ASME Y14.100-2004
(Revision of ASME Y14.100-2000)

Engineering Drawing Practices

Engineering Drawing and Related Documentation Practices

AN AMERICAN NATIONAL STANDARD

The American Society of Mechanical Engineers

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ASME Y14.100, Engineering Drawing and Related Documentation Practices, was adopted on 30 January 1998 for use by the Department of Defense, DoD. Proposed changes by DoD activities must be submitted to the DoD Adopting Activity: Commander, U.S. Army ARDEC, ATTN: AMSRD-AAR-AIS-SS, Picatinny Arsenal, NJ 07806-5000. Copies of this document may be purchased from The American Society of Mechanical Engineers (ASME), 22 Law Drive, PO Box 2900, Fairfield, NJ 07007-2900; http://www.asme.org.

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The American Society of Mechanical Engineers
Three Park Avenue • New York, NY 10016

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This Standard will be revised when the Society approves the issuance of a new edition. There will be no addenda or written interpretations of the requirements of this Standard issued to this edition.

The American Society of Mechanical Engineers
Three Park Avenue, New York, NY 10016-5990

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FOREWORD

This Standard establishes engineering drawing practices and ties together the engineering drawing and related documentation practices in the Y14 series. It is not the intent of this Standard to be a stand-alone document for the purpose of addressing basic practices. An accurate perception of engineering drawing practices is derived by treating ASME Y14.100, ASME Y14.24, ASME Y14.34M, and ASME Y14.35M as a composite set.

This Standard is a revision of ASME Y14.100-2000, Engineering Drawing Practices. The revision of this Standard was initiated after the official release of ASME Y14.100M-2000. The initial attempt to convert the DoD drawing practices standard, MIL-STD-100, to a nongovernment standard resulted in two drawing practices standards: ASME Y14.100M-1998, which consisted of basic practices common to DoD and industry, and MIL-STD-100G, which consisted of those practices and requirements unique to DoD. The impact on the community was that judgments on when to use which standard as a stand-alone or in combination were causing a good deal of confusion. Accordingly, the realization of the problems presented by the existence of two basic drawing practices standards is the basis for the issue of this revision. The consensus was that one standard was needed. To accomplish this, this Standard contains appendices that may be invoked and tailored by DoD, thereby making possible the cancellation of MIL-STD-100.

Changes contained in this revision are intended to improve standardization and harmonize practices and methodology between industry and government. The following is a summary of the significant differences between ASME Y14.100-2000 and this revision:

(a) Section 3 — added the reference to ASME Y14.34 to the definition for *associated lists*;

(b) Section 3 — added a definition for *Notes (flag, general, local)*;

(c) Para. 6.5 — deleted paras. 6.5 and 6.5.1 and replaced with the following new paras.:

(1) 6.5, Drawing Identification and Ownership

(2) 6.5.1, Drawing Identification

(3) 6.5.1.1, Design Activity Identification

(4) 6.5.2, Drawing Ownership, Current or Original Design Activity

(5) 6.5.2.1, Transferring Design Responsibility to Another Activity

(d) Added a new Fig. 1, Drawing Notations Indicating a Transfer of Design Responsibility;

(e) Renumbered remaining figures appropriately;

(f) Added new para. 7.6.1 and renumbered remaining para. 7.6.1 to 7.6.2;

(g) Para. 7.11, deleted reference to Fig. 4;

(h) Fig. 2, deleted two of the ESD Symbols leaving only the hand ESD Symbol;

(i) Deleted old Fig. 4, Location of CAD-Generated Drawing Note;

(j) Para. D9.8, corrected 15-character PIN to 32-character PIN; and

(k) Para. D9.9.1, Parent or Corporate CAGE Code — clarified the sentence to indicate that when a drawing remains within the jurisdiction of a corporate or parent entity, there is no requirement for drawing revision to indicate design activity transfer.

It is not the intent of this Standard to prevent individual organizations from designing specific drawing practices that meet their individual needs but rather to provide common engineering delineation standards to aid the increasing interchange of drawings between industry, government, and other users. It is well recognized that individual companies have many detailed requirements for their specific method of operation. Consequently, the minimum requirements set forth in this Standard will provide them flexibility in implementation. The appendices are intended for use by other than strictly commercial organizations, such as DoD; however, nothing prevents commercial organizations from using the appendices and tailoring them as necessary to meet their own needs.

The successful revision of this Standard is attributed to the subcommittee members and their respective companies and the department and agencies of the U.S. government.

Suggestions for improvement of this Standard are welcome and should be sent to The American Society of Mechanical Engineers; Attention: Secretary, Y14 Main Committee; Three Park Avenue, New York, NY 10016-5990.

This revision was approved as an American National Standard on September 9, 2004.

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Engineering Drawing and Related Documentation Practices

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ENGINEERING DRAWING PRACTICES

1 GENERAL

1.1 Scope

This Standard establishes the essential requirements and reference documents applicable to the preparation and revision of engineering drawings and associated lists. It is essential that this Standard be used in close conjunction with ASME Y14.24, ASME Y14.34M, and ASME Y14.35M.

1.2 Application

Application of this Standard may necessitate tailoring to exclude unnecessary requirements. A tailoring guide, Nonmandatory Appendix A, has been included for that purpose.

1.3 Figures

The figures in this Standard are intended only as illustrations to aid the user in understanding the practices described in the text. In some cases, figures show a level of detail as needed for emphasis. In other cases, figures are incomplete to illustrate a concept or facet thereof. The absence of figures has no bearing on the applicability of the stated requirement or practice.

1.4 Notes

Notes depicted in this Standard in capital letters are intended to reflect actual drawing entries. Notes in lowercase letters are to be considered supporting data to the contents of this Standard and are, therefore, not intended for literal entry on drawings.

2 REFERENCES

The following is a list of publications referenced in this Standard. When the following American National Standards referred to in this Standard are superseded by a revision approved by the American National Standards Institute (ANSI), the revision shall apply.

ANSI Y14.7.1, Gear Drawing Standards — Part 1: For Spur, Helical, Double Helical, and Rack
ANSI Y14.7.2, Gear and Spline Drawing Standards — Part 2: Bevel and Hypoid Gears
ANSI Y14.13M, Mechanical Spring Representation
ANSI Y32.10, Graphic Symbols for Fluid Power Diagrams

Publisher: The American Society of Mechanical Engineers (ASME), Three Park Avenue, New York, NY 10016-5990; Order Department: 22 Law Drive, P.O. Box 2900, Fairfield, NJ 07007-2900

ANSI/AIIM MS4, Flowchart Symbols and Their Use in Micrographics

Publisher: Association for Information and Image Management (AIIM), 1100 Wayne Avenue, Silver Spring, MD 20910

ANSI/AWS A2.4, Standard Symbols for Welding, Brazing, and Nondestructive Examination
ANSI/AWS A3.0, Welding Terms and Definitions, Including Terms for Brazing, Soldering, Thermal Spraying, and Thermal Cutting

Publisher: American Welding Society (AWS), 550 NW Le Jeune Road, Miami, FL 33135

ANSI/IEEE 91, Graphic Symbols for Logic Functions
ANSI/IEEE 200, Reference Designations for Electrical and Electronic Parts and Equipment
ANSI/IEEE 260.1, Letter Symbols for Units of Measurement (SI Units, Customary Inch-Pound Units, and Certain Other Units)
ANSI/IEEE 260.3, Mathematical Signs and Symbols for Use in Physical Sciences and Technology
ANSI/IEEE 268, Standard Metric Practice
ANSI/IEEE 280, Letter Symbols for Quantities Used in Electrical Science and Electrical Engineering (Same as ANSI Y10.5)
ANSI/IEEE 315a, Supplement to Graphic Symbols for Electrical and Electronics Diagrams
ANSI/IEEE 991, Logic Circuit Diagrams

Publisher: Institute of Electrical and Electronics Engineers (IEEE), 445 Hoes Lane, Piscataway, NJ 08855

ANSI/IPC D-350, Printed Board Description in Digital Form
ANSI/IPC T-50F, Terms and Definitions for Interconnecting and Packaging Electronic Circuits

Publisher: Institute for Interconnecting and Packaging Electronic Circuits (IPC), 2215 Sanders Road, Northbrook, IL 60062