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Electroplated coatings of zinc on iron or steel

ICS 25.220.40

Descriptors : metal coatings, coatings, electroplating, zinc, iron, steels, metal plating,
corrosion protection

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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 8610:1991** is replaced with **JIS H 8610:1999**.

Attention is drawn to the possibility that some parts of this Standard may conflict with a patent right, application for a patent after opening to the public, utility model right or application for registration of utility model after opening to the public which have technical properties. The relevant Minister and the Japanese Industrial Standards Committee are not responsible for identifying the patent right, application for a patent after opening to the public, utility model right or application for registration of utility model after opening to the public which have the said technical properties.

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Electroplated coatings of zinc on iron or steel

Introduction This Japanese Industrial Standard has been prepared based on the corresponding International Standard, which is listed in Remarks of **1 Scope**, without any modification of the technical contents on the corresponding parts, but some items, which are not specified in the corresponding International Standard, are supplemented in this Japanese Industrial Standard.

1 Scope This Japanese Industrial Standard specifies electroplated coatings (hereafter referred to as "coating") of zinc on the significant surface of iron or steel basis metal for the purpose of preventing corrosion.

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

ISO 2081: 1986 *Metallic coatings — Electroplated coatings of zinc on iron or steel*

Informative reference: When chromate conversion coatings are applied for the purpose of preventing corrosion, the procedures shall conform to **JIS H 8625**.

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

JIS H 0400 *Glossary of terms used in electroplating*

JIS H 0404 *Graphical symbol for electroplated coating*

JIS H 8501 *Methods of thickness test for metallic coatings*

JIS H 8504 *Methods of adhesion test for metallic coatings*

JIS H 8625 *Chromate conversion coatings on electroplated zinc and cadmium coatings*

JIS Z 9031 *Random sampling methods*

3 Definitions For the purpose of this Standard, the definitions in **JIS H 0400** apply, and the rest of the terms are as follows.

- a) **significant surface** The surface of the parts which is plated or to be plated and for which the coating is essential for performance and appearance.
- b) **local thickness** The average of measurements carried out specified times on the reference area.
- c) **minimum local thickness** The minimum value of local thicknesses which have been confirmed on the significant surface of the part.

4 Grade, symbols and service environment

4.1 Grade and symbols

- a) **Grade** The grades of coatings shall be classified into 6 grades according to the minimum thickness of coating as shown in Table 1.
- b) **Symbols** The symbols used for coatings shall follow JIS H 0404.

4.2 Service environment, condition of service environment, and symbol

The service environment, condition of service environment, and symbol shall follow JIS H 0404.

Informative reference: When electroplated articles are used for corrosion prevention, the service environments shall be classified as shown in Informative reference Table 1 and indicated with symbols.

Table 1 Grade and its minimum thickness of coating

Unit: μm

Grade	Minimum thickness of coating	Informative reference
		Service condition number of ISO
Grade 1	2	—
Grade 2	5	1
Grade 3	8	2
Grade 4	12	3
Grade 5	20	3
Grade 6	25	4

Informative reference Table 1 Service environment, condition of service environment, and symbols

Service environment	Condition of service environment	Symbols	Informative reference	
			Service condition number of ISO	Example
D	Ordinary indoor environment	D	1	Residence, office, etc.
C	Indoor environment with high humidity	C	2	Bath room, kitchen, etc.
B	Ordinary outdoor environment	B	3	Field, residence area, etc.
A	Outdoor environment with high corrosiveness	A	4	Beach, industrial area, etc.

5 Quality

5.1 Appearance of coatings When being tested according to 9.2, the significant surface of coating shall be free from such defects as roughness, burnt deposits, cracks, pits, exposures of basis metal, and from such signs of inferior adhesiveness as blisters and peeling, and stains, flaws, or others.