
Simulation of elastic foundation deformation in composite cylindrical shell

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The article considers the elastic properties calculation method (compliance coefficients) of continuous elastic foundation, which is the link between the inner and outer cylindrical shells forming the composite shell. The method takes into account the two shells geometry and the physical-mechanical properties of the elastic foundation material. The method described presents the plane problem of the elasticity theory as a system with the finite number of degrees of freedom in the transverse direction, while maintaining the infinite number of degrees of freedom in the longitudinal direction.

Keywords: composite shell, inner shell, outer shell, continuous elastic foundation, generalized model, single-layer model, displacement method, equilibrium condition, compliance factor.

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