

Material Mechanical Characterization Method for Multiple Strains and Strain Rates

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Technology Summary

Characterization of strain rate dependent properties of a material requires a number of tests where each tests covers only one distinct strain rate magnitude. This invention enables measurement of material behavior under multiple strain rates using a single specimen in one test. The method combines specially shaped specimens and 3D Digital Image Correlation. It enables application of prescribed strain at high rate of deformation and enables measurement of material state evolution under different rates.

Inventor

SIMUNOVIC, SRDJAN

Computer Science and Mathematics Div

Licensing Contact

SIMS, DAVID L

UT-Battelle, LLC

Oak Ridge National Laboratory

Rm 124C, Bldg 4500N, MS: 6196

1 Bethel Valley Road

Oak Ridge, TN 37831

Office Phone: (865) 241-3808

E-mail: SIMSDL@ORNL.GOV

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