

Hypersingular integral equation for multiple curved cracks problem in plane elasticity.

ABSTRACT

The complex variable function method is used to formulate the multiple curved crack problems into hypersingular integral equations. These hypersingular integral equations are solved numerically for the unknown function, which are later used to find the stress intensity factor, SIF, for the problem considered. Numerical examples for double circular arc cracks are presented.

Keyword: Hypersingular integral equations; Multiple curved cracks; Stress intensity factor.