

THE BEHAVIOR OF ROCKS IN THE NEAR ZONE OF AN EXPLOSION

Serge V. Krasavin
University of Illinois
Champaign-Urbana, Illinois

ABSTRACT

The behavior of rocks subjected to dynamic loading conditions under explosion includes sufficient information about hydrodynamic variables such as pressure P , mass velocity U , internal energy E , specific volume V and density ρ as functions of time. Measurement of dynamic characteristics in compressed media with manganin wire sensors has become common in the past few years, but the experimental data for certain media, such as rock, do not provide an exhaustive description of rock's behavior in the near zone of an explosion, which is highly responsible for the transformation of energy of explosives.