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Autocatalytic nickel-phosphorus coatings on metals

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Descriptors : nickel, phosphorus, metal coatings, wear resistance, corrosion protection,
metal plating

Reference number : JIS H 8645 : 1999 (E)

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Foreword

This translation has been made based on the original Japanese Industrial Standard revised by the Minister of International Trade and Industry through deliberations at the Japanese Industrial Standards Committee in accordance with the Industrial Standardization Law. Consequently **JIS H 8645:1989** is replaced with **JIS H 8645:1999**.

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Autocatalytic nickel-phosphorus coatings on metals

Introduction This Japanese Industrial Standard has been prepared based on the corresponding parts to International Standard shown in Remarks to clause 1 **Scope** without any modification in the technical contents, however, some specifications, which are not specified in the corresponding International Standards, have been supplemented in this Standard.

1 Scope This Japanese Industrial Standard specifies autocatalytic nickel-phosphorus coatings⁽¹⁾ (hereafter referred to as “coatings”) applying on significant surface of such basis metal as iron, copper, aluminium, and their alloy to improve corrosion resistance, abrasion resistance, and others.

Note ⁽¹⁾ This is autocatalytic type nickel-phosphorus coating by the reduction using hypophosphorous acid, that produce a deposit mainly of nickel containing 2 % to 15 % of phosphorus.

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

ISO 4527 : 1987 Autocatalytic nickel-phosphorus coating — Specification and test methods

2 Normative references The following standards contain provisions which, through reference in this Standard, constitute provisions of this Standard. The most recent editions of these standards indicated bellow shall be applied.

- JIS B 0651 *Surface texture — Instruments for the assessment of surface texture — Profile method*
- JIS C 0050 *Basic environmental testing procedures Part 2: Tests, Test T: Soldering*
- JIS G 1204 *General rules for fluorescent X-ray analysis of iron and steel*
- JIS H 0400 *Glossary of terms used in electroplating and related processes*
- JIS H 0404 *Graphical symbol for electroplated coating*
- JIS H 8501 *Methods of thickness test for metallic coatings*
- JIS H 8502 *Methods of corrosion resistance test for metallic coatings*
- JIS H 8503 *Methods of wear resistance test for metallic coatings*
- JIS H 8504 *Methods of adhesion test for metallic coatings*
- JIS K 0050 *General rules for chemical analysis*
- JIS K 0115 *General rules for molecular absorptiometric analysis*
- JIS K 0119 *General rules for X-ray fluorescence spectrometric analysis*
- JIS K 8001 *General rule for test methods of reagents*
- JIS Z 2251 *Knoop hardness test — Test method*
- JIS Z 3282 *Soft solders — Chemical compositions and forms*
- JIS Z 9031 *Random sampling methods*