A PROBLEM OF PLANE ELASTICITY FOR A RECTANGULAR DOMAIN WITH A CURVILINEAR QUADRANGULAR HOLE

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In this paper we consider a plane problem of elasticity for a rectangular domain with a curvilinear quadrangular hole, which is composed of rectilinear segments (parallel to the abscissa axis) and arcs of one and the same circumference. The problem is solved by the methods of conformal mappings and boundary value problems of analytic functions. The sought complex potentials are constructed effectively (in the analytical form). Estimates of the obtained solutions are derived in the neighbourhood of angular points.