

The problem of finding of an equally strong contour for a rectangular plate weakened by a hole and the notches at the vertices

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The problem of finding of the equally strong contour of the plane theory of elasticity for a rectangular plate weakened by a hole and notches at the vertices. The problem consist in finding analytical forms of boundaries of equally strong contour under the condition that the tangential normal stress takes on the contour value is a constant. Using complex analysis methods the complex potentials and the equation of the equally strong contour contour are constructed effectively (in analytical form). The case of cyclic symmetry (square) is studied and investigated in detail.