



JAPANESE
INDUSTRIAL
STANDARD

Translated and Published by
Japanese Standards Association

JIS B 7727 : 2000
(JTM/JSA)

**Shore hardness test—Verification of
testing machines**

ICS 77.040.10

Descriptors : test equipment, hardness testing, scleroscope hardness measurement

Reference number : JIS B 7727 : 2000 (E)

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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, as the result of proposal for revision of Japanese Industrial Standard submitted by Japan Testing Machinery Association (JTM)/Japanese Standards Association (JSA) with the draft being attached, based on the provision of Article 12 Clause 1 of the Industrial Standardization Law applicable to the case of revision by the provision of Article 14. Consequently **JIS B 7727 : 1993** is replaced with this Standard.

Date of Establishment: 1952-12-24

Date of Revision: 2000-07-20

Date of Public Notice in Official Gazette: 2000-07-21

Investigated by: Japanese Industrial Standards Committee
Divisional Council on Precision Machinery

JIS B 7727 : 2000, First English edition published in 2004-03

Translated and published by: Japanese Standards Association
4-1-24, Akasaka, Minato-ku, Tokyo, 107-8440 JAPAN

In the event of any doubts arising as to the contents,
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Printed in Japan

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Shore hardness test— Verification of testing machines

1 Scope This Japanese Industrial Standard specifies the indirect verification method of the Shore hardness testing machine for metallic materials.

Remarks : In this Standard, only the indirect verification method is specified. The direct verification method which verifies the elements of testing machines (see Annex 1) is not specified. This is because of the characteristics of the Shore hardness testing machine as a comparative measuring machine, and also because the technical effects obtained by the direct verification using the Shore hardness testing machine are very limited.

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) shall be applied.

JIS B 7731 *Standardized blocks of Shore hardness*

JIS Z 2246 *Method of Shore hardness test*

3 General conditions Prior to the verification of the testing machines, the following items shall be checked:

- a) The testing machines shall be set appropriately.
- b) The handle operation of pressing the measuring cylinder on the test specimen shall subject the test specimen a stable load of approximately 200 N.
- c) The hammer shall be capable of making proper impact.

Remarks : The rotation of the operating ring of the indicating type testing machine (Type D, see Annex 1) shall be appropriate.

4 Indirect verification The indirect verification shall be performed as follows:

- a) The verification temperature shall be $23\text{ }^{\circ}\text{C} \pm 5\text{ }^{\circ}\text{C}$. If verified outside of this range, the temperature shall be described in the report.
- b) The hardness reference block used for the verification shall be calibrated by **JIS B 7731**.
- c) The hardness indicator scale of calibrating points shall be five points in total and approximately 30, 50, 60, 80 and 95 HS.
- d) For each reference block, the hardness shall be measured at five points.
- e) The testing machine repeatability at each verifying scale shall be the difference between the maximum value and the minimum value. The tolerance of repeatability shall be in accordance with Table 1.