

Contents

Vol. 50, No. 2, 2007

Simultaneous English language translation of the journal is available from Allerton Press, Inc.
Distributed worldwide by Springer. *Russian Aeronautics (Iz. VUZ)*, ISSN 1068-7998.

Structural Mechanics and Strength of Flight Vehicles

The Finite Element Approximation of Vector Fields in Curvilinear Coordinates <i>A. Sh. Dzhabrailov, Yu. V. Klochkov, S. S. Marchenko, and A. P. Nikolaev</i>	115
Power Balance Method in Calculation of Helicopter Maneuverability Taking into Account Specific Operational Conditions <i>S. A. Mikhailov and A. Yu. Onushkin</i>	121

Aero- and Gas-Dynamics of Flight Vehicles and Their Engines

Derivation of the Prandtl–Sirazetdinov Equations for Optimally Controlled Boundary Layer Based on the Navier–Stokes Equations <i>K. G. Garaev</i>	129
A Problem of Control Optimization of the Laminar Boundary Layer on a Circular Cylinder <i>V. K. Kuznetsov</i>	133
Single-Wave Approximation for a One-Dimensional Acoustic Running Wave in the Viscous Gas <i>A. N. Kusyumov and L. A. Makarova</i>	140
Optimal Friction Control on a Circular Cylinder Taking into Account the Reverse Effect of the Boundary Layer <i>V. A. Ovchinnikov</i>	146
Wave Resistance of Rough Plane Channel Walls in the Supersonic Flow <i>V. V. Semenov, V. A. Volkov, and M. Kwon</i>	150
An Analysis of Temperature Fields in Rotating Fluid <i>M. R. Khabibullin and E. A. Fafurina</i>	158
Mathematical Modeling of Heat Transfer Process in a Variable Domain <i>Xueshi Yang, Jun Zhang, Shiyin Qin, and Huansheng Ning</i>	164

Aircraft and Rocket Engine Theory

Numerical Simulation of Nonstationary Gasodynamic Processes in a Pulsejet Engine <i>A. V. Borisoglebskii</i>	172
A Principle of Constructing the System for Measuring the FV Takeoff Weight and Center-of-Mass Position on the Basis of Measurement Reduction <i>A. P. Loktionov</i>	178

Aircraft Production Technology

Parameters of a Creasing-Bending Machine as Applied to the Scheme of Transverse Rotary Shaping of Chevron Structures <i>I. M. Zakirov and K. A. Alekseev</i>	186
---	-----

Economical Aspects in Aircraft Engineering

Minimization of Aircraft Engineering Enterprise Losses

V. P. Danil'chenko and M. V. Skiba

199

Topical Problems of Corporative Control in Aircraft Manufacturing

P. A. Zinov'ev, V. S. Moiseev, I. A. Ginatullin, L. A. Nikoshin, and D. V. Piyadin

204

TECHNICAL NOTES

Aircraft Equipment

Powder Gas Diffusion into the Surface Layer of the Aviation Quick-Firing Gun Barrel

I. N. Lazovik and A. A. Ashurkov

210

A Program Package for Solving Problems of FV Structure Design

T. Yu. Gainutdinova

215

Aircraft and Rocket Engine Design and Development

A Technique for Low-Frequency Balancing of Two-Console High-Speed Turbomachine Rotors

S. S. Evgen'ev and R. R. Zalyaev

218

Aircraft Instruments and Instrumentation Computer Complexes

A Technique and Diagnostic Aids of Diesel Engine Fuel Equipment in Service Conditions

A. A. Leferov and V. G. Kul'chikhin

223

Aircraft Production Technologies

Improvement of a Technological Process for Ceramic Core Removal out of Internal Cavities of Aircraft GTE Turbine Blade Castings

E. P. Kruglov and G. Kh. Kochetova

227

To a Problem of Machining Monoimpeller Intervane Passages

A. V. Starikov

230
