Slurry Abrasion Tester

test method

Covers the laboratory procedures for determining the resistance of metallic materials to scratching abrasion by means of the wet sand/rubber wheel test. It is the intent of this procedure to provide data that will reproducibly rank materials in their resistance to scratching abrasion under a specified set of conditions.

slurry abrasion tester

The Koehler K92800 test rig is designed such that a standard specimen is pressed against a rubber wheel with a known force. The test area is submerged in wet abrasive slurry. The wheel carries grip particles across the contact face in the direction of wheel rotation.

Three wheels are required with nominal shore A durometer hardness of 50, 60, and 70 with a hardness tolerance of ±2.0. A run-in is conducted with the 50 durometer wheel followed by the test with the 50, 60 and 70 durometer wheels in order of increasing hardness.

Specimens are weighed before and after each run and the loss in mass is recorded. The logarithms of mass loss are plotted as a function of measured rubber wheel hardness and a test value is determined from a least square line as the mass loss at 60.0 durometer.

It is important to convert the mass loss to volume loss, due to wide differences in density of materials, in order to obtain a ranking of materials. Abrasion is then reported as volume loss in cubic millimeters.

ordering information

catalog no.	description
K92800	Slurry Abrasion Tester *Please specify voltage requirements when ordering*
K92800-1	Test Wheel, 7” dia, 68-71 Shore A
K92800-2	Test Wheel, 7” dis, 58-61 Shore A
K92800-3	Test Wheel, 7” dia, 48-52 Shore A
K92800-4	Wheel Dressing Tool
K92800-5	Replacement Nozzle

K92800 Slurry Abrasion Tester

specifications

Conforms to the specifications of:
ASTM G105, B611
Abrasive Slurry:
Mixture of alumina (1.5kg) and water (0.94kg)
Wheel Speed:
100 to 250 rpm continuously variable
Test Load:
G105: 100 N to 30 0N
B611: 100 N to 200 N
Wheel Diameter:
G105: 178 mm x 12.7 mm
B611: 169 mm x 12.7 mm
Neoprene Rubber Wheel Shore Hardness:
50, 60, and 70 ±2
Revolution Controller:
Microprocessor based digital preset counter
1 rev to 9999 revs

Features

- Compliant to ASTM G10 and B611
- Preset Revolution Counter
- Variable Speed
- Normal Load Calibration
- Frictional Force Measurement

Included Accessories

Slurry Tank
Slurry Connection Container
Loading arm with lifting cam and easily changeable dead weights
Neoprene rubber wheels

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