Azer B. MUSTAFAYEV

GRACK NUCLEATION IN THICK-WALLED CYLINDER

Abstract

Mathematical model of crack-formation in an isotropic thick-walled cylinder under the conditions of plane deformation is constructed. The solution of a problem on equilibrium of thick-walled cylinder with germ crack is reduced to the solution of a singular integral equation with Cauchy type kernel. Condition of crack appearance is formulated allowing for criterion of limit opening of prefracture zone focus.