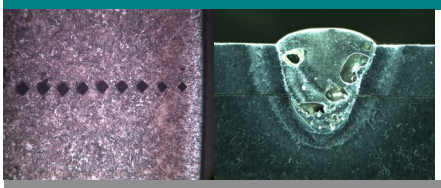
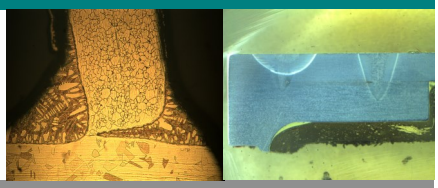

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ASTM E-1356

Test Method for Assignment of the Glass Transition Temperatures by DSC

This test method covers the assignment of the glass transition temperatures of materials using DSC. It is applicable to amorphous materials or to partially crystalline materials containing amorphous regions, that are stable and do not undergo decomposition or sublimation in the glass transition region. The normal operating temperature range is from room temperature to 500°C. This test method involves continuously monitoring the difference in heat flow into, or temperature between, a reference material and a test material when they are heated or cooled at a controlled rate through the glass transition region of the test material and analyzing the resultant thermal curve to provide the glass transition temperature.

DSC provides a rapid test method for determining changes in specific heat capacity in a homogeneous material. The glass transition is manifested as a step change in specific heat capacity. For amorphous and semi crystalline materials the determination of the glass transition temperature may lead to important information about their thermal history, processing conditions, stability, progress of chemical reactions, and mechanical and electrical behavior. It is especially useful for research, quality control and specification acceptance.

(E1356, E-1356, E 1356)

ASTM Standard E1356, 2007, “Test Method for Assignment of the Glass Transition Temperatures by DSC,” ASTM International, West Conshohocken, PA, 2007, DOI: 10.1520/E1356-03, www.astm.org.

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