1)N.S. Kostenko, 1)P.M. Bondar, 2)G.E. Yankelevich

1)National Technical University of Ukraine «Kiev Polytechnic Institute»; 2)Open Joint Stock Company "Scientific Industrial Complex "Kyiv Automatic Plant named after G. Petrovsky", Kyiv, Ukraine

AN IMPACT OF THE CORIOLIS VIBRATORY GYROSCOPE RESONATOR BOTTOM CONFIGURATION ON STRUCTURAL STIFFNESS

Due to the high vibration sensibility coriolis vibratory gyroscope (CVG) has a small range of application. In order to compensate this lack, an impact of the CVG resonator bottom configuration on natural frequencies allocation and structural stiffness is considered. Computer simulation has shown increasing longitudinal rigidity and therefore increasing vibration resistance with the increase of the bottom conical angle. The main mode frequency remains almost the same. This research of the structural stiffness is considered to be unique. In the future, it is planned to explore an impact of the resonator bottom configuration on the piezoceramic excitation system of the main mode.

Keywords: coriolis vibratory gyroscope, resonator, structural stiffness.