

On report of the department of “Elasticity and plasticity theory” for 2016

The department consists of 6 research associates including 1 doctor of phys.math.sci.prof., 3 ass. prof., 2 cand. of sci., and senior laboratory assistant, translator and engineer.

In the department 6 scientific works are carried out on the theme “Bending, stability and vibrations of nonhomogeneous and anisotropic structural elements”. On this period, 2 papers were published. 3 papers were accepted for publication and 3 papers are prepared for publication.

Work A. Vibrations of a rectangular plate stretched on a perimeter. (Ex:V.J.Gadjiev). The value of frequency in lateral vibrations of an orthotropic nonhomogeneous plate built-in along perimeter and stretched in two directions, was determined.

Work B. Determining frequency in natura vibrations of a curved structure orthotropic rectangular plate.(Ex:T.Y.Zeynalova). Analytic expression for determining frequency of natural vibrations of different curvature functions was given.

Work C. Strength and deflection of cylindrical shells.(Ex:Kh.I.Musayev). Analytic equation for calculating strength and deflection of cylindrical shells was determined.

Work E.Vibrations of orthotropic cylindrical shells on viscous elastic foundation. (Ex:G.R.Mirzayeva). The value of vibrations of an orthotropic cylindrical shell on a foundation characterized by two constants was determined.

Work D. Calculation of annular cylindrical shells. (Ex:F.S. Huseynov). Annular cylindrical shells are calculated by its specific weight and load.

Work F. Crack initiation between two faces under nonhomogeneous stress state. (Ex:F.H.Shahbandayev).The researches were conducted around the theme and previously considered works were studied.