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**Geometrical Product Specifications
(GPS)—Surface texture :
Profile method—
Rules and procedures for the
assessment of surface texture**

ICS 17.040.20

Descriptors : roughness (surface), geometric surfaces, surface treatment

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Foreword

This translation has been made based on the original Japanese Industrial Standard established by the Minister of Economy, Trade and Industry through deliberations at the Japanese Industrial Standards Committee according to the proposal of establishing a Japanese Industrial Standard from the Japanese Standards Association (JSA), with a draft of Industrial Standard based on the provision of Article 12 Clause 1 of the Industrial Standardization Law.

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In the event of any doubts arising as to the contents,
the original JIS is to be the final authority.

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Geometrical Product Specifications (GPS)— Surface texture : Profile method— Rules and procedures for the assessment of surface texture

Introduction This Japanese Industrial Standard has been prepared based on **ISO 4288 Geometrical Product Specifications (GPS)—Surface texture : Profile method—Rules and procedures for the assessment of surface texture** published in 1996 without modifying the technical contents.

This Standard is a geometrical product specification (GPS) standard and is to be regarded as a general GPS standard (see **TR B 0007**). It influences the chain links 3 and 4 of the chains of standards for roughness profile and primary profile.

For more detailed information of the relation of this Standard to other standards and the GPS matrix model see annex B.

The discrimination between periodic and non-periodic profiles is subjective and left to the discretion of the user.

“Information” underlined with dots in this Standard is the matters not stated in the original International Standard.

Remarks : **TR B 0007** is identical with **ISO/TR 14638 : 1995 Geometrical Product Specifications (GPS)—Master plan**.

1 Scope This Standard specifies the rules for comparison of the measured values with the tolerance limits for surface texture parameters defined in **JIS B 0601**, **JIS B 0631**, **ISO 13565-2** and **ISO 13565-3**.

It also specifies the default rules for selection of cut-off wavelength, λ_c , for measuring roughness profile parameters by using stylus instruments according to **JIS B 0651**.

Remarks : The International Standard corresponding to this Standard is as follows.

In addition, symbols which denote the degree of correspondence in the contents between the relevant International Standard and **JIS** are IDT (identical), MOD (modified), and NEQ (not equivalent) according to **ISO/IEC Guide 21**.

ISO 4288 : 1996 Geometrical Product Specifications (GPS)—Surface texture : Profile method—Rules and procedures for the assessment of surface texture (IDT)

2 Normative references The following standards contain provisions which, through reference in this Standard, constitute provisions of this Standard. If the indication of the year of publication is given to these referred standards, only the edition of indicated year constitutes the provision of this Standard but the revision and amendment made thereafter are not applied. The normative references without the indication of the year of coming into effect apply limiting only to the most recent edition (including amendments).

JIS B 0601 *Geometrical Product Specification (GPS)—Surface texture : Profile method—Terms, definitions and surface texture parameters*

Remarks : **ISO 4287** : 1997 *Geometrical Product Specifications (GPS)—Surface texture : Profile method—Terms, definitions and surface texture parameters* is identical with the said standard.

JIS B 0631 *Geometrical Product Specification (GPS)—Surface texture : Profile method—Motif parameters*

Remarks : **ISO 12085** : 1996 *Geometrical Product Specifications (GPS)—Surface texture : Profile method—Motif parameters* is identical with the said standard.

JIS B 0651 *Geometrical Product Specification (GPS)—Surface texture : Profile method—Nominal characteristics of contact (stylus) instruments*

Remarks : **ISO 3274** : 1996 *Geometrical Product Specifications (GPS)—Surface texture : Profile method—Nominal characteristics of contact (stylus) instruments* is identical with the said standard.

ISO 1302 : 1992 *Technical drawings—Method of indicating surface texture*

ISO 13565-1 : 1996 *Geometrical Product Specifications (GPS)—Surface texture : Profile method ; Surfaces having stratified functional properties—Part 1 : Filtering and general measurement conditions*

ISO 13565-2 : 1996 *Geometrical Product Specifications (GPS)—Surface texture : Profile method ; Surfaces having stratified functional properties—Part 2 : Height characterization using the linear material ratio curve*

ISO 13565-3 : 1998 *Geometrical Product Specifications (GPS)—Surface texture : Profile method ; Surfaces having stratified functional properties—Part 3 : Height characterization using the material probability curve*

ISO 14253-1 : 1998 *Geometrical Product Specifications (GPS)—Inspection by measurement of workpieces and measuring instruments—Part 1 : Decision rules for providing conformance or non-conformance with specifications*

3 Definitions For the purposes of this Standard, the definitions given in **JIS B 0651**, **JIS B 0601**, **JIS B 0631**, **ISO 13565-2** and **ISO 13565-3** apply.

4 Parameter estimation

4.1 Parameters defined over the sampling length

4.1.1 Parameter estimate An estimate of the parameter's value is calculated using the measured data from only one sampling length.

4.1.2 Average parameter estimate An average parameter estimate is calculated by taking the arithmetic mean of the parameter estimates from all the individual sampling lengths.