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Shore hardness test — Test method

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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 Z 2246:1992 is replaced with JIS Z 2246:2000.

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Shore hardness test—Test method

Introduction There is no standard in ISO which corresponds to this Standard, but this revision has been prepared to conform to the Japanese Industrial Standards of Brinell hardness, Vickers hardness, Rockwell hardness and Knoop hardness which have been conformed to the ISO standards.

1 Scope This Japanese Standard Industrial specifies shore hardness test method for metallic materials mainly. The limit of hardness tested here is 5 to 105 HS.

2 Normative references The following standards contain provisions which, through reference in this Standard, constitute provisions of this Standard. The most recent editions (including amendments) of the standards indicated below shall be applied.

JIS B 0601 *Surface roughness—Definitions and designation*

JIS B 7727 *Shore hardness test—Verification of testing machines*

JIS B 7731 *Shore hardness test—Calibration of reference blocks*

JIS Z 8401 *Guide to the rounding of numbers*

3 Principle Shore hardness is defined as the value proportionating to the jumping height obtained when the diamond hammer is dropped on the test piece from the specified height.

4 Symbol, definition and marking Symbols, definitions and markings are as follows.

a) The symbols and definitions used for Shore hardness shall be as shown in Table 1.

Table 1 Symbols and definitions

Symbols	Definitions
HS	Shore hardness (hardness symbol) $HS = k \frac{h}{h_0}$
h	Height made by jumping of hammer
h_0	Height from which a hammer is dropped
k	Factor needed to convert height ratio (h/h_0) to Shore hardness. This varies depending on the type of a measuring tube. See Annex 1 Table 1 to JIS B 7727.
HSC	Hardness symbol, C type tester = hardness by visual reading type
HSD	Hardness symbol, D type tester = hardness by indicator type
VHS	Hardness symbol, converted Shore hardness, converted value from Vickers hardness, conversion formula shall follow JIS B 7731.

Remarks : In the expression of hardness, the symbols of hardness, HS, HSC, HSD and VHS, are treated as quasi-unit symbols. The values expressed by different symbols given in the above-mentioned may be arranged by the