

STABILITY OF ELASTIC ROD WITH VARIABLE
MODULUS OF ELASTICITY SITUATED ON
NON-HOMOGENEOUS BASE

Abstract

In the paper it is assumed that a rod with rectangular cross-section lies on the Fuss-Winkler type base. Stability equation is the fourth order equation with variable coefficients,. Solution of the problem is constructed using a small parameter method. Two cases of built-in of end of rod: simple support and rigid are considered. The carried out calculations and the obtained results are represented in the form of graph of dependence between critical parameters and parameters which characterize non-homogeneities.