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**Method of measuring discharge
capacity of hydrogen absorbing
alloys for a negative electrode
of a rechargeable nickel-metal
hydride battery**

ICS 29.220.99; 77.150.40

Reference number : JIS H 7205 : 2003 (E)

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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 in accordance with the Industrial Standardization Law.

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.

This Standard may include hazardous materials, methods or apparatus, however, does not cope with all the safety problems. The users of this Standard must have responsibility for security against the adequate safety and the health management, and decision of the appropriate applicable limits in the application of this Standard.

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In the event of any doubts arising as to the contents,
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Method of measuring discharge capacity of hydrogen absorbing alloys for a negative electrode of a rechargeable nickel-metal hydride battery

1 Scope This Japanese Industrial Standard specifies the method of measuring discharge capacity of hydrogen absorbing alloys necessary for designing nickel-metal hydride battery by judging applicability of hydrogen absorbing alloys to the negative electrode of nickel-metal hydride battery.

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 (including amendments) indicated below shall be applied.

JIS B 7411 *Solid-stem general purpose liquid-in-glass thermometers*

JIS C 1102-2 *Direct acting indicating analogue electrical measuring instruments and their accessories Part 2 : Special requirements for ammeters and voltmeters*

JIS H 7003 *Glossary of terms used in hydrogen absorbing alloys*

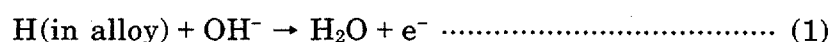
JIS H 7201 *Method of determining the PCT relations of hydrogen-absorbing alloys*

JIS Z 8401 *Guide to the rounding of numbers*

JIS Z 8801-1 *Test sieves—Part 1 : Test sieves of metal wire cloth*

3 Definitions For the purposes of this Standard the definitions in **JIS H 7003**, and the following shall apply.

- a) **discharge capacity (C_d)** In a certain sample hydrogen absorbing alloys electrode, a quantity of electricity per unit mass of hydrogen absorbing alloys which is introduced electrically until completion of discharge reaction generally represented by the formula (1) (Ah/kg).



- b) **calculation capacity (C_{calc})** Discharge capacity of sample alloy to be expected from pressure-composition isotherm of sample hydrogen absorbing alloys (hereafter referred to as "sample alloy") (Ah/kg). When the percentage in mass of hydrogen to alloy which is measured from pressure-composition isotherm of sample alloy at 60 °C and 0.5 MPa based on **JIS H 7201** as W , the calculation capacity (C_{calc}) is obtained according to the formula (2).

$$C_{\text{calc}} = 26\,800 \times \frac{W}{100} \dots\dots\dots (2)$$

where, C_{calc} : calculation capacity (Ah/kg)

W : percentage of hydrogen to alloys (%)