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**JIS B 0671-3** : 2002

(ISO 13565-3 : 1998)

(JSA)

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

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ICS 17.040.20; 17.040.30

Reference number : JIS B 0671-3 : 2002 (E)

B 0671-3 : 2002 (ISO 13565-3 : 1998)

## 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.

This Standard has been made based on **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* for the purposes of making easy to compare this Standard with International Standard; to prepare Japanese Industrial Standard conforming with International Standard; and to propose a draft of International Standard which is based on Japanese Industrial Standard.

**JIS B 0671** group consists of the following three parts with the general title *Geometrical Product Specifications (GPS) — Surface texture: Profile method; Surfaces having stratified functional properties*.

*Part 1: Filtering and general measurement conditions*

*Part 2: Height characterization using the linear material ratio curve*

*Part 3: Height characterization using the material probability curve*

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In the event of any doubts arising as to the contents,  
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**Geometrical Product Specifications  
(GPS) — Surface texture: Profile method;  
Surfaces having stratified functional properties —  
Part 3: Height characterization  
using the material probability curve**

**Introduction** This part of JIS B 0671 has been prepared based on the first edition of ISO 13565-3 *Geometrical Product Specifications (GPS) — Surface texture : Profile method ; Surfaces having stratified functional properties — Part 3 : Height characterization using the material probability curve* published in 1998 without modifying the technical contents.

This part of JIS B 0671 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 link 2 of the chains of standards on roughness profile and primary profile.

For more detailed information on the relation of this Standard to the GPS matrix model see annex E.

This part of JIS B 0671 provides a numerical characterization of surfaces consisting of two vertical random components, namely, a relatively coarse “valley” texture and a finer “plateau” texture. This type of surface is used for lubricated, sliding contact, for example in cylinder liners and fuel injectors. The calculations necessary to determine the parameters  $R_{pq}$ ,  $R_{vq}$ , and  $R_{mq}$  ( $P_{pq}$ ,  $P_{vq}$ , and  $P_{mq}$ ) used to characterize these two components separately involves the generation of the material probability curve, the determination of its linear regions, and the linear regressions through these regions.

The parameters are undefined for surfaces not consisting of two such components.

“Informations” underlined with dots in this Standard are the matters not included in the original International Standard.

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

**1 Scope** This part of JIS B 0671 establishes the evaluation process for determining parameters from the linear regions of the material probability curve, which is the Gaussian representation of the material ratio curve. The parameters are intended to aid in assessing tribological behaviour, for example of lubricated, sliding surfaces, and to control the manufacturing process.

**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.