

# **ACOUSTIC WHIRLING RESONANCE OF AN AIRCRAFT FUEL PUMP SCREW**

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The paper describes a combined fuel unit consisting of two stages- the screw centrifugal stage and the main pinion stage. A model of whirling disturbances interaction in the screw centrifugal stage with screw blades oscillating has been developed. The model takes into account the impact of hydrodynamic processes in the pinion stage. The model describes resonance increase of the frequencies of the screw own oscillations, vibroacoustic influence of the pinion stage and the stalling of end whirls. The experiments show the adequacy of the model designed to the real process.