

The Photon Attenuation Coefficients and Thermal Conductivity of Volcanic Rocks

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The linear attenuation coefficient ($\mu \text{ cm}^{-1}$) of photon propagation and the thermal conductivity have been determined for some volcanic rocks, which are commonly used materials in building constructions especially as a cladding stone. The linear attenuation coefficient calculated using XCOM is compared with the measurement. Thermal conductivity has been extracted from P-Wave velocity measured using a Pundit apparatus. The relation between thermal conductivity and the attenuation coefficient are also investigated.

Key words: Thermal Conductivity; Attenuation Coefficients; Radiation Shielding.