INTERNATIONAL STANDARD

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Geometrical product specifications (GPS) — Fundamentals — Concepts, principles and rules

Spécification géométrique des produits (GPS) — Principes fondamentaux — Concepts, principes et règles

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 8015 was prepared by Technical Committee ISO/TC 213, *Dimensional and geometrical product specifications and verification*.

This second edition cancels and replaces the first edition (ISO 8015:1985), which has been technically revised.

Introduction

This International Standard is a geometrical product specification (GPS) standard and is to be regarded as a fundamental GPS standard (see ISO/TR 14638). It influences all other standards in the GPS matrix system, i.e. all global, general and supplementary standards, as well as any other kind of document in the GPS matrix system.

For more detailed information of the relation of this International Standard to other standards and the GPS matrix model, see Annex A.

This International Standard covers a number of fundamental principles that apply to all GPS standards and technical product documentation that is based on the GPS matrix system. Until this current version of this International Standard was published, these principles were implied, but not formulated explicitly.

This International Standard also covers the indication of ISO default specification operators and particularly the indication of non-default specification operators, either by direct indication or by the use of company-specific or drawing-specific defaults.

For the purpose of this International Standard, a concept is considered as an abstract idea, a principle is considered as a standardized truth based on concepts upon which rules are based, and a rule is considered as a standardized procedure (for action).

Geometrical product specifications (GPS) — Fundamentals — Concepts, principles and rules

1 Scope

This International Standard specifies fundamental concepts, principles and rules valid for the creation, interpretation and application of all other International Standards, Technical Specifications and Technical Reports concerning dimensional and geometrical product specifications (GPS) and verification.

This International Standard applies to the interpretation of GPS indications on all types of drawings.

For the purposes of this International Standard, the term “drawing” is to be interpreted in the broadest possible sense, encompassing the total package of documentation specifying the workpiece.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 17450-1:—[1)], *Geometrical product specifications (GPS) — General concepts — Part 1: Model for geometrical specification and verification*

ISO 17450-2:—[2)], *Geometrical product specifications (GPS) — General concepts — Part 2: Basic tenets, specifications, operators and uncertainties*

ISO/IEC Guide 98-3:2008, *Uncertainty of measurement — Guide to the expression of uncertainty in measurement (GUM:1995)*

ISO/IEC Guide 99:2007, *International vocabulary of metrology — Basic and general concepts and associated terms (VIM)*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 17450-1, ISO 17450-2, ISO/IEC Guide 98-3, ISO/IEC Guide 99 and the following apply.

3.1
ISO GPS system
GPS system
geometrical product specification and verification system developed in ISO by ISO/TC 213

1) To be published. (Revision of ISO/TS 17450-1:2005)

2) To be published. (Revision of ISO/TS 17450-2:2002)