

# Mechanical Properties of Rocks under Strong Impact Loading

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## Abstract

A high velocity impact experiment is conducted with a gas gun. The stress waves of sandstone and granite are measured in the experiment. The experimental dates of stress-distance-time are analyzed with Lagrangian method. The dynamic stress-strain relations of rocks have been gotten. Some mechanical properties and deformation characteristics of rocks have been understand.

**Key words** dynamical property of rock, stress-strain relation, Lagrangian analysis, surface fitting