On a Static Problem for the Two Layered Prismatic Shell-Like Composites

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Static problem of two layered prismatic shell-like composite [1,2] in zero approximation of Vekua's hierarchical models [3] is considered, when on the upper surface of the two-layered composite stresses are given

$$Q_{\underset{\nu}{(\pm)}\, i}(x_1, x_2, \overset{(+)}{h}(x_1,x_2), t) = X_{i\beta}(x_1, x_2, \overset{(+)}{h}(x_1,x_2), t)\, \overset{(+)}{\nu}_{\beta} + X_{33}(x_1, x_2, \overset{(+)}{h}(x_1,x_2), t)\, \overset{(+)}{\nu}_{3}, \quad i = 1,2,3,$$

while on the lower surface of the composite displacements are given

$$u_i(x_1, x_2, \overset{(-)}{h}(x_1,x_2), t), \qquad i = 1,2,3.$$

The questions of transmission conditions between the two-layers are explored.

References

[1] N. Chinchaladze, On a cusped double-layered prismatic shell, Proceedings of I. Vekua Institute of Applied Mathematics, **64** (2014), 13-23

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[3] I. Vekua, Shell Theory: General Methods of Construction, Pitman Advanced Publishing Program, Boston-London-Melbourne, 1985