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Geometrical product specifications (GPS) — Straightness —

Part 1: Vocabulary and parameters of straightness

Spécification géométrique des produits (GPS) — Rectitude —

Partie 1: Vocabulaire et paramètres de rectitude

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Contents

Page

Foreword ..... **iv**

Introduction ..... **v**

1 Scope **1**

2 Normative references **1**

3 Terms and definitions **1**
3.1 General terms **1**
3.2 Terms relating to profiles **2**
3.3 Terms relating to the reference line **3**
3.4 Terms relating to the filter function **4**
3.5 Terms relating to parameters **5**

Annex A (informative) **Mathematical definition of straightness tolerances of nominal integral features** **6**

Annex B (informative) **Synoptic tables of terms, abbreviated terms and parameters** **7**

Annex C (informative) **Relationship to the GPS matrix model** **9**

Bibliography **11**

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 12780-1 was prepared by Technical Committee ISO/TC 213, *Dimensional and geometrical product specifications and verification*.

This first edition of ISO 12780-1 cancels and replaces ISO/TS 12780-1:2003, which has been technically revised.

ISO 12780 consists of the following parts, under the general title *Geometrical product specifications (GPS) — Straightness*:

— *Part 1: Vocabulary and parameters of straightness*

— *Part 2: Specification operators*

Introduction

This part of ISO 12780 is a geometrical product specification (GPS) standard and is to be regarded as a general GPS standard (see ISO/TR 14638). It influences chain link 2 of the chain of standards on form of line independent of datum.

The ISO/GPS Masterplan given in ISO/TR 14638 gives an overview of the ISO/GPS system of which this document is a part. The fundamental rules of ISO/GPS given in ISO 8015 apply to this document and the default decision rules given in ISO 14253-1 apply to specifications made in accordance with this document, unless otherwise indicated.

For more detailed information of the relationship of this part of ISO 12780 to other standards and the GPS matrix model, see Annex C.

This part of ISO 12780 defines terms and concepts necessary for defining the specification operators according to ISO 17450-2 for straightness of integral features.

Extracting data always involves applying a certain filtering process. An additional filtering of the extracted data might or might not be applied. This additional filter can be a mean line filter (Gaussian, spline, wavelet, etc.) or a non-linear filter (e.g. morphological filter). The type of filtering influences the definition of straightness and the specification operators and, therefore, needs to be stated unambiguously.

This part of ISO 12780 is not intended to disallow any means of measuring straightness.