Mixed Contact Problem for Prestressed Two Coaxial Cylinders and Layer

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The study is carried out in general for the theory of large initial (finite) deformations and two variants of the theory of small initial deformations within the framework of the linearized elasticity theory with elastic potential of arbitrary structure. In the case of equal roots of the characteristic equation, the mixed contact problem is solved for prestressed two elastic coaxed finite cylinders and layer without taking into account frictional forces. To solve the problem, the Hankel transform, pair integral equations, and other methods of the theory of contact problems of the linearized elasticity theory are used.

Keywords

- linearized theory of elasticity
- initial (residual) stresses
- contact problem
- cylindrical punch
- layer

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