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Biaxial tensile testing method for sheet metals using a cruciform test piece

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In the event of any doubts arising as to the contents,
the original JIS is to be the final authority.

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Foreword

This Japanese Industrial Standard has been established by the Minister of Economy, Trade and Industry through deliberations at the Japanese Industrial Standards Committee according to the proposal for establishment of Japanese Industrial Standard submitted by Osaka Science & Technology Center (OSTEC)/Japanese Standards Association (JSA) with a draft being attached, based on the provision of Article 12, paragraph (1) of the Industrial Standardization Act.

Attention is drawn to the possibility that some parts of this Standard may conflict with patent rights, published patent application or utility model rights. The relevant Minister and the Japanese Industrial Standards Committee are not responsible for identifying any of such patent rights, published patent application or utility model rights.

Biaxial tensile testing method for sheet metals using a cruciform test piece

Introduction

This Japanese Industrial Standard has been prepared based on ISO 16842 : 2014, Edition 1, with some modifications of the technical contents.

The dotted underlines indicate changes from the corresponding International Standard. A list of modifications with the explanations is given in Annex JA.

1 Scope

This Standard specifies the method for measuring the stress-strain curves of sheet metals under biaxial tensile stresses using a cruciform test piece having a uniform thickness, fabricated from a sheet metal sample (hereafter referred to as test piece), by applying tensile forces in the orthogonal directions parallel to the centrelines of the test piece.

NOTE The International Standard corresponding to this Standard and the symbol of degree of correspondence are as follows.

ISO 16842 : 2014 *Metallic materials — Sheet and strip — Biaxial tensile testing method using a cruciform test piece* (MOD)

In addition, symbols which denote the degree of correspondence in the contents between the relevant International Standard and JIS are IDT (identical), MOD (modified), and NEQ (not equivalent) according to ISO/IEC Guide 21-1.

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 G 0202 *Glossary of terms used in iron and steel (Testing)*

JIS Z 2241 *Metallic materials — Tensile testing — Method of test at room temperature*

JIS Z 8401 *Rounding of numbers*

3 Terms and definitions

For the purpose of this Standard, the terms and definitions given in JIS G 0202 and JIS Z 2241, and the following apply.

3.1

cruciform test piece