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[Revision of ASME Y14.36M-1996 (R2008)]

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Surface Texture Symbols

Engineering Product Definition and Related Documentation Practices

AN AMERICAN NATIONAL STANDARD

The American Society of Mechanical Engineers

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Engineering Product Definition and Related Documentation Practices

AN AMERICAN NATIONAL STANDARD

The American Society of Mechanical Engineers
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CONTENTS

Foreword iv

Committee Roster v

Correspondence With the Y14 Committee vi

1 General 1
1.1 Scope 1
1.2 ASME Y14 Series Conventions 1
2 References 2
3 Definitions 2
4 Surface Texture Symbols 2
4.1 Control and Modifier Data 2
4.2 Basic Surface Texture Symbol 2
4.3 Symbol Modifiers 2
4.4 Symbol Position Descriptions 3
4.5 Symbol Placement 3
4.6 Textual Presentation of Surface Texture Requirements 3
5 Applications and Associated Values 3
5.1 Applicability of Controls 3
6 Example Designations 4
6.1 Examples 4
6.2 Symbols for Special or Multiple Operations 4

Nonmandatory Appendix
A Graphic Proportions 13

Figures
4-1 Surface Texture Symbols 5
4-2 Value Application 5
4-3 Lay Symbols 6
4-4 Location of Surface Texture Symbols 7
4-5 Text Example of Surface Texture Requirements 7
5-1 Requirements Related to Plating or Coating 7
5-2 Surface Application Modifier All Around 8
5-3 Surface Application Modifier All Over 8
5-4 Surface Texture Applied to a Measurement Direction Supplemental Line 8
6-1 Surface Texture Symbol Application Examples 9
6-2 Special Designation Examples 12
A-1 Surface Texture Symbols and Construction 13
A-2 Lay Symbols 13

FOREWORD

The revision of this Standard includes changes and additions that reflect advancements in the field of surface texture. The successful completion of this Standard is due to the members of the Y14.36 and B46.1 committees. This revision was influenced by changes in the ISO 1302 and ASME Y14.41 standards and investigations by the Joint Advisory Committee 1 (Y14/B89) on the Specification of Notation to Support Requirements for Size and Geometric Tolerances.

Major changes include the

(a) renumbering of all the paragraphs and figures
(b) addition of a textual presentation method
(c) reorganization of surface texture parameters associated with the surface texture symbol
(d) addition of symbol locations for previously unstated parameters
(e) ability to specify multiple wavelength domains
(f) inclusion of all-around and all-over symbols
(g) elimination of the material removal allowance value
(h) clarification of how to orient the surface texture symbol
(i) addition of lay symbol proportions
(j) ability to annotate surface texture symbols on digital models
(k) ability to annotate lay and measurement direction on drawing graphic sheets and digital data sets (3D model)

This Standard was approved as an American National Standard on June 15, 2018.

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Engineering Product Definition and Related Documentation Practices

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Secretary, Y14 Standards Committee
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Two Park Avenue
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Proposing Revisions. Revisions are made periodically to the Standard to incorporate changes that appear necessary or desirable, as demonstrated by the experience gained from the application of the Standard. Approved revisions will be published periodically.

The Committee welcomes proposals for revisions to this Standard. Such proposals should be as specific as possible, citing the paragraph number(s), the proposed wording, and a detailed description of the reasons for the proposal, including any pertinent documentation.

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SURFACE TEXTURE SYMBOLS

1 GENERAL

1.1 Scope

This Standard establishes methods to designate surface texture controls. It includes symbolic and textual methods for specifying roughness, waviness, and other surface texture information on drawings, in specifications, or in other documents.

1.2 ASME Y14 Series Conventions

The conventions in paras. 1.2.1 through 1.2.9 are used in this and other ASME Y14 Standards.

1.2.1 Mandatory, Recommended, Guidance, and Optional Words

(a) The word "shall" establishes a requirement.

(b) The word "will" establishes a declaration of purpose on the part of the design activity.

(c) The word "should" establishes a recommended practice.

(d) The word "may" establishes an allowed practice.

(e) The words "typical," "example," or "for reference" or the Latin abbreviation "e.g." indicates suggestions given for guidance only.

(f) The word "or" used in conjunction with a requirement or a recommended practice indicates that there are two or more options for complying with the stated requirement or practice.

(g) The phrase "unless otherwise specified" or "UOS" shall be used to indicate a default requirement. The phrase is used when the default is a generally applied requirement, and an exception may be provided by another document or requirement.

1.2.2 Cross-Reference of Standards. Cross-reference of standards in text with or without a date following the standard designator shall be interpreted as follows:

(a) Reference to other ASME Y14 standards in the text without a date following the standard designator indicates that the issue of the standard identified in the References section shall be used to meet the requirement.

(b) Reference to other ASME Y14 standards in the text with a date following the standard designator indicates that only that issue of the standard shall be used to meet the requirement.

1.2.3 Invocation of Referenced Standards. The following examples define the invocation of a standard when specified in the References section and referenced in the text of this Standard:

(a) When a referenced standard is cited in the text with no limitations to a specific subject or paragraph(s) of the standard, the entire standard is invoked. For example, "Dimensioning and tolerancing shall be in accordance with ASME Y14.5" is invoking the complete standard because the subject of the standard is dimensioning and tolerancing, and no specific subject or paragraph(s) within the standard are invoked.

(b) When a referenced standard is cited in the text with limitations to a specific subject or paragraph(s) of the standard, only the paragraph(s) on that subject is invoked. For example, "Assign part or identifying numbers in accordance with ASME Y14.100" is invoking only the paragraph(s) on part or identifying numbers because the subject of the standard is engineering drawing practices, and part or identifying numbers is a specific subject within the standard.

(c) When a referenced standard is cited in the text without an invoking statement such as "in accordance with," the standard is invoked for guidance only. For example, "For gauging principles, see ASME Y14.43" is only for guidance, and no portion of the standard is invoked.

1.2.4 Parentheses Following a Definition. When a definition is followed by a standard referenced in parentheses, the standard referenced in parentheses is the source for the definition.

1.2.5 Notes. Notes depicted in this Standard in all uppercase letters are intended to reflect actual drawing entries. Notes depicted in initial uppercase or lowercase letters are to be considered supporting data to the contents of this Standard and are not intended for literal entry on drawings. A statement requiring the addition of a note with the qualifier "such as" is a requirement to add a note, and the content of the note is allowed to vary to suit the application.

1.2.6 Acronyms and Abbreviations. Acronyms and abbreviations are spelled out the first time used in this Standard followed by the acronym or abbreviation in parentheses. The acronym is used thereafter throughout the text.

1.2.7 Units. The International System of Units (SI) is featured in this Standard. It should be understood that U.S. Customary units could equally have been used without prejudice to the principles established.

1.2.8 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,