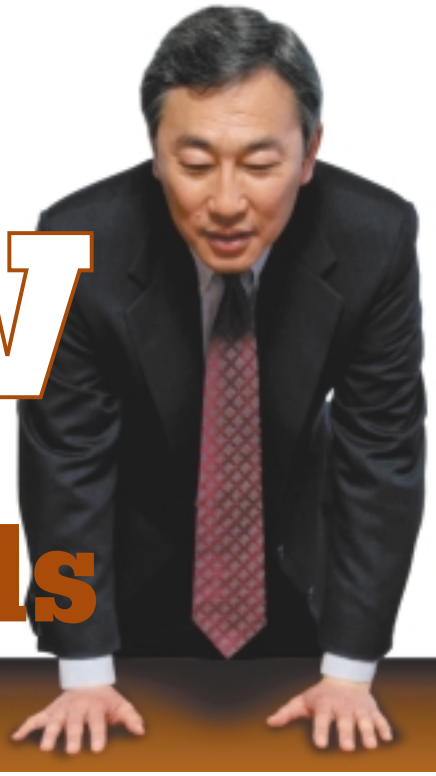
Know Your Types of Standards



/ BY RICHARD WILHELM /

ASTM has a detailed form and style for its standards, and as a standards developer, you need to be familiar with these rules. But just how do you know whether the new standard you're writing is a test method or a specification? Rich Wilhelm, of Editorial Services, tells you the difference among the six types of ASTM standards. >>>>>>

DAVID LETTERMAN has a recurring routine in which he challenges an audience member to play the "Know Your…" game. The game is simple. Letterman introduces an obscure topic, for example, "Know Your 19th Century Vice Presidents." After some banter with Dave, the contestant is asked a question about Elbridge Gerry or some equally obscure vice president. The contestant then answers the question (or, more likely, reads the answer from the card Dave helpfully provides) and wins dinner at a fine New York restaurant.

Here at ASTM, we also occasionally play the "Know Your…" game. This month's topic: "Know Your Types of ASTM Standards."

Let's begin by defining the term, "standard." According to the current *Regulations Governing ASTM Technical Committees,* a standard is defined as "a document that has been developed and established within the consensus process of the Society and that meets the approval requirements of ASTM procedures and regulations."

ASTM publishes six different types of standards: test method, specification, classification, practice, guide, and terminology. The definitions that appear in this article are taken from the *Regulations.* The information in the brief discussions that follow each definition is taken from *Form and Style for ASTM Standards.* More details on each type, as well as information on use of the Modified Numbering System, legal aspects in standards, and use of SI units also can be found in *Form and Style.*

Although each type of standard is different from the other, certain mandatory sections must be included in all types. Obviously each standard must have a title and designation, but each must also include a scope and keywords.

TEST METHOD

A DEFINITIVE PROCEDURE that produces test result.

A test method usually includes a concise description of an orderly procedure for determining a property or constituent of a material, an assembly of materials or a product. All details regarding apparatus, test specimen, procedure, and calculations needed to achieve satisfactory precision and bias should be included in a test method. An ASTM test method should represent a consensus as to the best currently available test procedure for the use intended and it should be supported by experience and adequate data obtained from cooperative tests.

Examples of test methods include, but are not limited to: identification, measurement, and evaluation of one or more qualities, characteristics or properties. A precision and bias statement shall be reported at the end

ToolBox

Form and Style for ASTM Standards (the "Blue Book"):

Go to **www.astm.org** (click on Technical Committees/ Membership, then on Standards Development Tools) or contact your ASTM staff manager or editor for a copy.

of a test method. Aside from the mandatory sections common to all standards, sections of Significance and Use, Hazards (where applicable), Procedure, and Precision and Bias are mandatory for test methods.

The question sometimes arises as to the difference between a test method and a practice. The major difference is a test result. A test method produces a test result. A practice does not.

SPECIFICATION

AN EXPLICIT SET of requirements to be satisfied by a material, product, system or service.

A wide variety of subjects are covered in ASTM specifications. Examples of specifications include, but are not limited to, requirements for: physical, mechanical, or chemical properties, and safety, quality, or performance criteria. A specification identifies the test methods for determining whether each of the requirements is satisfied.

Specifications may serve three functions: to facilitate purchasing; to create standardization; and, to provide technical data. A specification can serve all three functions, but it is important not to get these functions confused when writing a standard.

CLASSIFICATION

A SYSTEMATIC ARRANGEMENT or division of materials, products, systems, or services into groups based on similar characteristics such as origin, composition, properties, or use.

Because each ASTM committee is unique, the classifications written by one committee might be quite different from those written by another. The one common aspect to all ASTM classifications is that each must have a mandatory Basis of Classification section. This is the most important part of any classification as it sets up categories in which groupings are made.

PRACTICE

A DEFINITIVE SET of instructions for performing one or more specific operation that does not include a test result.

As mentioned in the *Test Methods* section, occasionally there is confusion about the differences between practices and test methods. In addition, questions sometimes surface over the differences between practices and guides, which are defined below. Generally speaking, the difference between a practice and a guide is that a practice underscores a general usage principle while a guide suggests an approach. A guide connotes accepted procedures for the performance of a given task.

Examples of practices include, but are not limited to: application, assessment, cleaning, collection, decontamination, inspection, installation, preparation, sampling, screening, and training.

GUIDE

A COMPENDIUM OF INFORMATION or series of options that does not recommend a specific course of action.

A guide may propose a series of options or instructions that offer direction without recommending a definite course of action. The purpose of this type of standard is to offer guidance based on a consensus of viewpoints but not to establish a standard practice to follow in all cases. A guide is intended to increase the awareness of the user concerning available techniques in a given subject area, while providing information from which subsequent testing programs can be derived.

TERMINOLOGY

A DOCUMENT COMPRISING definitions of terms; explanations of symbols, abbreviations, or acronyms.

Of all the types of standards published by ASTM, terminology standards are the most self-explanatory: it is simply a collection of definitions and, occasionally, symbols, abbreviations and acronyms.

In addition to the six types of standards, ASTM also publishes provisional standards, which are defined in the Regulations as "a document published for a limited time by the Society to meet a demand for more rapid issuance of specific documents, such as an emergency situation, regulatory requirements, or other special circumstances." Provisional standards are not full consensus documents because they require subcommittee consensus only. Section 14 of the *Regulations* provides more information on provisional standards.

Now that the various types of ASTM standards have been defined and described, you should have an easier time determining which type of standard you want to write. Perhaps more importantly, if you're ever an audience member on the Letterman show when Dave wants to play "Know Your Types of ASTM Standards," you'll be ready.

Incidentally, Elbridge Gerry served as James Madison's vice president from 1813 to 1814. //

Richard Wilhelm is an editor in ASTM Editorial Services.