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CAI-70 WEST CERCHAR ABRASIVITY INDEX TESTER

ASTM D7625-10



Description

The CAI-70 is a precision instrument designed for the accurate determination of the rock abrasivity index (CAI), which is a crucial parameter used to classify rock materials based on their abrasiveness. The CAI is a dimensionless measurement derived from assessing the wear on a HRC55 Rockwell Hardness steel stylus tip after it has been employed to abrade a specimen with a normal force of 70N. This apparatus comprises several key components, including a stationary stylus, a deadweight (70N) positioned atop the stylus, a sturdy load frame, a robust vice for securely clamping the rock sample, and a cross table with two adjustable axes to align the specimen precisely along both horizontal axes. Additionally, the device features a graduated knob that allows for precise control of the scratch distance with an accuracy of 0.01 mm. Optional accessories include an indenter visualization system, spare indenters, and a sharpening tool. The indenter visualization system consists of a digital camera with support for the indenter and inspection software, which reveals the amount of wear on the stylus and correlates it to the abrasiveness index (CAI). The sharpening tool is used to quickly restore a worn stylus for subsequent scratch tests.

Specifications

Standard	ASTM D7625-10.
Load	70 N
Maximum specimen height	150 mm (6 inches)
Maximum specimen diameter	76 mm (3.0 inches)
Scratch distance precision	0.01 mm
Steel Stylus	Rockwell Hardness HRC 54/56
Weight	25 kg
Dimensions (WxLxH)	330 x 500 x 500 mm

Benefits

ASTM-compliant, West model

Easy manual handling

Features precision slide for smooth movement of the rock specimen over the required scratch distance

Video presentation:

