

JIS

JAPANESE INDUSTRIAL STANDARD

Method of Abrasion Test for Building
Materials and Part of Building
Construction (Abrasive-Paper Method)

JIS A 1453-1973
(Reaffirmed: 1983)

Translation without guarantee
In the event of any doubt arising, the original
standard in Japanese is to be evidence

Translated
by
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1. Scope

This Japanese Industrial Standard applies to building materials and parts of building construction and specifies the testing method to evaluate the degree of abrasion of the test piece by an abrasive paper by applying abrasive wheels ⁽¹⁾ attached with abrasive paper to the test piece mounted on a rotating horizontal disc, hereinafter referred to as the "rotating disc", under the testing load, as well as the method of evaluating the test results.

Note ⁽¹⁾ The abrasive wheel means a rubber ring attached with abrasive paper.

Remark: The abrasive paper used for the abrasive paper method and the method of examination on its quality are specified in Appendix.

Reference Standards:

JIS H 4321-Zinc Plates

JIS K 6301-Physical Testing Methods for Vulcanized Rubber

JIS K 6503-Animal Glues and Gelatins

JIS P 8124-Determination of Basis Weight of Paper

JIS R 6111-Artificial Abrasives

JIS Z 8703-Standard Atmospheric Conditions for Testing

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2. Abrasion Test Apparatus

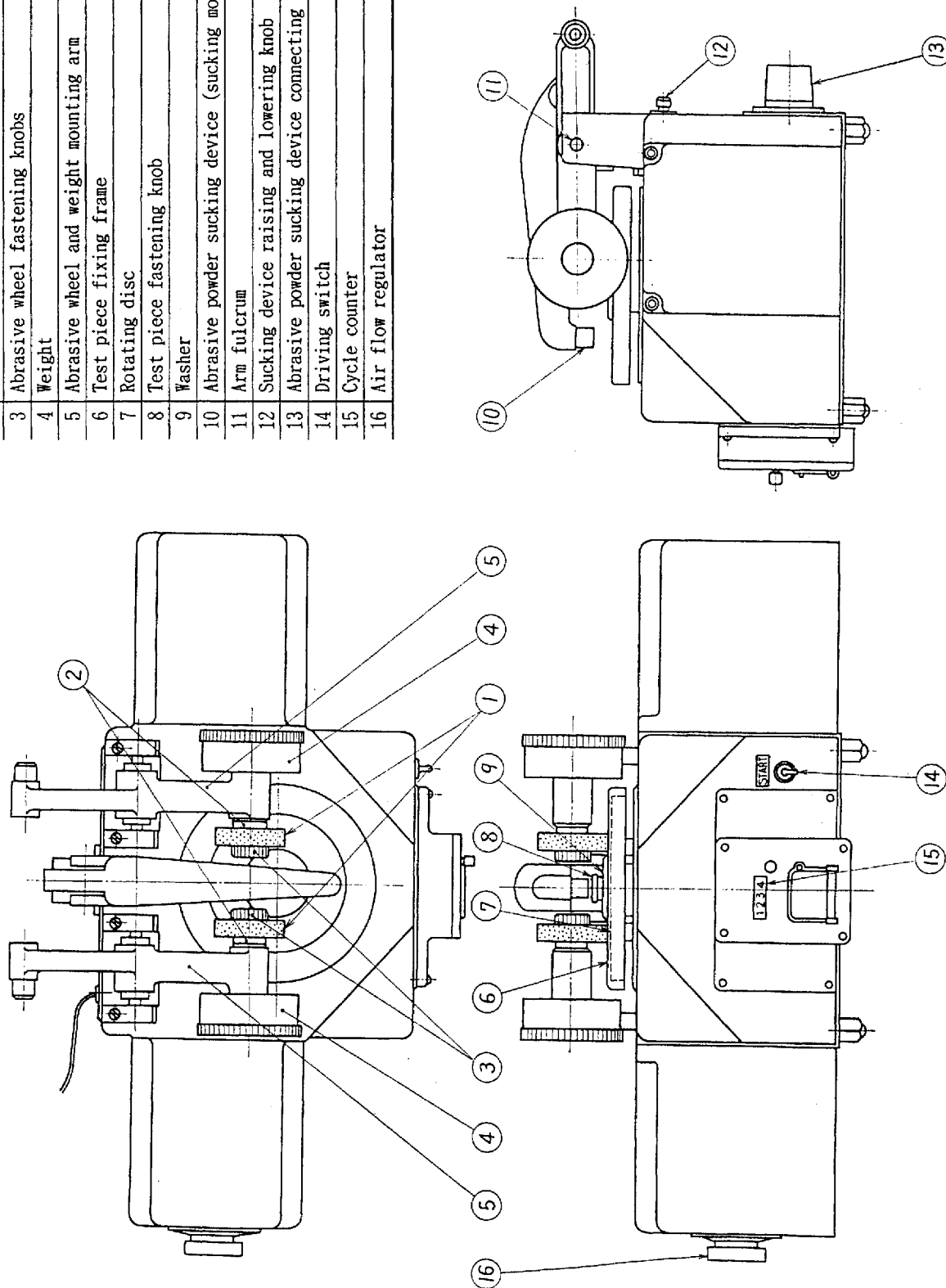
2.1 The abrasion test apparatus used in this test shall be constituted by the following parts, and the summary of its mechanism is shown in Reference Figure.

- (1) Driving unit proper
- (2) Rotating disc and test piece fixing frame
- (3) Cycle counter
- (4) Abrasive wheel, weights, and mounting arms therefor.
- (5) Abrasive powder sucking device

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Reference Figure

No.	Remark
1	Abrasive wheels
2	Abrasive wheel mounting axes
3	Abrasive wheel fastening knobs
4	Weight
5	Abrasive wheel and weight mounting arm
6	Test piece fixing frame
7	Rotating disc
8	Test piece fastening knob
9	Washer
10	Abrasive powder sucking device (sucking mouth)
11	Arm fulcrum
12	Sucking device raising and lowering knob
13	Abrasive powder sucking device connecting
14	Driving switch
15	Cycle counter
16	Air flow regulator



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2.2 The construction of respective parts of the abrasion test apparatus shall be in accordance the specifications of Table 1.

Table 1

Parts		Specification
Arm (for mounting abrasive wheel and weight)		Perfect balance shall be obtained when a weight of 250 g is placed on the other end of the arm without attaching a weight and the abrasive wheel to the arm.
Abrasive wheel mounting axis		The outer diameter shall be $15.875^{+0}_{-0.02}$ mm, and no play nor rotational deflection in the axial direction shall be present.
Rotating disc	Rotating speed	60 ± 2 rpm
	Rotational deflection	The vertical deflection of the upper surface of the rotating disc at the periphery shall be within 0.08 mm.
Weight		The tolerances on weight shall be ± 0.1 % of the nominal weight.
Cycle counter		The cycle counter shall be capable of indicating the cumulative number of revolutions up to 9999, and operate accurately; in addition, the automatic stopping mechanism shall work securely.
Driving of apparatus		When the apparatus is driven in the condition that a rubber sheet is fixed on the rotating disc instead of the test piece and rubber rings are placed on it, with a test weight of each 1000 g, the apparatus shall operate smoothly and accurately.
Abrasive powder sucking device	Sucking mouth	Inner diameter: 8 ± 0.1 mm
	Air flow rate	The air flow rate obtained by the sucking device when the distance between the sucking mouth and the test piece is 3 mm shall be 0.5 ± 0.1 m ³ /min.