JIS

JAPANESE
INDUSTRIAL
STANDARD

Translated and Published by
Japanese Standards Association

JIS H 8711 : 2000

(ISO 9591 : 1992)

Test methods for stress corrosion cracking on aluminium alloys

ICS 77.060; 77.120.10

Descriptors : testing, stress corrosion, corrosion, cracking, aluminium alloys, light alloys, non-ferrous alloys

Reference number : **JIS H 8711 : 2000 (E)**

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 8711** : 1990 is replaced with **JIS H 8711** : 2000.

This revision puts stress on achieving conformance between the Japanese Industrial Standard and the International Standard, that is employed all the contents of the corresponding International Standard.

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.

Date of Establishment: 1977-04-01

Date of Revision: 2000-06-20

Date of Public Notice in Official Gazette: 2000-06-20

Investigated by: Japanese Industrial Standards Committee
Divisional Council on Non-Ferrous Metals

JIS H 8711:2000, First English edition published in 2001-04

Translated and published by: Japanese Standards Association
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In the event of any doubts arising as to the contents,
the original JIS is to be the final authority.

Test methods for stress corrosion cracking on aluminium alloys

Introduction This Japanese Industrial Standard has been prepared based on **ISO 9591** *Corrosion of aluminium alloys—Determination of resistance to stress corrosion cracking* published in 1992, excluding annexes (informative) 1 to 7, without changing the technical contents.

For helping convenience for utility and understanding of this Standard, normative references to **ISO 9591**, **ISO 7539-1** to **ISO 7539-7** are employed as annexes (informative) 1 to 7 which are supplemented the text of this Standard.

In addition, "Informative references" with dotted underlines are the matters not stated in the original International Standards.

1 Scope

1.1 This Standard specifies a method for the determination of resistance to stress corrosion cracking (SCC) of aluminium alloys.

1.2 This Standard covers the method of sampling, the types of specimens, the loading procedure, the type of environment and the interpretation of results.

1.3 This Standard is aimed at the determination of the resistance to SCC as a function of the chemical composition, the method of manufacture and heat treatment of aluminium alloys.

1.4 This Standard applies to cast and wrought aluminium alloys in the form of castings, semi-finished products, parts and weldments.

1.5 Since most natural and many artificial environments contain chlorides, this Standard can be used to compare the performance of products employed under marine atmospheres and in environments containing chlorides providing that the failure mechanism is not changed. However, the result of this test should not be considered as an absolute criterion for the quality of alloys.

2 Normative references The following standards contain provisions which, through reference in this Standard, constitute provisions of this Standard. If the indication of the year of coming into effect (or the year of publication) is given to these referred standards, only the edition of indicated year constitutes the provision of this Standard but the revision and amendment made thereafter are not applied. The normative references without the indication of the year of coming into effect (or the year of publication) apply limit only to the most recent edition (including the amendment).

ISO 7539-1 : 1987, *Corrosion of metals and alloys—Stress corrosion testing—Part 1 : General guidance on testing procedures.*

ISO 7539-2 : 1989, *Corrosion of metals and alloys—Stress corrosion testing—Part 2 : Preparation and use of bent-beam specimens.*

ISO 7539-3 : 1989, *Corrosion of metals and alloys—Stress corrosion testing—Part 3 : Preparation and use of U-bend specimens.*