

# CODES AND OTHER STANDARDS



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## CHAPTER 16

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# CODES AND OTHER STANDARDS

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## INTRODUCTION

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This chapter is intended to familiarize the fabricators and consumers of welded products with the basic documents that govern or guide welding activities. These documents serve to assure that safe and reliable welded products are produced and that the individuals associated with welding operations are not exposed to undue danger or other conditions that would be harmful to their health. Publications relating only to the manufacture of welding equipment are not addressed in this chapter. However, these publications may be referenced in codes and other standards, and their relationship to safety and reliability should not be underestimated.

Codes and other standards offer distinct benefits to the welding industry. These include promoting greater compatibility and interoperability of goods and services, enhancing of product quality and reliability at a reasonable price, and simplifying products for improved usability and ease of maintenance. This chapter describes some of the organizations that contribute to these benefits through the development of welding standards. Inasmuch as the globalization of the manufacturing and construction markets is broadening the range of inspection standards that might be specified for a product, this chapter has been expanded to include more of the international organizations that develop such standards.

The number as well as the scope of welding-related regulating documents grows on a daily basis. For example, a recent survey of International Organization for Standardization (ISO) welding standards lists 64 standards that apply directly to inspection issues related to welded structures alone. These standards are distributed among 22 management elements, which span the entire life of a structure, from its initial planning to record retention for the life of the structure. New ISO standards and revisions to existing standards are cur-

rently under review by U.S. Technical Advisory Groups (TAGs).

At the time of the preparation of this chapter, the referenced codes and other standards were valid. As the codes or other standards referred to here are cited without a date of publication, it is understood that the latest edition of the document applies. As these documents undergo frequent revision, the reader is encouraged to consult the most recent edition.

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## TYPES OF REGULATORY DOCUMENTS

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The American Welding Society (AWS) uses the general term *standards* to refer to documents that govern and guide welding activities. Standards describe the technical requirements for a material, process, product, system, or service. They also provide information on the procedures, methods, equipment, and tests that are used to determine that the requirements have been met. Thus, standards comprise codes, specifications, recommended practices, classifications, methods, and guides. These documents have many similarities; however, due to their subtle differences, they are not interchangeable.

Codes and specifications are similar types of standards that use the word *shall* to indicate the mandatory use of certain materials and actions. Codes differ from specifications in that their use is generally applicable to processes. Specifications generally provide requirements for products. Codes and specifications become mandatory when so specified by one or more governmental jurisdictions or when they are referenced by contractual or other procurement documents.