Cylindrical Shells of Finite Length under External Pressure

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The problem of large (comparable to the radius of the cross-section) displacements of the cylindrical shell middle surface points under external lateral hydrostatic pressure is stated on the basis of the simple kinematic model and solved by the collocation method over the middle cross-section. The expression for the critical pressure for the elastic shell is derived provided that the sustainable development of the quasistatic process terminates when deflections are small with respect to the mean radius of an undeformed cross-section.

***Keywords*:** *finite length shell, external pressure, large displacements, critical pressure.*

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