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**Method for evaluation of
tensile properties of metallic
superplastic materials**

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Foreword

This translation has been made based on the original Japanese Industrial Standard established by the Minister of Economy, Trade and Industry through deliberations at the Japanese Industrial Standards Committee according to the proposal of establishing a Japanese Industrial Standard from the Foundation of Osaka Science & Technology Center (OSTEC)/ the Japanese Standards Association (JSA), with a draft of Industrial Standard based on the provision of Article 12 Clause 1 of the Industrial Standardization Law.

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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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Method for evaluation of tensile properties of metallic superplastic materials

Introduction It is necessary to understand the fundamental superplastic properties of metallic superplastic materials to form those materials superplastically. The tensile test specified in this Standard can evaluate the fundamental superplastic properties such as superplastic elongation, deformation stress, strain rate sensitivity exponent (m value), stress-strain relation, deformation stress-strain rate relation.

1 Scope This Japanese Industrial Standard specifies the method for evaluating the tensile properties of metallic superplastic materials which show fine-grained superplasticity (**JIS H 7007**) by conducting the tensile test of flat form and bar form test pieces, under the requirements for superplasticity (**JIS H 7007**).

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 apply.

JIS B 7721 *Verification of the force measuring system of the tensile testing machine*

JIS C 1602 *Thermocouples*

JIS H 7007 *Glossary of terms used in metallic superplastic materials*

JIS Z 2201 *Test pieces for tensile test for metallic materials*

JIS Z 2241 *Method of tensile test for metallic materials*

JIS Z 8401 *Guide to the rounding of numbers*

JIS Z 8704 *Temperature measurement—Electrical methods*

ISO 783 *Metallic materials—Tensile testing at elevated temperature*

3 Definitions For the purposes of this Standard, the definitions and symbols given in **JIS H 7007** and in Table 1 shall apply.