

Impact - Izod, Charpy, Multiaxial impact

Principle

Izod and Charpy testing can be used to measure the material's resistance to impact from a swinging pendulum. These tests can be used as a means to check for a material's impact properties or to compare a material's general toughness. This type of testing can be performed on both notched and unnotched specimens for both Izod and Charpy.

Multi-axial impact is a high speed impact test used to determine the toughness of a material. This test can provide load-deflection curves and total energy absorption. It is often used for applications involving high energy impact scenarios.

Capabilities

Izod and Charpy

- Izod - ASTM D256, ASTM D4812, ISO 180
- Charpy - ISO 179
- Notched and unnotched specimens
- Testing temperatures (-40°C to 23°C)

Multi-Axial Impact

- ASTM D3763
- 4" x 4" plaques
- Testing temperatures (-40°C to 100°C)

Equipment

	Equipment Type	Information
	Izod/Charpy Zwick Automation System	• Kuka robotic arm • Three impact testers • 1 CMU (cross-section measurement unit) • 1 TMU (depth under the notch measurement unit) • Notch and break detection • Hammers ◦ Izod: 2.75 J, 5.5J, 11J ◦ Charpy: 2J, 5J, 7.5 J, 15J
	Zwick HIT25P Impact Tester	• Izod/Charpy • Hammers ◦ Izod: 2.75 J, 5.5J, 11J ◦ Charpy: 2J, 5J, 7.5 J, 15J • Testing temperatures (-40°C to 23°C)

	CEAST 9350 Multi-axial Impact	• Multi-axial impact tester with automatic sample loader • Environmental chamber (-40° C to 100°C) • Load-deflection curves
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Test Codes

AP-RD-MECH-IMPACT

AP-RD-DYNATUP-RT

AP-RD-DYNATUP-NA