

Ramil E.MAMEDLI

ABOUT THE STABILTY OF
NONHOMOGENEOUS THREE-LAYER RODS
UNDER UNEVEN TEMPERATURE IN AN
NONLINEAR ELASTIC FOUNDATION

Abstract

We study the problem of three-layered nonhomogeneous rectilinear rods on an nonlinear elastic foundation under the pressure of compressive loads in this article.

It is assumed that the rod is in the uneven temperature field and the elasticity modules of the material layers depend on temperature.

For the elastic foundation of nonlinear model is accepted and it is assumed that the hypothesis of plane sections is valid for the entire thickness of the element of the rod. In general, we achieve the steadiness equation of the considered rod, and a formula is found for determining the critical load in the certain case.