General Expressions of Internal Deformation Fields due to a Point Dislocation Source in a Multi-Layered Elastic Half-Space

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So far, internal deformation fields due to a point dislocation source in a multi-layered elastic half-space has been calculated with the forward-potential algorism (Sato, 1971). But, the deformation fields in the region deeper than the source can not have been obtained accurately because of numerical instability. Matsu'ura et al. (1997) have solved this problem by introducing the backward-potential algorism, and obtained the concrete expression of internal deformation fields for a two-layered elastic half-space. In this study, generalizing the expression for a two-layered elastic half-space, we derived the concrete expression of internal deformation fields due to a point dislocation source in a multi-layered elastic half-space.