

SOLUTION OF BOUNDARY VALUE PROBLEMS OF THE COUPLED THEORY OF ELASTICITY FOR POROUS SOLIDS

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The boundary value problems of the coupled linear theory of elasticity are solved for isotropic one-porous materials of a specific shape. Special representations of the general solution of a system of differential equations in terms of elementary functions are constructed. With the help of these representations, solutions to problems are obtained explicitly, in the form of absolutely and uniformly converging series. The question of the uniqueness of regular solutions of the problems under consideration is investigated.