

## Reflection of *SH* waves from an inhomogeneous half-space

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### ABSTRACT

The problem of the reflection of *SH* waves at the interface between two half-space is considered. Plane waves are incident from the upper medium which is supposed to be homogeneous. The rigidity and density in the lower medium vary with the depth as follows :

$$\begin{aligned}\mu &= \mu_0 (1 + bz)^{p+2}, \\ P &= P_0 (1 + bz)^p\end{aligned}$$

Exact solution of the equation of motion is utilized to calculate the reflection coefficient. The modulus and phase of reflection coefficient is computed for  $p=0, 1, 2$ . These are compared with the corresponding results when both the media are homogeneous. It is found that the inhomogeneity has a distinct effect on the modulus as well as on the phase of the reflection coefficient.