ANALOGUE OF SAINT-VENANT'S PRINCIPLE FOR THE ONE SPECIAL TYPE 4-TH ORDER ELLIPTIC EQUATION AND ITS APPLICATIONS

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Abstract

In the present article a priori energetic estimates, analogue of Saint-Venants principle in theory of elasticity, for the solutions of Dirichlet problem for special type 4-th order elliptic equation with variable coefficients are proved. On the basis of this estimates asymptotic behaviour of solutions of the corresponding boundary value problem are studied, under weak assumptions regarding the structure of the boundary in the neighbourhood of irregular boundary points.