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Test methods for abrasion resistance of anodic oxide coatings on aluminium and aluminium alloys— Part 3 : Sand-falling abrasion resistance test

ICS 25.220.20

Descriptors : aluminium, aluminium alloys, protective coatings, oxidation methods,
anodizing, anodic coating, wear resistance, wear tests

Reference number : JIS H 8682-3 : 1999 (E)

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Foreword

This translation has been made based on the original Japanese Industrial Standard established 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 Consequently, **JIS H 8682 : 1993** was withdrawn and the sand-falling abrasion resistance test, which was specified in the withdrawn **JIS H 8682**, has been replaced in this Standard.

This establishment, for the purpose of making it easy to compare Japanese Industrial Standards with International Standards, to prepare the Japanese Industrial Standard which conforms to International Standards, and to propose a draft for International Standard on the basis of Japanese Industrial Standard, has adopted (1) wheel wear test, (2) abrasive jet test, and (3) sand-falling abrasion resistance test, which were specified in the withdrawn **JIS H 8682**, and has made them independent parts as shown in the following new standards.

JIS H 8682-1 *Test methods for abrasion resistance of anodic oxide coatings on aluminium and aluminium alloys—Part 1 : Wheel wear test*

JIS H 8682-2 *Test methods for abrasion resistance of anodic oxide coatings on aluminium and aluminium alloys—Part 2 : Abrasive jet test*

JIS H 8682-3 *Test methods for abrasion resistance of anodic oxide coatings on aluminium and aluminium alloys—Part 3 : Sand-falling abrasion resistance test*

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Test methods for abrasion resistance of anodic oxide coatings on aluminium and aluminium alloys— Part 3 : Sand-falling abrasion resistance test

1 Scope This Japanese Industrial Standard specifies the abrasion resistance test method, which is performed by sand-falling abrasion resistance test, in order to test the anodic oxidation coatings (hereafter referred to as “coatings”) which have been applied to the surface of products⁽¹⁾ of aluminium and aluminium alloys (hereafter referred to as “products”).

Note (1) This Standard does not applied to hard coatings.

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 C 1202 *Circuit testers*

JIS H 0201 *Glossary of terms used in the surface treatment of aluminium*

JIS H 8680-2 *Test methods for thickness of anodic oxide coatings on aluminium and aluminium alloys—Part 2 : Eddy current method*

JIS R 6111 *Artificial abrasives*

3 Definitions For the purpose of this Standard, the definitions in JIS H 0201 apply.

4 Summary Employ the sand-falling abrasion resistance tester, drop abrasives on a test specimen through guiding tube from a definite height, measure the period of time (s) needed until the coating has taken off and the substrate has exposed. Thus abrasion resistance is measured.

5 Apparatus, implements and abrasives The apparatus, implements, and abrasives are as follows.

5.1 Apparatus The sand-falling abrasion resistance tester is composed of, a hopper, funnel, shutter, guiding tube, sample supporting stage and others, and they must satisfy the necessary conditions in Table 1. An example of sand-falling abrasion resistance tester is shown in Fig. 1.