Rayleigh's Wave Propagate in Semi-infinite Elastic Medium

Pooja Rani

Department of mathematics, Chandigarh university, Mohali (Punjab), India-140413

A B S T R A C T

This paper introduces the study of propagation of the Rayleigh's wave on the free surface. when Rayleigh waves propagate on the semi-infinite plane it shows the retrograde motion at the shallow depths but becomes propagate at large depths. They are always non-dispersive in nature. The specific solution of frequency is connected with the boundary condition of the Rayleigh wave. The equation of frequency is used to get the non-dimensional speed of the Rayleigh wave. In this paper we also define that how Geologists and geophysicists can examine and define heterogeneity inside the earth's crust in many ways. Physical parameters like seismic velocities and rock density are measured as part of geophysical characterization. Grain size distribution and Mineralogical composition are two aspects of geological characterization that are influenced by the processes that formed the rock.

Keywords: Rayleigh Wave, boundary conditions, dispersive nature, Heterogeneity, Reflection and transmission of Rayleigh wave.

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