

CONTENTS

<i>L'vov G. I. and Kostromitskaya O. A.</i> Numerical modeling of plastic deformation of uni-directionally reinforced composites	3
<i>Bochkareva S. A., Grishaeva N. Yu., Buslovich D. G., Kornienko L. A., Lyukshin B. A., Panin S. V., Panov I. L., and DontsovYu. V.</i> Development of a wear-resistant extrudable composite material based on an ultrahigh-molecular polyethylene with predetermined properties	27
<i>Lomovskoy V. A., Abaturova N. A., Lomovskaya N. Yu., and Galushko T. B.</i> Effect of the ratio of components in a polyvinyl alcohol—chitosan composite on the temperature range of its inelasticity	43
<i>Soltani M. and Asgarian B.</i> Lateral-torsional stability analysis of a simply supported axially functionally graded beam with a tapered I-section	59
<i>Koval'chuk S. B.</i> Exact solution of the problem on elastic bending of the section of a narrow multilayer beam by an arbitrary normal load.....	81
<i>Vuković N. K., Jevrić, and Zejak R.</i> Experimental analysis of RC elements strengthened with CFRP strips	109
<i>Gailitis R., Sliseris J., Kornijejenko K., Mikula J., Łach M., Pakrastins L., and Sprince A.</i> Long-term deformation properties of a carbon-fiber-reinforced alkali-activated cement composite.....	123
<i>Katumin A. and Wachla D.</i> Influence of air cooling on the fatigue of a polymer composite under self-heating.....	135
<i>Solovyev D. N., Dadunashvili S. Sh., Mironov A., Doronkin P., and Mironovs D.</i> Mathematical modeling and experimental investigation of a main rotor made from layered composite materials.....	149
<i>Strizhius V. E.</i> Models of nonlinear fatigue damage accumulation under block cyclic loadings of layered composites	161
<i>Bulut M.</i> Low-velocity impact tests on basalt fiber/polypropylene core honeycomb sandwich composites	177
Notes for contributors	191

CONTENTS

<i>Barkanov E., Akishin P., Namsone E., Bondarchuk A., and Pantelelis N.</i> Real-time characterization of pultrusion processes with a temperature control	203
<i>Paimushin V. N., Firsov V. A., and Shishkin V. M.</i> Numerical modeling of resonant vibrations of an elongate plate with an integral damping coating	225
<i>Akhundov V. M.</i> Method for calculating the near-surface effect in piecewise homogeneous bodies at large deformations based on a two-level approach.....	253
<i>Sokolovskaya Yu. G., Zharinov A. N., Karabutov A. A., and Podymova N. B.</i> Determinating the volume content of a polymeric matrix in CFRP structures using a laser-ultrasonic method	279
<i>Czechowski L., Gralewski J., and Kubiak T.</i> Failure of polymer beams reinforced with glass fibers	293
<i>Zhu H., Guo Z. X., Zhu M., Cui J. J., He Q., and Li Y. C.</i> A progressive FE failure model for laminates under biaxial loading.....	311
<i>Bourchak M., Juhany K. A., Salah N., Ajaj R., Algarni A., and Scarpa F.</i> Determining the tensile properties and dispersion characterization of cnts in epoxy using TEM and Raman spectroscopy.....	321
<i>Startsev O. V., Vapirov Yu. M., Lebedev M. P., and Kychkin A. K.</i> Comparison of glass-transition temperatures for epoxy polymers obtained by methods of thermal analysis.....	337
<i>Akhmadeev A. A., Bogoslov E. A., Danilaev M. P., Klabukov M. A., and Kuklin V. A.</i> Influence of the thickness of a polymer shell applied to surfaces of submicron filler particles on the properties of polymer compositions	357
<i>Drah A., Tomić N. Z., Kovačević T., Djokić, Tomić M., Heinemann R. J., and Marinković A.</i> Structurally and surface-modified alumina particles as a reinforcement in polyester-based composites with an improved toughness	369
<i>Yilmaz E.</i> Investigating the effect of chewing force and an abrasive medium on the wear resistance of composite materials by chewing simulation	387

CONTENTS

<i>Yankovskii A. P.</i> Critical analysis of the equations of statics in the bending theories of composite plates obtained on the basis of variational principles of elasticity theory. I. General theories of high order.....	407
<i>Kahla H. B., Ayadi Z., and Varna J.</i> Local delaminations induced by interaction between intralaminar cracking and specimen edge in quasi-isotropic CF/EP NCF composites in fatigue loadings	437
<i>Romanova T. P., Yankovskii A. P.</i> Yield loci of reinforced plates made from rigid-plastic unequiresistant materials considering the two-dimensional stress state in fibers. II. Orthogonal reinforcement	457
<i>Plavan V. P., Rezanova V. G., Budash Yu. O., Ishchenko O. V., Rezanova N. M.</i> Influence of aluminum oxide nanoparticles on formation of the structure and mechanical properties of microfibrillar composites	479
<i>Nurullaev E. M.</i> Influence of high-frequency radiation on the deformation behavior of composites based on low-molecular rubbers filled with silicon dioxide	493
<i>Nouri M., Ashenai-Ghasemi F., Rahimi-Sherbaf G., and Reza-Kashyzadeh K.</i> Experimental and numerical study of the static performance of a hoop-wrapped CNG composite cylinder considering its variable wall thickness and polymer liner	507
<i>Slovikov S. V., Lobanov D. S.</i> Mechanical properties of a basalt-fiber-reinforced plastic rod used in composite high-voltage wires in torsion and three-point bending	525
<i>Özben T. and Şen H.</i> Damage behavior of hybrid composite plates exposed to impacts at different energy levels.....	537
<i>Khatkar V., Sakthi Vijayalakshmi A. G., Manjunath R. N., Olhan S., Behera B. K.</i> Experimental investigation into the mechanical behavior of textile composites with various fiber reinforcement architectures.....	545
<i>Yildizel S. A.</i> Material properties of basalt-fiber-reinforced gypsum-based composites made with metakaolin and silica sand.....	561
<i>Sun H., Li F., Shen K., and Li K.</i> Energy absorption of carbon-fiber-reinforced composite laminates under low-velocity impacts.....	575
<i>Amini M. H. M., Hashim R., Sulaiman N. S., Mohamed M., Bakar M. B. A.</i> Ecowood composites made using citric-acid-modified corn and oil palm starches as the binder	585

CONTENTS

<i>Paimushin V. N., Kayumov R. A., Kholmogorov S. A.</i> Features of inelastic behavior of a composite under cyclic loading. Experimental and theoretical investigations	611
<i>Rafiee R., Abbasi F.</i> Numerical and experimental analyses of the hoop tensile strength of filament-wound composite tubes	631
<i>Yankovskii A. P.</i> Critical analysis of the equations of statics in the bending theories of composite plates obtained on the basis of variational principles of elasticity theory. 2. Particular low-order theories.....	649
<i>Parida S. P., Jena P. Ch.</i> Advances of the shear deformation theory for analyzing the dynamics of laminated composite plates. An overview.....	675
<i>Thuan N. V., Hien T. D.</i> Stochastic perturbation-based finite element for free vibration of functionally graded beams with an uncertain elastic modulus.....	715
<i>Barzov A. A., Bochkarev S. V., Galinovskii A. L.</i> Functionally deterministic model of hydroerosion in studying the physically latent ability of a composite material to defect formation	731
<i>Azarafza R., Davar A., Fayez M. S., Jam J. E.</i> Free vibration of a grid-stiffened composite cylindrical shell reinforced with carbon nanotubes	743
<i>Ay Z., Tanoğlu M.</i> The effect of single-walled carbon nanotube (SWCNT) concentration on the mechanical and rheological behavior of epoxy matrix	767
<i>Strizhius V.</i> A methodology for estimating the delamination growth rate in layered composites under tensile cyclic loading.....	781
<i>Sevdimaliyev Y. M., Akbarov S. D., Yahnioglu N.</i> The influence of imperfect contact conditions between layers of a hollow sandwich sphere on its natural frequencies	79

CONTENTS

<i>Plotnikova S. V. and Kulikov G. M.</i> Shape control of composite plates with distributed piezoelectric actuators in a three-dimensional formulation	821
<i>Nunes S. G., Saseendran S., Joffe R., Amico S. C., Fernberg P., and Varna J.</i> On temperature related shift factors and master curves in viscoelastic constitutive models for thermoset polymers	841
<i>Leshkov E. V. and Sapozhnikov S. B.</i> Modeling the nonlinear deformation and damage of carbon-aramid fabric composites in tension	867
<i>Cui D. and Li D. K.</i> An adaptive structure based on hybrid extension-twisting coupled laminates	881
<i>Lin M. J., Tsai K. H., and Hwan C. L.</i> Strength prediction for composite plates with an inclined elliptical hole	905
<i>Bakulin V. N., Konopelchev M. A., Nedbai A. Ya.</i> Panel flutter of a variable-thickness composite shell.....	919
<i>Shi H. and Han X.</i> Experimental investigation into the fatigue damage performance of a grp mortar pipe culvert.....	933
<i>Nazerian M., Ali Razavi S., Ali Partovinia, Vatankhah E., Razmpour Z.</i> The prediction of the bending strength of the laminated veneer lumber (lvl) using artificial neural network.....	945
<i>Nahas M. and Alzahrani M.</i> Optimal stochastic distribution of CNTs in a cantilever polymer microbeam using artificial neural networks.....	967
<i>Baali B., Benmounah A., and Rokbi M.</i> Mechanical characterization and optimum design of wound glass-fiber-reinforced polymer pipes based on the winding angle and the number of plies.....	977
<i>Lomovskoy V. A., Nekrasova N. V., Lomovskaya N. Yu., Khlebnikova O. A., Abaturova N. A., Galushko T. B., Gorbunov A. M.</i> Effect of microwave irradiation on the microinhomogeneity of α -relaxation processes in polyvinyl alcohol.....	993

CONTENTS

<i>Barkanov E., Akishin P., Namsone E., Auzins J., and Morozovs A.</i> Optimization of pultrusion processes for an industrial application	1015
<i>Muc A.</i> Optimizing the thickness/stiffness distribution of infinitely wide porous fgm plates subjected to supersonic flutter constraints	1037
<i>Mirsalimov V. M.</i> Modeling the initiation and propagation of cracks in a fibrous composite under loading across fibers	1047
<i>Wang Z. Z., Zhao J., Ma X., Wang S. J., and Yang X.</i> Numerical simulation of progressive delamination in composite laminates under mode I and Mode II loadings	1067
<i>Bazhenov V. G., Zhestkov M. N.</i> Numerical modeling of large deformations for porous metals and identification of carcass deformation diagrams	1081
<i>Karmi Y., Khadri Y., Tekili S., Daouadji A., and Daya E. M.</i> Dynamic analysis of composite sandwich beams with a frequency-dependent viscoelastic core under the action of a moving load	1095
<i>Chebakov M. I., Kolosova E. M.</i> Contact interaction of an axisymmetric stamp and an elastic layer fixed on a poroelastic base	1113
<i>Cui D. and Li D.</i> The effect of importing extension-bending coupling into asymmetric composite structures	1127
<i>Yuan Z., Yang G., Yang Z., Feng Y., Li S., Li Y., Tong X., and Song D.</i> Process-induced deformation of L-shaped laminates: analysis of tool–part interaction	1141
<i>Abouzaid K., Bassir D., Guessasma S., and Yue H.</i> Modelling the process of fused deposition and the effect of temperature on the mechanical, roughness, and porosity properties of resulting composite products	1163
<i>Kozhamkulov B., Kadyrakunov K., Jumadillayev K., Primkulova Zh., Altenbach H.</i> Destruction of pmma after the irradiation with high-energy electrons and a mechanical point impact	1179
<i>Semenov N. A., Kelbysheva E. S.</i> Creating a new elastomeric material with a polyimide filler and studying its viscoelastic properties under applied external electric fields and dynamic loads	1189
Contents of the journal <i>Mekhanika Kompozitnykh Materialov</i> in 2020	1199