

CONTENTS

M. A. LAVRENT'EV : Leonid Ivanovich Sedov	1
E. F. AFANAS'EV and V. N. NIKOLAEVSKII : On the development of asymmetric hydrodynamics of suspension with rotating solid particles	16
G. M. BAM-ZELIKOVICH : On the acceleration of a conducting gas to high speeds	27
A. A. BARMIN and A. G. KULIKOVSKII : Gas-ionizing shock waves in an arbitrarily oriented magnetic field	39
GARRETT BIRKHOFF: Similarity and the transport equation	55
EDMOND A. BRUN and BERNARD LE FUR : Application of similitude in the mechanics of disperse media	63
BERNARD BUDIANSKY : Remarks on theories of solid and structural mechanics	77
ADOLF BUSEMANN : Relations between hodograph and speedgraph	84
HENRI CABANNES and MAX BAUSSET : Application of the method of Padé to the determination of shock waves.	95
E. CARAFOLI and ȘT. STAIU : On the flow separation from the edges of the antisymmetrical delta wing in supersonic regime	115
G. P. CHEREPANOV : On modeling in linear rheology	137
G. G. CHERNYI : Supersonic flow past bodies with formation of detonation and combustion fronts	145
K. F. CHERNYKH and E. I. MIKHAILOVSKII : Separation of boundary conditions in linear shell theory.	170
G. A. DOMBROVSKII and V. S. TKALICH : On linearized theory of a profile in subsonic flow	178
CHARLES S. DRAPER , LEON TRILLING , WILLIAM G. DENHARD and ROBERT H. WILKINSON : Torque induced by convective effects acting on a cylinder floated in a thin layer of viscous fluid	188
YU. N. D'YAKONOV , V. B. MINOSTSEV , G. F. TELENIN and G. P. TINYAKOV : Supersonic three-dimensional flow past blunt bodies	208
L. A. EPSHTEIN : Determination of the depression behind a finite-span underwater wing and gliding flat plate	220
A. FAVRE : Statistical equations of turbulent gases	231
ANTONIO FERRI and RAYMOND EDELMAN : Some observations on heterogeneous mixing inside channels	267
B. FRAEJSDIJK VEUBEKE : The theoretical design laws of warping-free multicellular box beams	2 8 7
V. S. GALKIN and M. N. KOGAN : On equations of nonequilibrium flow of polyatomic gases in the Eucken approximation	306

P. R. GARABEDIAN : Global structure of solutions of the inverse detached shock problem	318
P. GLANSDORFF and I. PRIGOGINE : On the general theory of stability of thermodynamic equilibrium	323
A. L. GOL'DENVEIZER : On two-dimensional equations of the general linear theory of thin elastic shells.	334
H. GÖRTLER , K. KIRCHGASSNER and P. SORGER : Branching solutions of the Bénard problem.	353
É. I. GRIGOLYUK and V. M. TOLKACHEV : On the transfer of loads from reinforcing ribs to a cylindrical shell	375
M. I. GUREVICH : Two-dimensional problem of aerodynamic interaction of high-speed trains approaching from opposite directions	382
NICHOLAS J. HOFF , TSAI-CHEN SOONG and ROBERT L. SENDELBECK : Remarks on the buckled shapes of thin-walled circular cylindrical and conical shells subjected to axial compression	390
D. D. IVLEV : On deformation theories of plasticity	402
CAIUS JACOB : On a new proof of the formulae of L. I. Sedov in the theory of thin wings.	409
L. M. KACHANOV : On the problem of propagation of cracks under conditions of creep	418
W. T. KOITER : On the thermodynamic background of elastic stability theory	423
E. A. KRASIL'SHCHIKOVA : Flow past slender bodies in a gas stream in the presence of a moving shock wave	434
E. KRÖNER : On the symmetry properties of elastic materials with cohesive forces of finite range	443
L. G. LOITSYANSKII : Similarity parameters in the boundary layer theory	452
G. A. LYUBIMOV and A. BIVATAZHIN : Effect of electrode layers on the characteristics of an MHD-generator	463
ANGELO MIELE : Drag minimization as the extremization of products of powers of integrals	478
R. D. MINDLIN : Note on vibrations of prisms and polygonal plates . . .	485
L. G. NAPOLITANO : On a new set of thermodynamic characteristic speeds for reacting mixtures	489
A. A. NIKOL'SKII : Homogeneous deformations of space and the Cauchy problem for homogeneous free-molecular motions	502
V. V. NOVOZHILOV : On the relations between stresses and elastic strains for polycrystals	515
W. NOWACKI : Thermoelastic waves in an unbounded medium	530

F. K. G. ODQVIST: Influence of varying temperature on the body relations in solid mechanics	545
W. OLSZAK and Z. BYCHAWSKI: Creep phenomena and failure of non-linear rotational membranes	557
WILLIAM PRAGER: The deformation of rigid, workhardening optimal structures	563
RONALD F. PROBSTEIN: The dusty gasdynamics of comet heads	568
YU. N. RABOTNOV: Elasto-plastic state of composite structure	584
S. A. REGIRER: On a two-dimensional approximation in the theory of magnetohydrodynamic flows	590
MARKUS REINER: The Cauchy and Swainger measures of finite deformations in general coordinates	601
A. ROSHKO and W. FISZDON: On the persistence of transition in the near-wake	606
MAURICE ROY: Dynamics of continua and energetics	617
V. V. RUMYANTSEV: On the stability of motion of liquid-filled rigid bodies	626
B. R. SETH: Space transitions	632
G. S. SHAPIRO: On the deformations of elastic-viscoplastic bodies	639
D. I. SHERMAN: A representation of analytic functions and its application to the theory of singular integral equations	643
MARTIN SUMMERFIELD and HERMAN KRIER: Role of aluminum in supressing instability in solid propellant rocket motors	703
G. I. TAYLOR: Motion of axisymmetric bodies in viscous fluids	718
MARSHALL P. TULIN: On the creation of ultra-jets	725
MILTON VAN DYKE: Free convection from a vertical needle	748
I. I. VOROVICH: Estimates of the number of solutions of the Kármán equation connected with the problem of stability of plates and shells	762
J. WINOGRADZKI: On the role of generalized tensors with invariant components	772
A. M. YAGLOM: Asymptotic behavior of the turbulence spectrum in various models of spectral energy transfer	781
V. A. ZHELNOROVICH: Models of media with internal electromagnetic and mechanical momenta	803