54)
Size of Rod		$C_f$
$\frac{1}{2}$	(12.7)	.026 ( .66)
$\frac{5}{8}$	(15.9)	.026 ( .66)
$\frac{3}{4}$	(19.1)	.08 (2.03)
$\frac{7}{8}$	(22.2)	.08 (2.03)
1	(25.4)	.142 (3.61)
1 $\frac{1}{8}$	(28.6)	.171 (4.34)

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