

Interaction between inclined and curved cracks problem in plane elasticity

ABSTRACT

Interaction between inclined and curved cracks are studied and the hypersingular integral equations for the problem in plane elasticity are obtained using the complex variable functions method. The curved length coordinate technique and a suitable quadrature rule are used to solve the algebraic equations numerically for the unknown function, which are later used to find the stress intensity factor (SIF).

Keyword: Complex variable function method; Curved length coordinate method; Hypersingular integral equation; Stress intensity factor