

Contents

Vol. 53, No. 2, 2010

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

Flight Vehicle Design

- Application of an Expert System to Predict the Efficiency of Flight Vehicle Modification
A. P. Paramonov 121
- Mathematical Identification Technique and Its Application in Problems of Flight Vehicle Structure Design
S. G. Parafes' 126
- Design Calculation of Light Piston-Engined Aircraft Controllability and Stability Parameters
E. K. Syzdykov, and A. V. Gainutdinova 134
-

Structural Mechanics and Strength of Flight Vehicles

- Small Perturbation Propagation in the Viscoelastic Fluid Enclosed in a Multilayer Viscoelastic Tube
R. Yu. Amenzade, E. T. Kiyasbeili, and A. A. Nasirzade 141
- Analysis of Nonlinear Deformation and Stability of Reinforced Elliptic Cylindrical Shells under Bending with Internal Pressure
D. V. Boiko, L. P. Zheleznov, and V. V. Kabanov 149
- Kinematic Deformation Scheme for Multilayer Thin Structures with Significantly Dissimilar Layers
V. G. Gainutdinov 155
- Numerical Modeling of Large Elastoplastic Strains in Terms of Principal Stretches. I. Kinematics of Elastoplastic Strains
A. I. Golovanov 161
- Quality Analysis of Nonlinear Elasticity Theory for the Stability Problems of Planar Laminated Curved Beams. Problem Statement
V. N. Paimushin, I. Sh. Gunal, S. A. Lukankin, and V. A. Firsov 167
-

Flight Dynamics and Control of Flight Vehicles

- Calculation of Decoupling Zeroes in the Multiconnected Dynamic System
A. Z. Asanov and D. N. Dem'yanov 173
-

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

- A Boundary Value Problem of Aerohydrodynamics in Designing an Axisymmetric Body with Jet Blowout
N. B. Il'inskii and S. A. Solov'ev 182
-

Aircraft and Rocket Engine Design and Development

- Geometric and Thermophysical Characteristics of a Highly-Porous Structure
Yu. A. Kirsanov, R. A. Nazipov, and V. A. Danilov 191

Problems of Microthruster Development <i>A. I. Kolomentsev, A. V. Baikov, S. I. Martynenko, A. V. Yakutin, L. S. Yanovskii, D. S. Telichkin, and S. Ziegenhagen</i>	198
Shaping a SPRE Multinozzle Cluster with Out-of-Round Nozzles <i>N. I. Mikheev and A. O. Kochetkov</i>	202

Aircraft and Rocket Engine Theory

Electric Field Effect on the Diffusion Flame Structure at Different Oxidizer Excess Coefficients <i>S. M. Reshetnikov, A. S. Bobrov, and I. A. Zyryanov</i>	206
Integral Method for Calculating a Turbofan Engine Thrust Reverser Jet Interacting with an External Stream <i>V. L. Varsegov</i>	212

Aircraft Production Technology

Pareto-Optimal Solution of a Two-Objective Problem in Choosing Conditions of Monoimpeller Milling <i>A. N. Lunev, L. T. Moiseeva, and I. T. Yadgarov</i>	221
---	-----

Conversion of Aeronautical Equipment and Production

Use of Probability Indices for Assessment of Gas Turbine Power Station Reliability under Commercial Operation Conditions <i>B. G. Mingazov and N. A. Korobitsin</i>	226
--	-----

TECHNICAL NOTES

Structural Mechanics and Strength of Flight Vehicles

Analysis of Shells of Revolution under Reversely Symmetrical Loading Using the Quadrature Method <i>I. S. Akhmed'yanov</i>	230
---	-----

Aircraft and Rocket Engine Design and Development

Experimental Development of a Plasma Spark Plug for GTE Altitude Start <i>V. V. Mikhailov, V. V. Lebedev, and A. N. Mukhin</i>	235
---	-----
