

Formulation of the Initial Boundary Value Problems in the Theory of Multilayer Thermoelastic Thin Bodies in Moments. III

Mikhail Nikabadze, Tamar Moseshvili, Armine Ulukhanian, Ketevan Tskhakaia, Nodar Mardaleishvili

Abstract: Various variants of equations of motion in moments with respect to orthogonal polynomial systems are obtained. The interlayer conditions are written down under various connections of adjacent layers of a multilayer body. Formulation of the initial boundary value problems in the theory of multilayer thermoelastic thin bodies in moments are given. Note that the analytic method with the use of the Legendre polynomial system in constructing the one-layer thin body theory and multilayer thin body theory can be successfully used in constructing any thin body theory. Despite this, the classic theories constructed by this method are far to be complete, and the more so, the micropolar theories and theories of other reology are.

-
- ¹⁾ Mikhail Nikabadze, Professor: Lomonosov Moscow State University, Department of Mechanics and Mathematics, Leninskie Gory, 1, Moscow, RUSSIA (nikabadze@mail.ru).
 - ²⁾ Tamar Moseshvili, Ph.D.: Akaki Tsereteli Kutaisi State University, Tamar Mephe street 59, Kutaisi 4600, GEORGIA (tamarmoseshvili@yahoo.com).
 - ³⁾ Armine Ulukhanian, Ph.D.: Bauman Moscow State Technical University, Baumanskaya 2-ya, str., 5, Moscow 105005, RUSSIA (armine_msu@mail.ru).
 - ⁴⁾ Ketevan Tskhakaia, Ph.D.: Akaki Tsereteli Kutaisi State University, Tamar Mephe street 59, Kutaisi 4600, GEORGIA (spectri@gmail.com).
 - ⁵⁾ Nodar Mardaleishvili, Ph.D.: Akaki Tsereteli Kutaisi State University, Tamar Mephe street 59, Kutaisi 4600, GEORGIA (nodarmard3@mail.ru).