API Standards Format and Style

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Topics

- Compliance
- Prescriptive vs. performance-based standards
- API document designations
- Expression of provisions
- Common mistakes
Why You Need to Know This

❖ Standards writer
  – Facilitates standards development process if documents are properly formatted at the beginning of the process
  – Legal interpretation

❖ Standards user
  – Legal interpretation
  – Regulatory compliance
  – Ease of use (uniform structure, style, and terminology within a series of documents)
Compliance with Industry Standards

- All API documents are voluntary unless imposed by regulation, contract, or company procedures.

- The document type does **NOT** determine compliance.
Prescriptive vs. Performance-based Standards

- Prescriptive standard – typically prescribes materials, design, and construction methods without stating goals and objectives.

- Performance-based standard – expresses desired characteristics of the final product, service, or activity rather than requirements for the processes to produce it.
Prescriptive vs. Performance-based Standards

- API generally prefers performance-based standards.

- Advantages
  - Allows earlier use of new technology
  - Encourages innovation
  - Goals and objectives are clearly stated
  - Development and maintenance requires less effort
Prescriptive vs. Performance-based Standards

- A mixed approach may be necessary depending on whether or not the requirements meet the goals and objectives of the standard.

- Prescriptive requirements should be considered when performance-based requirements lead to costly and complicated testing procedures.
Performance-based Elements

- Establish goals for the standard
- Specify assumptions about the service to be performed or condition of the equipment and its environment
- Establish objectives necessary to meet specified goals
- Establish performance criteria
- Establish verification criteria
API Document Designations

- Specifications
- Standards
- Recommended Practices
- Bulletins and Technical Reports
API Document Designations

- **Specifications** - Documents that are written in such a way as to facilitate communications between purchasers, manufacturers, and/or service suppliers.

- **Standards** - Documents that combine elements of both specifications and recommended practices.
API Document Designations

- **Recommended Practices** - Documents that communicate recognized industry practices; RPs may include both mandatory and non-mandatory requirements.

- **Bulletins & Technical Reports** - Documents that convey technical information on a specific subject or topic and are generally issued on a one-time basis.
Expression of Provisions

Only these terms shall be used!

- **shall** – indicates that a provision is mandatory
- **should** – indicates that a provision is not mandatory, but recommended as good practice
- **may** – signifies permission and indicates a provision is optional
- **can** – used for statements of possibility or capability
Expression of Provisions

- Do NOT use “must” as an alternative for “shall” (this will avoid any confusion between the requirements of a document and jurisdictional regulatory obligations)

- Do NOT use “must” as alternative for “has to” or “have to” for statements of fact (e.g. the vapor has to be above 300 psi in order for the valve to open)
Expression of Provisions

- 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
Common Mistakes

- Scope contains information that is unrelated to what the standard covers and/or contains requirements
- Dated vs. undated references to other standards
- Definitions contain requirements or are too lengthy
- Defined terms or abbreviations are not used in the document
- Annexes are in the wrong order
- Hanging paragraphs
Scope

- Appears at the beginning of each document and define without ambiguity the subject of the document and the aspects covered
- Indicates the limits of applicability of the document and cannot contain “shall” or “should” statements
- The scope should be brief so that it can be used as a summary for and the API Publications Catalog
References to other Documents

- Undated references may be made to a complete document

- Dated references are references to a specific edition, indicated by the year of publication

- References to specific sections or subsections, tables, and figures of another document should be dated
Definitions

- Only terms used in the document can be defined
- Cannot contain requirements
- Should be a brief, self-contained description of the term in question (one sentence)
- Any term that is not self-explanatory or commonly known and which can be differently interpreted in different contexts should be defined
Annexes

- Must be referenced at least once in the text
- Must appear in the order in which they are cited in the text
- Their presence is optional
- Annexes must be identified as “informative” (FYI) or “normative” (required)
Annexes

- Normative annexes give provisions additional to those in the body of the document.
- Informative annexes give additional information intended to assist the understanding or use of the document.
- Informative annexes may contain optional requirements.
- An annex’s normative/informative status must be made clear by the way in which it is referred to in the text.
# Hanging Paragraphs

<table>
<thead>
<tr>
<th>Incorrect</th>
<th>Correct</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>5 Designation</strong></td>
<td><strong>5 Designation</strong></td>
</tr>
<tr>
<td>The quick brown fox jumps over the lazy dog.</td>
<td>The quick brown fox jumps over the lazy dog.</td>
</tr>
<tr>
<td><strong>5.1 XXXXXXXXXXXXXX</strong></td>
<td><strong>5.1 General</strong></td>
</tr>
<tr>
<td>The quick brown fox jumps over the lazy dog.</td>
<td>The quick brown fox jumps over the lazy dog.</td>
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<tr>
<td><strong>5.2 XXXXXXXXXXXXXX</strong></td>
<td><strong>5.2 XXXXXXXXXXXXXX</strong></td>
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<td>The quick brown fox jumps over the lazy dog.</td>
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<tr>
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</tr>
</tbody>
</table>
Addenda & Errata

- **Errata**
  - Corrects editorial mistakes or omissions
  - Cannot contain new material or revisions that changes the intent of the standard
  - Does not require a ballot

- **Addenda**
  - Contains changes that either adds new material or changes the intent of the standard
  - May contain editorial changes as well
  - Requires a ballot
Questions??