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**Acceptance and reverification tests
for coordinate measuring machines
(CMM) with non-contacting probing
systems**

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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 in accordance with the Industrial Standardization Law.

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Acceptance and reverification tests for coordinate measuring machines (CMM) with non-contacting probing systems

1 Scope

This Japanese Industrial Standard specifies the acceptance test and the reverification test for coordinate measuring machines (CMM) with non-contacting probing systems capable of obtaining the form of an object as the three-dimensional coordinate of multipoint group.

The CMM shall be equipped with a projector for projection of a pattern-texture on the surface of object for measurement, an optical sensor with laser beam irradiation system, etc. and other non-contacting probing system technology (see Annex A) in addition to an image sensor (such as CCD camera). There are such concrete examples of the optical sensor as a laser slit scanning, stripe projection, spot light projection and moiré method. Also, this Standard is applicable to both CMMs with or without moving system. Further, this Standard is applicable to the assessment of measurement results obtained by merging of measuring data from CMM without moving system using a marker, software, etc.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this Standard. The most recent editions of the standards (including amendments) indicated below shall be applied.

- JIS B 0641-1 *Geometrical Product Specifications (GPS)—Inspection by measurement of workpieces and measuring equipment—Part 1: Decision rules for proving conformance or nonconformance with specifications*
- JIS B 0672-1 *Geometrical Product Specifications (GPS)—Geometrical features—Part 1: General terms and definitions*
- JIS B 7440-1 *Geometrical Product Specifications (GPS)—Acceptance and reverification tests for coordinate measuring machines (CMM)—Part 1: Vocabulary*

3 Terms and definitions

For the purposes of this Standard, the terms and definitions given in **JIS B 0641-1**, **JIS B 0672-1** and **JIS B 7440-1**, the following terms and definitions apply.

3.1 error of spherical form measurement P_{FS}

range of the distance from the centre determined by the approximation of measured points on the test sphere according to the least-square method to each measured point in the CMM with non-contacting probing systems

NOTE : The error of spherical form measurement P_{FS} corresponds to the probing error P defined in **JIS B 7440-1**.