

# TO MODELING OF THERMODYNAMIC NONSHALLOW ELASTIC SHELLS, APPLICATION OF COMPLEX ANALYSIS AND HIGH ORDER FINITE ELEMENT METHOD

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## A b s t r a c t

We consider the problem of mathematical modeling of piezoelectric, electrical conductivity and viscous elastic multilayer nonshallow shells by 2-Dim von Kármán-Koiter-Ciarlet type refined theories. The static part of corresponding models represent boundary value problems for nonlinear systems of 2Dim partial integro-differential equations with Monge-Ampere operators and Poisson brackets. As a typical example we consider some details when shells presents longitude thin walled tube. The trial of applied some schemes of theory of analytical functions] and a projective method will be given. For latest case we construct high order accuracy finite element method .This one would be used new algorithms which represent efficient decision of 13-rd Hilbert problem for multivariable polynomials of Stone-Weierstrass type.