

JIS

JAPANESE INDUSTRIAL STANDARD

Method of hardness test for brake linings, pads and clutch facings of automobiles

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Method of hardness test for brake linings, pads and clutch facings of automobiles

1 Scope This Japanese Industrial Standard specifies method of Rockwell hardness test for drum brake lining, disc brake pads and clutch facings of automobiles (hereafter referred to as "linings", "pads" and "facings", respectively).

Remarks 1 The hardness obtained by this method is a kind of indentation hardness and it is obtained based on the depth of indentation remaining after removal of the test load.

2 The following standards are cited in this standard :

JIS K 7202 *Method of Rockwell hardness test for plastics*

JIS Z 8401 *Rules for rounding off of numerical values*

JIS Z 9041 *Presentation and reduction of data*

2 Definitions For the purpose of this Standard the following principal definitions shall apply :

(1) **Rockwell hardness** The value of hardness obtained from the difference h (mm) between the depths of penetration of the indenter under the first and second applications of the standard load when the standard load is first applied to the specimen using the indenter, then the test load is applied and then the load is returned to the standard load, by means of the following formula :

$$\text{Rockwell hardness (HR)} = 130 - 500h$$

(2) **scale** The symbol which denotes combination of the type of indenter, test load and hardness calculation formula, in a Rockwell hardness expression.

3 Temperature and humidity for testing In general, the test shall be carried out in a room at a temperature 23 ± 2 °C, and a relative humidity (50 ± 5) %.

4 Equipment and apparatus

4.1 Testing machine The Rockwell hardness testing machine shall be as follows :

(1) The testing machine shall comply with Annex 1 to JIS K 7202.

Remarks 1 When the main parts of the testing machine have been disassembled, reassembled, modified or when the indenter has been replaced, it shall be verified again that the test machine is complying with Annex 1 to JIS K 7202.

2 Even if the testing machine is not subjected to the above treatment, the indirect inspection specified in 3.5 of Annex 1 to JIS K 7202 shall be carried out at certain intervals, appropriate to the frequency of use, to confirm that the overall error of the testing machine is within the permissible value.