

THE CONVERGENCE OF AN ITERATION METHOD FOR THE PLATE UNDER THE ACTION OF SYMMETRIC LOAD

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The boundary value problem for Timoshenko system of a nonlinear ordinary differential equations is considered for the functions w, w' and ψ . The functions w and ψ are expressed explicitly through the function w' for which a nonlinear integro-differential equation with a boundary condition is written. To approximate the problem solution for w' , the Galerkin method is used. It leads to a nonlinear system of algebraic equations that is solved by the Jacobi iteration method. The convergence of the iteration method is established and the error estimate is obtained.