

ESTIMATION OF STRAIN AND STRAIN ENERGY IN THE RELEASE OF AN AVALANCHE BY AN EXPLOSIVE DEVICE

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Abstract

Strain and strain energy at the time of explosive release of an avalanche has been modeled in the present investigation. Basic concepts of explosive pressure in underwater explosion have been used in getting appropriate strain and strain energy relations in the present studies. Equations related to the present investigations have been suitably modified with respect to snow as material selection. Variation of strain and strain energy has been observed with peak pressure (P_m), length of snow slab (L), Elastic modulus (E), sound velocity (V_s), snow density ($\tilde{\rho}$), and Poisson's ratio (ν). The results have been quantified with the physics of flows and deformations and found that the results of the present investigation agrees with the general quantum behavior of the individual parameter.