

ANALYTICAL SOLUTION OF INTERIOR BOUNDARY VALUE PROBLEMS OF ELASTICITY FOR THE DOMAIN BOUNDED BY THE PARABOLA WITH THE NORMAL OR TANGENTIAL LOADS

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Analytical (exact) solution of two dimensional problems of elasticity are constructed in the parabolic coordinates in the domain bounded by coordinate lines of the parabolic coordinate system. Here represent internal boundary value problems of elastic equilibrium of the homogeneous isotropic body bounded by coordinate lines of the parabolic coordinate system, when on the parabolic border normal or tangential stresses are given. Exact solutions are obtained using the method of separation of variables. Using the MATLAB software numerical results are obtained and graphs of the mentioned boundary value problems are constructed.