

API Document Format and Style Manual

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Introduction

To implement API Policy 602 and further the international use of API publications, this manual establishes the preferred API style for the preparation of new and revised standards. This manual is not intended to be a guide to the procedural development of standards. This information can be found in the Procedures for Standards Development published by the API Standards Department.

Although based on the requirements of the ISO/IEC Directives—Part 2, the guidelines in this manual are not intended for use in preparing a draft ISO standard. ISO project leaders should refer to the Directives for this purpose as well as the adopted ISO/TC 67 (which publishes most of the API-based ISO standards) editorial protocols covering SI units, product specification levels, normative references, and references to quality and certification systems.

1 Scope

This document covers only the most basic information about the API format as it has been adapted to API layout and U.S. conventions, and should be used as a guide by API standards development committees. These guidelines are intended to ensure that API standards are presented as uniform as practicable, irrespective of the technical content.

2 Normative References

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

API MPMS Chapter 15, *Guidelines for the Use of the International System of Units (SI) in the Petroleum and Allied Industries*

API Policy 602, *Voluntary Industry Standards Program*

API *Procedures for Standards Development*

3 Terms and Definitions

For the purposes of this document, the following definitions apply:

3.1 consensus

General agreement, characterized by the absence of sustained opposition to substantial issues by any important part of the concerned interests, and by a process that involves seeking to take into account the views of all parties and to reconcile any conflicting arguments.

3.2 informative elements

Elements that

- a) identify the document, introduce its content and explain its background, development, and its relationship with other documents; or
- b) provide additional information intended to assist the understanding or use of the document.

3.3 normative elements

Elements that describe the scope of the document, and which set out provisions that are required to implement the standard.

3.4 requirement

Expression in the content of a document conveying criteria to be fulfilled if compliance with the document is to be claimed and from which no deviation is permitted.

NOTE Table 1 specifies the verbal forms for the expression of requirements.

3.5 recommendation

Expression in the content of a document conveying that among several possibilities one is recommended as particularly suitable, without mentioning or excluding others, or that a certain course of action is preferred but not necessarily required, or that (in the negative form) a certain possibility or course of action is disapproved of but not prohibited.

NOTE Table 2 specifies the verbal forms for the expression of recommendations.

3.6 statement

Expression in the content of a document conveying information.

NOTE Table 3 specifies the verbal forms for indicating a course of action permissible within the limits of the document. Table 4 specifies the verbal forms to be used for statements of possibility and capability.

4 General Principles

4.1 Document Types

4.1.1 Bulletin

Documents that convey technical information on a specific subject or topic and are generally issued on a one-time basis, are not standards, and are not addressed by these procedures.

4.1.2 Code

A document intended for adoption by regulatory agencies or authorities having jurisdiction.

4.1.3 Recommended Practice

A document that communicates proven industry practices.

4.1.4 Specification

A document that prescribes technical requirements to be fulfilled by a product, process, or service.

4.1.5 Standard

A document, established by consensus, that provides for common and repeated use, rules, guidelines or characteristics for activities or their results, aimed at the achievement of the optimum degree of order in a given context. Standards typically include elements of both specifications and recommended practices.

NOTE For the purposes of this document, the term "standard" is used as a generic description for all document types.

4.1.6 Technical Report

See bulletin.

4.2 Expression of Provisions

4.2.1 General

Every document contains terms that express the provisions the reader needs to demonstrate compliance with the requirements. A document does not in itself impose any obligation upon anyone to follow it. However, such an obligation may be imposed, for example, by legislation or by a contract. Consistent use of the correct verbal form in every provision avoids ambiguity and simplifies the task of the user of the standard. The user will know exactly what has to be done to claim conformance with the standard, what should be done to facilitate the procedure, and what can be done if desired. The verbal forms necessary to express these provisions are specified as being “shall” (requirement), “should” (recommendation), “may” (permission) and “can” (possibility and capability). These terms are defined as:

- a) shall—is used to indicate that a provision is mandatory;
- b) should—is used to indicate that a provision is not mandatory, but recommended as good practice;
- c) may—is used to indicate that a provision is optional;
- d) can—is used for statements of possibility or capability.

See Annex A for additional information and examples to help in the writing of API standards.

4.2.2 Requirements

Table 1 summarizes the verbal forms of expression that shall be used to indicate requirements to be followed in order to conform to the document and from which no deviation is permitted.

Table 1—Verbal Forms to Express Requirements

Verbal Form	Equivalent Expressions for use in <u>Exceptional</u> Cases ^a
shall ^b	is to is required to it is required that has to only is permitted it is necessary
shall not	is not allowed (permitted) (acceptable) (permissible) is required to be not is required that be not is not to be
NOTE 1 Do not use “may” when “can” is meant. NOTE 2 Do not use “may not” when “shall not” is meant. NOTE 3 See ISO Directives, Part 2, Annex G for negatives of these verbal forms and further explanation.	
^a The equivalent expressions given the second column shall be used only in exceptional cases when the form given in the first column cannot be used for linguistic reasons. ^b Do not use “must” as an alternative for “shall” (this will avoid any confusion between the requirements of a document and jurisdictional regulatory obligations).	

Avoid using vague expressions that are not truly informative and may cause the reader to make an incorrect judgment call. Words like “very”, “all”, “every”, “never”, “excessive”, “slightly”, “approximately”, “nearly”, or “significant” are not useful.

4.2.3 Recommendations

Table 2 summarizes the verbal forms that shall be used to indicate

- a) that among several possibilities one is recommended as particularly suitable, without mentioning or excluding the others,
- b) or that a certain course of action is preferred but not necessarily required,
- c) or that (in the negative form) a certain possibility or course of action is discouraged but not prohibited.

Table 2—Verbal Forms to Express Recommendations

Verbal form	Equivalent Expressions for use in <u>Exceptional</u> Cases ^a
should	it is recommended that ought to
should not	it is not recommended that ought not to
a The equivalent expressions given the second column shall be used only in exceptional cases when the form given in the first column cannot be used for linguistic reasons.	

4.2.4 Permission

Table 3 summarizes the verbal forms that shall be used to indicate a course of action permissible within the limits of the document.

Table 3—Verbal Forms to Express Permission

Verbal form	Equivalent Expressions for use in <u>Exceptional</u> Cases ^a
may	is permitted to is allowed is permissible
need not	it is not required that no . . . is required
Do not use "possible" or "impossible" in this context. Do not use "can" instead of "may" in this context. NOTE "May" signifies permission expressed by the document, whereas "can" refers to the ability of a user of the document or to a possibility open to him/her.	
a The equivalent expressions given the second column shall be used only in exceptional cases when the form given in the first column cannot be used for linguistic reasons.	

4.2.5 Possibility and Capability

Table 4 summarizes the verbal forms that shall be used for statements of possibility and capability, whether material, physical, or causal.

Table 4—Verbal Forms to Express Possibility and Capability

Verbal form	Equivalent Expressions for use in <u>Exceptional</u> Cases ^a
can	be able to there is a possibility of it is possible to
cannot	be unable to there is no possibility of it is not possible to
NOTE See note in Table 3.	

4.3 Homogeneity

Uniformity of structure, of style, and of terminology shall be maintained not only within each document, but also within a series of associated documents. The structure of associated documents and the numbering of their sections shall, as far as possible, be identical. Analogous wording shall be used to express analogous provisions; identical wording shall be used to express identical provisions.

The same term shall be used throughout each document or series of associated documents to designate a given concept. The use of an alternative term (synonym) for a concept already defined shall be avoided. As far as possible, only one meaning shall be attributed to each term chosen.

4.4 Units and Quantities

4.4.1 Units

In recognition of the international use and applicability of API standards, measured and calculated values should be expressed in metric units (SI) and U.S. customary units (USC). When citing units in dual units the SI unit should be listed first with the corresponding USC unit listed either in parentheses in the text or on separate, tables, figures, datasheets or in separate annexes.

Do not use periods within measurements (lb, ft, s) except inches (in.). See API *MPMS* Chapter 15 for guidelines on the API-preferred units for quantities involved in the petroleum industry.

4.4.2 Quantities

The following rules should be observed:

- for numbers between –1.0 and 1.0, a zero shall be placed in front of the decimal;
- for clarity, the symbol $\times$ shall be used to indicate multiplication rather than a decimal point;
- in general text, isolated number less than 10 should be spelled out. However, in equations, tables, figures and other display elements numerals should be used;
- the value of a quantity is expressed by a numeral followed by a space and the appropriate unit symbol;

- e) if tolerances are provided, the unit shall be given with both the basic value and the tolerance (1.50 mm ± 0.05 mm);
- f) ranges should repeat the unit (2 psi to 12.5 psi);

NOTE Dashes should not be used since they can be misinterpreted as subtraction signs.

- g) the abbreviation for inches should include a period (in.) to avoid confusion with the word "in".

5 Document Structure

5.1 General

Final formatting is performed by API staff before publication, therefore, it is unnecessary for a committee to make the document look like a published document. However, the amount of staff effort required to prepare the document for publication can be reduced if the committee adopts the proper numbering format when the draft is prepared.

5.2 Normative and Informative Sections

Normative text denotes information that is required to implement the standard. Informative text is provided for information only.

The standard shall contain normative text in the main sections of the document, including footnotes to tables (see Annex B), and in normative annexes. Informative text shall be placed in notes (to text, tables, and figures), in footnotes within text, and in informative annexes.

5.3 Subdivision of Subject Matter

5.3.1 Descriptions of Divisions and Subdivisions

Terms to be used to designate the divisions and subdivisions of a document are shown in Table 2.

Table 2—Names of Divisions and Subdivisions

Term	Example of Numbering
Part ^a	9999-1
Section	1
Subsection	1.1
Subsection	1.1.1
Paragraph	(no number)
Annex	A
^a See ISO/IEC Directives, Part 2, Section 5.1.2 and 5.2.1 for more information on the subdivision of subject matter in a series of parts.	

5.3.2 Part

An individual document shall be prepared for each subject to be standardized, and published as a complete entity. However, in specific cases and for practical reasons, the document may be split into separate parts under the same number if, for example,

- a) the document is likely to become too voluminous,
- b) subsequent portions of the content are interlinked,
- c) portions of the document could be referred to in regulations, or
- d) portions of the document are intended to serve for certification purposes.

This has the advantage that each part can be changed separately when the need arises. In particular, the aspects of a product which will be of separate interest to different parties (e.g. manufacturers, certification bodies, legislative bodies) shall be clearly distinguished, preferably as parts of a document or as separate documents.

Such individual aspects are, for example,

- health and safety requirements,
- performance requirements,
- maintenance and service requirements,
- installation rules, and
- quality assessment.

The terms which shall be used to designate the divisions and subdivisions that a document may have are shown in Table 1. See ISO/IEC Directives Part 2, Section 5.1.2 for additional information on dividing a document into separate parts.

5.3.3 Section

A section is the basic component in the subdivision of the content of a document. The sections in each document or part shall be numbered with Arabic numerals, beginning with 1 for the “Scope” section. The numbering shall be continuous up to but excluding any annexes.

Each section shall have a title, placed immediately after its number, on a line separate from the text that follows it.

5.3.4 Subsection

A subsection is a numbered subdivision of a section. A primary subsection (e.g. 5.1, 5.2, etc.) may be subdivided into secondary subsections (e.g. 5.1.1, 5.1.2, etc.), and this process of subdivision may be continued as far as the fifth level (e.g. 5.1.1.1.1.1, 5.1.1.1.1.2, etc.).

A subsection shall not be created unless there is at least one further subsection at the same level. For example, text in Section 10 shall not be designated subsection “10.1” unless there is also a subsection “10.2”.