

*ISAAC Conference, 23-27 April, 2007, Tbilisi, Georgia  
Dedicated to the Centenary of I.Vekua*

**ON THE SOLVABILITY OF ONE BOUNDARY VALUE PROBLEM OF  
GEOMETRICALLY NONLINEAR THEORY OF PLATES**

***Mosia M.***

Zugdidi Branch of  
Iv. Javakhishvili Tbilisi State University

We consider isotropic geometrically nonlinear plate for I.Vekua's system. Using theory of complex variable and small parameter methods of Siniorini is solve boundary value problem for infinite set in case of  $N=0$  approximation. In particular, we consider the case then volume forces (acting on the body) and stress tensor are analytic functions of small parameters, in this case the solution can be expressed by the same type series.

The getting results are compare with the solution of analogy problem of linear theory.