

Heat and mass transfer bibliography— CIS works

O. G. MARTYNYENKO

Heat and Mass Transfer Institute, Minsk, 220072, Belarus

(Received 25 October 1993)

BOOKS

- V. M. Agranat, *Analytical Investigation of Heat and Mass Transfer and Friction in a Boundary Layer*. Izd. Tomsk. Univ., Tomsk (1991).
- A. M. Azizov, *Analysis of Technological Processes: Parametric and Non-linear Phenomena*. Izd. Khimiya, Leningrad (1992).
- M. K. Bologa and I. K. Savin, *Electrohydrodynamic Evaporation-Condensation Systems*. Izd. Shtiintsa, Kishinev (1991).
- Yu. V. Chebetarevskiy (Editor), *Modern Problems of Thermophysics, Mechanics and Thermomechanics in Electronic Instrument Making*. Izd. Saratovsk. Politekhn. Inst., Saratov (1991).
- Yu. I. Danilov (Editor), *The Modern Problems of Thermophysical Provision of Electrophysical Installations* (Proceedings of the Thermophysical Seminar, 13–15 June 1990). Sukhumi (1991).
- M. D. Demidenko, *Simulation and Optimization of Heat and Mass Transfer Processes in Chemical Technology*. Izd. Nauka, Moscow (1991).
- S. G. Diyakonov (Editor), *Mass Exchange Processes and Apparatus of Chemical Technology* (Collected Papers). Izd. Kazansk. Khim.-Tekhn. Inst., Kazan (1991).
- G. N. Dulnev and V. V. Novikov, *Transfer Processes in Nonuniform Media*. Energoatomizdat, Leningrad (1991).
- V. V. Faleyev (Editor), *Heat Transfer in Power Plants and the Improvement of the Efficiency of Their Operation* (Collected Papers). Izd. Voronezhsk. Politekhn. Inst., Voronezh (1991).
- N. N. Grinchik, *Transfer Processes in Porous Media, Electrolytes and Membranes*. Izd. ITMO AN BSSR, Minsk (1991).
- Heat and Mass Transfer—MIF-92* (The 2nd Minsk International Heat and Mass Transfer Forum, 18–22 May 1992), Vol. 1, Part 1—*Convective Heat and Mass Transfer*. Izd. ITMO AN BSSR, Minsk (1992).
- Heat and Mass Transfer—MIF-92* (The 2nd Minsk International Heat and Mass Transfer Forum, 18–22 May 1992), Vol. 1, Part 2—*Convective Heat and Mass Transfer*. Izd. ITMO AN BSSR, Minsk (1992).
- Heat and Mass Transfer—MIF-92* (The 2nd Minsk International Heat and Mass Transfer Forum, 18–22 May 1992), Vol. 4, Part 1—*Heat and Mass Transfer in Two-phase Systems*. Izd. ITMO AN BSSR, Minsk (1992).
- Heat and Mass Transfer—MIF-92* (The 2nd Minsk International Heat and Mass Transfer Forum, 18–22 May 1992), Vol. 4, Part 2—*Heat and Mass Transfer in Two-phase Systems*. Izd. ITMO AN BSSR, Minsk (1992).
- Heat and Mass Transfer—MIF-92* (The 2nd Minsk International Heat and Mass Transfer Forum, 18–22 May 1992), Vol. 6—*Heat and Mass Transfer in Rheological Systems*. Izd. ITMO AN BSSR, Minsk (1992).
- Heat and Mass Transfer—MIF-92* (The 2nd Minsk International Heat and Mass Transfer Forum, 18–22 May 1992), Vol. 7—*Heat and Mass Transfer in Capillary-porous Bodies*. Izd. ITMO AN BSSR, Minsk (1992).
- Heat and Mass Transfer—MIF-92* (The 2nd Minsk International Heat and Mass Transfer Forum, 18–22 May 1992), Vol. 9, Part 1—*Computational Experiment in Heat and Mass Exchange and Heat Transfer Problems*. Izd. ITMO AN BSSR, Minsk (1992).
- Heat and Mass Transfer—MIF-92* (The 2nd Minsk International Heat and Mass Transfer Forum, 18–22 May 1992), Vol. 9, Part 2—*Computational Experiment in Heat and Mass Exchange and Heat Transfer Problems*. Izd. ITMO AN BSSR, Minsk (1992).
- Heat and Mass Transfer—MIF-92* (The 2nd Minsk International Heat and Mass Transfer Forum, 18–22 May 1992), Vol. 10—*Heat and Mass Transfer in Power Engineering Installations*. Izd. ITMO AN BSSR, Minsk (1992).
- Heat and Mass Transfer—MIF-92* (The 2nd Minsk International Heat and Mass Transfer Forum, 18–22 May 1992), Vol. 11—*Heat and Mass Transfer in Chemicotechnological Installations*. Izd. ITMO AN BSSR, Minsk (1992).
- Investigation of Heat and Mass Transfer in Apparatus with Disperse Systems* (Collected Papers). Izd. ITMO AN BSSR, Minsk (1991).
- Kinetic Theory of Evaporation and Condensation Transfer Processes* (Collected Papers of the International School-Seminar, Minsk, September 1991). Izd. ITMO AN BSSR, Minsk (1991).
- A. T. Lukiyanov (Editor), *Approximate Analytical and Numerical Methods for Solving Boundary-value Problems* (Collected Papers). Izd. Kazakh. Gos. Univ., Alma-Ata (1990).
- V. K. Lyakhov and K. V. Migalin, *The Effect of Thermal or Diffusional Roughness*. Izd. Saratovsk. Univ., Saratov (1991).
- O. G. Martynenko (Editor), *Problems of Heat and Mass Transfer—91* (Collected Papers). Izd. ITMO AN BSSR, Minsk (1991).
- G. A. Mukhachev and V. K. Shchukin, *Thermodynamics and Heat Transfer (Textbook for Students of Higher Schools of Aviation)*, 3rd revised Edn. Izd. Vyssh. Shkola, Moscow (1991).
- V. Ye. Nakoryakov (Editor), *Hydrodynamics and Heat/Mass Transfer in Fixed Granular Beds* (Collected Papers). Izd. Inst. Teplofiz. SO AN SSSR, Novosibirsk (1991).
- V. Ye. Nakoryakov (Editor), *Topical Problems of Thermal Physics: Power Engineering and Ecology* (Collected Papers). Izd. Inst. Teplofiz. SO AN SSSR, Novosibirsk (1991).
- P. L. Novikov, L. Ya. Lyubin and V. I. Novikova, *Flow and Heat/Mass Transfer in Slot Systems*. Izd. Navuka i Tekhn., Minsk (1991).
- A. A. Palangin (Editor), *Heat Transfer and Gas Dynamics in the Bleeding-off Chambers of Steam Turbines* (Collected Papers). Izd. Nauk. Dumka, Kiev (1991).
- N. A. Rubtsov and V. A. Lebedev, *Geometric Invariants of Radiation*. Izd. Inst. Teplofiz. SO AN SSSR, Novosibirsk (1989).
- V. K. Shchukin (Editor), *Heat Exchange and Friction in*

Engines and Power Plants of Flying Vehicles (Collected Papers). Izd. Kazansk. Aviats. Inst., Kazan (1991).

T. N. Shigabiyev and Sh. A. Gaidarov, *Natural Convection Heat Transfer of Boiling of Liquids*, Parts 1 and 2. Izd. Nauchn. Tsentra, Kazan (1991).

The Problems in the Development of Life-support Complexes for the Crews of Flying Vehicles (Collected Papers of the Moscow Aviation Institute). Izd. MAI, Moscow (1991).

Thermophysical Properties of the Working Bodies and Heat Transfer Agents of the Present-day Power Engineering (Collected Papers). Izd. MAI, Moscow (1991).

PAPERS—GENERAL

A. A. Aleksashenko, Qualitative investigation of the solutions of some heat and mass transfer problems, *Izv. RAN, Energetika* No. 1, 140–149 (1992).

T. R. Amanbayev and A. I. Ivandayev, The structure of shock waves in the gas suspension of the droplets of liquid and fine solid particles, *Teplofiz. Vysok. Temp.* **29**(6), 1192–1197 (1991).

F. M. Babushkin, V. B. Kovalevskiy, M. G. Pshonik, I. Ye. Migutskiy and A. B. Steblov, Application of the method of arterial optimization in heating a thermally thick plate, *Izv. VUZov, Energetika* No. 1, 105–107 (1992).

A. B. Bartman, Exact non-linear modes in non-local evolutionary systems. In *Kinetic Theory of Evaporation and Condensation Transfer Processes* (Proceedings of the International School-Seminar, Minsk, September 1991), pp. 68–84. Luikov Heat and Mass Transfer Institute, Minsk (1991).

Sh.-B. B. Batuyev, Yu. F. Mukhopad, Yu. V. Bryanskaya, V. E. Matkhanova, and A. M. Molonova, Methodological aspects of lecturing in thermal physics, Part 1, Preprint No. 253 of the Institute of Thermophysics, pp. 1–9. Novosibirsk (1991).

S. I. Berezina, T. D. Keshner and Z. Sh. Idiyatullin, Mass transfer in the near-electrode diffusional layer in the process of deposition from complex electrolytes. In *Mass Transfer Processes and Apparatus of Chemical Technology*, pp. 38–43. Kazan Institute for Chemical Technology, Kazan (1991).

A. A. Bochkaryov, V. I. Polyakova and G. G. Telegin, The model of the kinetics of ionization of excited atoms on the surface of metals with allowance for adsorption processes, *Sib. Fiz.-Tekh. Zh.* No. 4, 109–112 (1991).

V. V. Bogachev, D. S. Mikhatulina and Yu. V. Polezhayev, Methodological foundations for conducting investigations in high-temperature heterogeneous flows, Preprint No. 2-331 of the Institute for High Temperatures, pp. 1–84. Moscow (1991).

V. A. Buryachenko and V. A. Murov, Effective conductivity of matrix composites, *J. Engng Phys.* **61**(2), 305–312 (1991).

A. M. Butko and A. G. Shevlyakov, Thermal elasticity of coaxial cylindrical shells. In *Calculation of the Constructions in Amelioration Arrangements*, pp. 5–15. Moscow Hydroamelioration Institute, Moscow (1991).

V. A. Chudinov, Poltergeist, is it the heating in contrary fashion? *Energiya: Ekon., Tekhn., Ekol.* No. 12, 59–63 (1991).

I. V. Chuguyev, Computer simulation of the non-linear parabolic object in the case of a moving source and varying geometry of the region, *Trudy Mosk. Energ. Inst.* No. 651, 32–39 (1991).

N. T. Danayev, Concerning the construction and use of movable finite-difference grids. In *Approximate Analytical and Numerical Methods for Solving Boundary-value Problems*, pp. 54–59. Kazakh State University, Alma-Ata (1990).

Ye. Ye. Denisov, Application of the methods of the theory of chains to solving heat transfer problems, *Elektron. Modelir.* **14**(1), 77–81 (1992).

I. G. Drozdov and V. V. Shitov, The temperature field of a porous plate. In *Heat Transfer in Power Plants and Improvement of the Efficiency of Their Operation*, pp. 54–58. Voronezh Polytechnic Institute, Voronezh (1991).

D. G. Dzhanguirov, I. G. Roda and M. A. Muratova, A procedure for determining mass transfer coefficients from the data on the adsorption of dissolved materials, *Khim. Tekhnol. Vody* **13**(12), 1083–1085 (1991).

V. I. Gavrysh, Temperature field in a semi-space with a parallelepiped inclusion due to heat flux, *Mat. Methody Fiz.-Mekh. Polya* No. 33, 18–20 (1991).

Yu. F. Gortyshov and S. R. Ashikhmin, New solutions of certain problems of the thermoelasticity of plates. In *Heat Exchange and Friction in Engines and Power Plants of Flying Vehicles*, pp. 24–32. Kazan Aviation Institute, Kazan (1990).

S. D. Grigoriyev, A. V. Kim, A. I. Korotkiy and I. A. Tsepelev, Concerning dynamic simulation of the parameters of certain thermal processes, *Mat. Modelir.* **3**(8), 72–81 (1991).

V. S. Gritsevich, The temperature field in thermosensitive multilayer bodies, *Mat. Fiz. Nelinein. Mekh.* No. 16, 78–80 (1991).

S. P. Fisenko, The statistical theory of the kinetics of nucleation in gases. In *Kinetic Theory of Evaporation and Condensation Transfer Processes* (Proceedings of the International School-Seminar, Minsk, September 1991), pp. 22–30. Luikov Heat and Mass Transfer Institute, Minsk (1991).

T. R. Kaliaskarova, Conventionally correct boundary-value problems with the time-derivative in the boundary conditions for heat and mass transfer systems, *Dokl. Akad. Nauk UkrSSR* No. 8, 24–30 (1991).

O. V. Kanunnikov and S. L. Esaulov, Numerical conversion of Laplace transform with the help of the Fourier series when calculating non-stationary temperature fields in laminated constructions, *J. Engng Phys.* **61**(5), 804–807 (1991).

R. K. Karabaliyev, Concerning the solutions of a certain system of transfer equations. In *Approximate Analytical and Numerical Methods for Solving Boundary-value Problems*, pp. 38–43. Kazakh State University, Alma-Ata (1990).

V. M. Khvisevich, Concerning solution of the external and internal problems of the Dirichlet potential theory in a multi-connected region, *J. Engng Phys.* **61**(5), 858–862 (1991).

L. V. Komarovskiy, O. N. Shablovskiy and V. I. Glazunov, Self-similar processes of thermal relaxation in non-linear media, In *Gas Dynamics*, pp. 99–105. Scientific-Research Institute of Applied Mathematics and Mechanics of the Tomsk State University, Tomsk (1991).

V. N. Korovkin, Toward the calculation of turbulent buoyant jets, *Vestsi Akad. Navuk Belarusi, Ser. Fiz.-Energ. Navuk* No. 1, 108–112 (1992).

V. G. Kostenko, The inverse problem for a simplified system of heat and moisture transfer equations, *Mat. Methody Fiz.-Mekh. Polya* No. 34, 47–50 (1991).

R. M. Kotta and K. A. K. Santos, The problem of non-stationary diffusion with variable coefficients in boundary conditions, *J. Engng Phys.* **61**(5), 829–837 (1991).

L. A. Kozdoba, A computational experiment and system approach in heat exchange problems. In *Heat and Mass Transfer—MIF-92* (Proceedings of the 2nd Minsk International Heat Transfer Forum, 18–22 May 1992), Vol. 9, Part 2, pp. 75–82. Luikov Heat and Mass Transfer Institute, Minsk (1992).

Yu. K. Lingart and D. L. Shur, A thermoemissive transducer for temperature control, *Teplofiz. Vysok. Temp.* **29**(5), 1009–1012 (1991).

V. S. Loginov, M. M. Gekke and V. P. Oglyublin, Evaluation of the internal heat sources in a heat liberating element. In *Collected Scientific-Methodological Papers in Thermal Engineering*, No. 5, pp. 72–78. USSR State Committee for Public Education, Moscow (1991).

A. G. Madera, Stochastic simulation of the processes of heat transfer in solid bodies. In *Heat and Mass Transfer—MIF-92* (Proceedings of the 2nd International Heat and Mass Transfer Forum, 18–22 May 1992), Vol. 9, Part 2, pp. 111–113. Luikov Heat and Mass Transfer Institute, Minsk (1992).

A. G. Madera, The method of the probabilistic analysis of the stochastic temperature fields of technical objects under static conditions, *J. Engng Phys.* **61**(5), 828–844 (1991).

- A. I. Maiorov, Concerning the error in the study of unsteady-state heat fluxes by the differentiation method, Preprint No. 44 of the Central Aerohydrodynamic Institute, pp. 1–11. Moscow (1991).
- A. I. Maiorov, Mathematical foundations of the processing of thermodynamic measurements with allowance for heat spreading, Preprint No. 45 of the Central Aerohydrodynamic Institute, pp. 1–12 (1991).
- G. M. Makhviladze and V. D. Filippov, Turbulent buoyant jets in neutral atmosphere. In *Heat and Mass Transfer—MIF-92* (Proceedings of the 2nd Minsk International Heat and Mass Transfer Forum, 18–22 May 1992), Vol. 1, Part 2, pp. 96–99. Luikov Heat and Mass Transfer Institute, Minsk (1992).
- Yu. M. Matsevityi and V. P. Sheryshev, The concept of concentrated capacity in the problems of identification of thermal processes. In *Heat and Mass Transfer—MIF-92* (Proceedings of the 2nd Minsk International Heat and Mass Transfer Forum, 18–22 May 1992), Vol. 9, Part 1, pp. 132–135. Luikov Heat and Mass Transfer Institute, Minsk (1992).
- A. V. Melkikh, Transfer of volatiles in membranes of finite thickness. In *Kinetic Theory of Evaporation and Condensation Transfer Processes* (Proceedings of the International School-Seminar, Minsk, September 1991), p. 97. Luikov Heat and Mass Transfer Institute, Minsk (1991).
- Yu. V. Mikhayev, L. S. Temkin and A. M. Banov, Decomposition and aggregation in the problems of optimal control of the processes of convective heating. In *Heat and Mass Transfer—MIF-92* (Proceedings of the 2nd Minsk International Heat and Mass Transfer Forum, 18–22 May 1992), Vol. 9, Part 2, pp. 123–126. Luikov Heat and Mass Transfer Institute, Minsk (1992).
- R. S. Minasyan, Heat flow in a prismatic body of rectangular cross section moving with constant velocity, *Dokl. Akad. Nauk Armenii* No. 1, 31–36 (1991).
- N. I. Nikitenko, Yu. N. Kolchik and N. N. Nikitenko, A numerical method for solving heat and mass transfer problems for bodies with curvilinear boundaries. In *Heat and Mass Transfer—MIF-92* (Proceedings of the 2nd Minsk International Heat and Mass Transfer Forum, 18–22 May 1992), Vol. 9, Part 2, pp. 135–138. Luikov Heat and Mass Transfer Institute, Minsk (1992).
- A. Ye. Polichka, The Rothe method for approximate solution of a certain heat and moisture transfer system. In *Qualitative Problems of Geometry and Analysis*, pp. 61–68. Khabarovsk State Pedagogical Institute, Khabarovsk (1990).
- V. M. Polyayev, A. N. Genbach and A. A. Genbach, The limiting state of the surface exposed to thermal attack, *Teplofiz. Vysok. Temp.* **29**(5), 923–934 (1991).
- M. F. Prokhorova, About the form of a growing dendrite, *J. Engng Phys.* **61**(5), 808–815 (1991).
- N. G. Pshonkin, The stationary thermal regime of a moved and heated cylinder, *Sib. Fiz.-Tekh. Zh.* No. 6, 24–27 (1991).
- Yu. N. Pushnograev, The problem of heat propagation in an orthotropic two-layer plate heated by point sources. In *Technological Problems of the Strength of Carrying Constructions*, Vol. 2, Part 1, pp. 155–160. Zaporozhiye Industrial Institute, Zaporozhiye (1991).
- A. N. Reznikov, Coding and solution of thermal problems when treating non-metals materials, *Rezan. Instrum.* No. 46, 87–88 (1991).
- V. V. Ryndin, Concerning the use of the terms “heat”, “quantity of heat”, “in the form of heat” in engineering literature. In *Collected Scientific-Methodological Papers in Thermal Engineering*, No. 7, pp. 9–17. USSR State Committee for Public Education, Moscow (1991).
- O. N. Shablovskiy, Non-linear wave problems of relaxation heat transfer. In *Gas Dynamics*, pp. 91–98. Scientific-Research Institute of Applied Mathematics and Mechanics at the Tomsk State University, Tomsk (1991).
- V. V. Shebela, Stability of thermoelastic vibrations on the surface of viscous fluid with the temperature gradient. In *Plasma Energy Converters*, pp. 51–54. Institute of the Energy Saving Problems, Kiev (1991).
- A. P. Slesarenko, The regional-analytical and design-difference methods in mathematical simulation, optimization and control of heat transfer processes. In *Heat and Mass Transfer—MIF-92* (Proceedings of the 2nd Minsk Heat and Mass Transfer Forum, 18–22 May 1992), Vol. 9, Part 2, pp. 154–157. Luikov Heat and Mass Transfer Institute, Minsk (1992).
- I. A. Soloviyov, V. V. Makhrov, V. I. Miroshnichenko and M. V. Rebrov, The method of artificial gravitation for solving the problems of heat transfer optimization. In *Heat and Mass Transfer—MIF-92* (Proceedings of the 2nd Minsk Heat and Mass Transfer Forum, 18–22 May 1992), Vol. 9, Part 2, pp. 158–161. Luikov Heat and Mass Transfer Institute, Minsk (1992).
- R. V. Ulinskas, P. I. Daunoras and V. F. Zakrevskiy, Study of the mechanism of depositions on heat transfer surfaces. In *Heat and Mass Transfer—MIF-92* (Proceedings of the 2nd Minsk International Heat and Mass Transfer Forum, 18–22 May 1992), Vol. 1, Part 1, pp. 141–145. Luikov Heat and Mass Transfer Institute, Minsk (1992).
- F. I. Vafina, I. I. Goldfarb and I. R. Shreiber, Effect of heat transfer on sound propagation in foam, *Akust. Zh.* **38**(2), 260–269 (1992).
- A. M. Vainberg, V. K. Kontorovich and R. Z. Khiterer, Solution of the problem of unsteady heat and mass transfer in non-linear media by the Newton-Kantorovich method, *Teor. Osnovy Khim. Tekhnol.* **25**(6), 805–813 (1991).
- D. N. Vandyshev and L. V. Zherdeva, Concerning the mechanism involved in the formation of the boundary region of a spreading droplet. In *Kinetic Theory of Evaporation and Condensation Transfer Processes* (Collected Papers of the International School-Seminar, Minsk, September 1991), p. 96. Luikov Heat and Mass Transfer Institute, Minsk (1991).
- S. P. Vashchenko, G. N. Dandaron, M. F. Zhukov and Kh. Ts. Zayatyayev, Current and heat transfer to the inner surface of a tubular cylindrical thermocathode, *Sib. Fiz.-Tekh. Zh.* No. 1, 98–100 (1992).
- I. S. Verzhbitskaya and P. G. Itskova, Mathematical simulation of oxidation with regard for the non-uniform distribution of the reactive mixture velocity. In *Approximate Analytical and Numerical Methods for Solving Boundary-value Problems*, pp. 60–66. Kazakh State University, Alma-Ata (1990).
- P. K. Volkov, Simulation of bubble motion in a “submerged” channel, *Izv. Akad. Nauk SSSR, Mekh. Zhidk. Gaza* No. 5, 138–144 (1991).
- F. B. Vurzel, B. A. Pleskov and V. K. Bituykov, Investigation of the spatial distribution of temperature field on the surface of a quartz tube. In *Collected Papers*, No. 8, pp. 100–107. Moscow Institute of Radiotechnics, Electronics and Automatics, Moscow (1990).
- M. F. Zhukov, T. V. Borisova and V. V. Pak, The electrochemical mechanism of the operation of zirconium cathode in air, *Sib. Fiz.-Tekh. Zh.* No. 4, 113–118 (1991).
- Yu. B. Zudin, Method of calculating heat transfer with periodic intensity pulsations, *Teplofiz. Vysok. Temp.* **29**(6), 1134–1141 (1991).
- L. R. Zvorykin, B. F. Rumyantsev, V. M. Falchenko and A. V. Filatov, Effect of surface roughness on mass transfer in copper under the influence of shock waves, *Metallofizika* **13**(11), 126–128 (1991).

HEAT CONDUCTION

- O. M. Alifanov and A. V. Nenarokomov, The boundary inverse heat conduction problem in extremal statement. In *Heat and Mass Transfer—MIF-92* (Proceedings of the 2nd Minsk International Heat and Mass Transfer Forum, 18–22 May 1992), Vol. 9, Part 2, pp. 7–13. Luikov Heat and Mass Transfer Institute, Minsk (1992).
- S. R. Ashikhmin, Yu. F. Gortyshov and I. N. Nadyrov, Concerning the limits of applicability for the Fourier “classical” equation in the problems of non-stationary heat conduction. In *Heat Exchange for and Friction in Engines and*

- Power Plants of Flying Vehicles*, pp. 10–14. Kazan Aviation Institute, Kazan (1990).
- A. M. Banov and Yu. V. Mikheyev, The asymptotic decomposition of the problems of boundary monitoring of heat conduction processes, *Izv. Akad. Nauk SSSR, Tekh. Kibernet.* No. 6, 152–162 (1991).
- V. G. Bashtovoi, O. K. Safonenko, N. Ye. Volkova and O. G. Reks, The temperature dependence of the thermal conductivity of water-based magnetic fluid, *Magnit. Gidrodinam.* No. 1, 13–17 (1991).
- I. I. Borshch, V. S. Starikov and S. A. Ursol, Effect of perforation and interlayers on the thermal conductivity of metallic inclusions in light panels. In *Improvements in the Building of Land Based Objects of Oil and Gas Industry*, pp. 15–18. Scientific-Productional Association "Hydro-pipeline", Moscow (1991).
- Yu. I. Chizhik, N. A. Tsvetkov and S. L. Karaush, An automated setup for determining the thermal conductivity of building materials. In *Topical Problems of Thermal Physics: Power Engineering and Ecology*, pp. 120–122. Institute of Thermophysics, Novosibirsk (1991).
- T. G. Faradzhev, A. M. Aliyev and A. G. Mustafayev, A generalized differential heat conduction equation for an arbitrary measure of the space and shape of a body, *Izv. VUZov, Neft. Gaz* No. 6, 32–42 (1991).
- V. V. Gorskiy, A. M. Sigitova and M. N. Televnyi, Concerning a certain approximate approach to the solution of three-dimensional heat conduction problems, *J. Engng Phys.* 61(2), 319–322 (1991).
- D. V. Grilitskiy, V. S. Kolesov and R. D. Kulchitskiy-Zhigailo, The translational-rotational motion of a rigid body of rotation over the plane surface of a rigid heat conducting base, *Izv. RAN, Mekh. Tverd. Tela* No. 2, 85–92 (1992).
- O. A. Ivanova, Heat transfer through a thin highly conductive interlayer. In *Numerical Simulation in the Problems of Mechanics*, pp. 34–38. Moscow State University, Moscow (1991).
- V. L. Kalitvyanskiy, Toward analytical calculation of the non-stationary thermal conductivity of multilayer bodies, *Teplofiz. Vysok. Temp.* 29(5), 914–922 (1991).
- Ye. I. Kim and M. M. Abenov, Concerning the problem with a skew derivative for the two-dimensional heat conduction equation in a quarter of a plane, *Vestn. Akad. Nauk KazSSR* No. 9, 34–36 (1991).
- Yu. M. Kolyano, R. V. Gladyshev, Ye. T. Ivanik and V. A. Volos, The inverse coefficient heat conduction problem for an isotropic body, *Mat. Metody Fiz.-Mekh. Polya* No. 33, 4–9 (1991).
- Yu. M. Kolyano, Te. G. Ivanik and O. V. Sikora, The non-linear heat conduction problem of a thermosensitive sphere, *J. Engng Phys.* 62(1), 126–129 (1992).
- V. A. Konstantinov, V. G. Manzheliy and S. A. Smirnov, Isochoric thermal conductivity of solid CHCl_3 and CH_2Cl_2 . The role of the rotational motion of molecules, *Fiz. Nizk. Temp.* 17(7), 883–888 (1991).
- A. F. Koshchiy and A. I. Ropavka, A posteriori estimates of the errors in the solutions of some boundary-value heat conduction problems. In *Heat and Mass Transfer—MIF-92* (Proceedings of the 2nd Minsk International Heat Transfer Forum, 18–22 May 1992), Vol. 9, Part 2, pp. 92–95. Luikov Heat and Mass Transfer Institute, Minsk (1992).
- V. G. Kostenko, L. O. Gubal and B. V. Gera, Determination of the heat transfer coefficient in the inverse problem for the heat conduction equation, *Mat. Metody Fiz.-Mekh. Polya* No. 33, 9–13 (1991).
- B. V. Kovalchuk and G. P. Lopushanskaya, The Green's function method in stationary and nonstationary problems of non-linear heat conduction, *Mat. Metody Fiz.-Mekh. Polya* No. 34, 42–47 (1991).
- V. F. Kozlov, A theoretical model of conduction heat transfer in sintered fibrous materials. In *Theoretical and Experimental Investigations of Certain Problems of the Aerohydro-mechanics*, pp. 23–36. Moscow Physicotechnical Institute, Moscow (1991).
- D. G. Krylov, Convective instability of a plane liquid layer in the vibrational field for arbitrary thermal conductivity of boundaries. In *Convective Flows*, pp. 46–49. Perm State Pedagogical Institute, Perm (1991).
- Ye. M. Landis, Concerning the regularity of the boundary point for the heat conduction equation, *Kachestv. Teor. Krayev. Zadach Mat. Fiz.* No. 1, 69–96 (1991).
- I. T. Mamedov, Toward the problem of the Wiener-type criterion for the heat conduction equation, *Kachestv. Teor. Krayev. Zadach Mat. Fiz.* No. 1, 118–176 (1992).
- V. Ye. Mitrofanov, I. V. Koletova and E. Ya. Falkov, Investigation of the inverse heat conduction problem in complex statement by the method of digital simulation, *Trudy Mosk. Energ. Inst.* No. 651, 23–31 (1991).
- M. I. Mukhitdinova and V. Kh. Salakhutdinov, Solution of the inverse heat conduction problem by the method of optimization of groove functions, *Vopr. Vychisl. Prikl. Mat.* No. 92, 52–56 (1991).
- N. I. Nikitenko, Yu. N. Kolchik and N. N. Nikitenko, A numerical method of solving heat conduction problems for bodies of complex configuration, *J. Engng Phys.* 61(5), 851–857 (1991).
- O. O. Olaru, About the solution of the equation of heat conduction outside two contacting spheres, *Vestnik MGU, Ser. 1, No. 3*, 73–76 (1992).
- A. A. Oleinik, Response-based optimization of systems described by the heat conduction equation, *Dinam. Sploshn. Sredy* No. 102, 80–91 (1991).
- V. M. Olshanskiy and V. L. Kovalyov, PC solution of the problem of heat conduction in multicoupled regions of complex configuration. In *Heat and Mass Transfer—MIF-92* (Proceedings of the 2nd Minsk International Heat and Mass Transfer Forum, 18–22 May 1992), Vol. 9, Part 1, pp. 144–147. Luikov Heat and Mass Transfer Institute, Minsk (1992).
- L. E. Rekenglaz, Solution of the boundary-value problems of heat conduction in the region with moving boundaries with the aid of the Laplace coordinate transform, *Zh. Tekh. Fiz.* 61(12), 146–148 (1991).
- Ye. K. Shirokova and S. N. Kravchun, Calculation and prediction of the thermal conductivity of fluorocarbon fluids. In *Thermophysical Properties of the Working Bodies and Heat Carriers in the Present-day Power Engineering*, pp. 71–78. Moscow Aviation Institute, Moscow (1991).
- I. V. Sopikov, A. I. Tumanov and Ye. B. Slobodov, Effect of longitudinal heat conduction in a disk nozzle on the efficiency of the air-separator regenerators, *Khim. Neft. Mashinostroyeniye* No. 2, 25–26 (1992).
- A. A. Vasserma and I. P. Khasilev, Calculation of the thermal conductivity of a dense gas on the basis of the Enskog theory with allowance for the reality of the intermolecular interaction potential, *Teplofiz. Vysok. Temp.* 29(5), 878–882 (1991).
- V. Ye. Ved, V. A. Ivanov and S. F. Lushpenko, Determination of the thermal conductivity of ceramic materials by solving the inverse heat conduction problem, *J. Engng Phys.* 61(5), 816–822 (1991).
- V. V. Zozulya and Yu. N. Borodenko, Thermoelastic contact of a rigidly fixed cylindrical cased shell through a heat conducting layer, *Dokl. Akad. Nauk UkrSSR* No. 7, 47–53 (1991).

HEAT AND MASS TRANSFER BETWEEN A SOLID BODY AND A FLUID

- G. I. Abramov, Specific features of heat release by stabilized-current conductors, *J. Engng Phys.* 61(5), 795–803 (1991).
- V. M. Agapkin, P. T. Zubkov and V. P. Yugov, Thermo-gravitational convection of a low-temperature water in a pipeline with electroheating elements, *Izv. Akad. Nauk SSSR, Energet. Transp.* No. 5, 130–134 (1991).
- V. M. Agranat, V. G. Zverev and A. V. Milovanova, Effect of variable physical properties of gas on friction and heat transfer in laminar mixed convection on a horizontal plate,

- Izv. Akad. Nauk SSSR, Mekh. Zhidk. Gaza* No. 5, 74–81 (1991).
- V. P. Ankudinov, Optimization of heat transfer in capillary decomposition of metal melt jets, *Poroshkov. Metallurgiya (Moscow)* No. 1, 13–18 (1992).
- A. N. Antonov, V. M. Yepifanov and V. V. Kolykhalov, Numerical simulation of convective heat transfer in cross-flow past a system of tubes arranged in succession. In *Heat and Mass Transfer—MIF-92* (Proceedings of the 2nd Minsk International Heat and Mass Transfer Forum, 18–22 May 1992), Vol. 1, Part 1, pp. 35–38. Luikov Heat and Mass Transfer Institute, Minsk (1992).
- G. V. Averin, An approximate method for solving certain boundary-value problems of convective heat transfer. In *Heat and Mass Transfer—MIF-92* (Proceedings of the 2nd Minsk International Heat and Mass Transfer Forum, 18–22 May 1992), Vol. 1, Part 1, pp. 77–80. Luikov Heat and Mass Transfer Institute, Minsk (1992).
- V. A. Babenko, Flow and heat transfer in the exit pipes of crystals. In *Heat Pipes and Heat Pumps*, pp. 146–163. Luikov Heat and Mass Transfer Institute, Minsk (1991).
- V. I. Baikov and Fam Son, Laminar ultrafiltration in asymmetric channels. In *Problems of Heat and Mass Transfer—91*, pp. 99–105. Luikov Heat and Mass Transfer Institute, Minsk (1991).
- V. A. Balashov, N. V. Tyabin and I. G. Yudin, Experimental investigation of the process of heat transfer in a cylindrical channel with a porous filling, *Trudy Mosk. Energ. Inst.* No. 644, 74–78 (1991).
- R. G. Barantsev, Ye. V. Maiorov and I. V. Prokhorov, Asymptotic investigation of heat transfer to a hot wall in a high-speed flow. In *Heat and Mass Transfer—MIF-92* (Proceedings of the 2nd Minsk International Heat and Mass Transfer Forum, 18–22 May 1992), Vol. 1, Part 1, pp. 86–89. Luikov Heat and Mass Transfer Institute, Minsk (1992).
- A. P. Baskakov, V. K. Maskayev, I. V. Ivanov and A. G. Usoltsev, Effect of the aerodynamics of a circulating fluidized bed on the external heat transfer intensity, *J. Engng Phys.* 61(5), 778–781 (1991).
- M. Ya. Belenkiy, M. A. Gotovskiy, B. M. Lekakh and B. S. Fokin, Experimental investigation of thermal and hydraulic characteristics of heat transfer surfaces formed by physical cavities, *Teplotfiz. Vysok. Temp.* 29(6), 1142–1147 (1991).
- V. P. Belousov, The methodological aspect of determining the mean-mass temperature of a heat carrier. In *Collected Papers on Thermal Engineering*, No. 5, pp. 88–92. USSR State Committee for Public Education, Moscow (1991).
- R. V. Birikh and V. I. Yakushin, Numerical simulation of the system of automatic regulation of heat transfer in the conjugated problem of thermogravitational convection. In *Convective Flows*, pp. 79–86. Perm State Pedagogical Institute, Perm (1991).
- E. A. Boltenko, S. M. Bardychev and A. M. Melekhin, Investigation of temperature regimes on the convex heat releasing surface of an annular channel with heat carrier swirling. In *Modern Problems of Thermal Physics* (Proceedings of the 4th All-Union School-Seminar), No. 3, pp. 109–111. Siberian Physical–Technological Institute (1991).
- V. Ya. Borovoi and L. V. Yakovlev, Heat transfer in super-sonic flow past a single cavity, *Izv. Akad. Nauk SSSR, Mekh. Zhidk. Gaza* No. 5, 48–52 (1991).
- Yu. M. Brodov, R. Z. Savelyev, K. E. Aronson, A. Yu. Ryabchikov, S. I. Blinkov and G. I. Sakinov, Intensification of heat transfer in power engineering heat exchange apparatus by applying profiled tubes, *Trudy Mosk. Energ. Inst.* No. 644, 67–74 (1991).
- A. M. Bubenchikov and S. N. Kharlamov, Heat transfer and friction in a developed laminar gas flow in a channel of variable cross section. In *Gas Dynamics*, pp. 15–18. Scientific-Research Institute of Applied Mathematics and Mechanics at the Tomsk State University, Tomsk (1991).
- A. B. Bulanov and V. I. Bezrukov, Effect of heat and mass transfer on the dynamics of filling dead-end pipelines with cryogenic fluid, *Khim. Neft. Mashinostroyeniye* No. 12, 14–16 (1991).
- Ye. N. Bunin, Effect of the variability in the properties of heat carriers on the uncertainty in the calculated characteristics of gas-turbine plants, *Vesti Akad. Nauk Belarusi, Ser. Fiz.-Energ. Navuk* No. 1, 118–120 (1992).
- V. D. Chervyakov, O. V. Maminov and F. A. Mustashkin, Time characteristics of droplet liquid motion in porous bodies. In *Mass Exchange Processes and Apparatus of Chemical Technology*, pp. 32–35. Kazan Chemical–Technological Institute, Kazan (1991).
- N. S. Demidova, Project investigation of the electrochemical system stability by using the kinetic approach. In *The Problems in the Development of Life-support Complexes for the Crews of Flying Vehicles*, pp. 23–27. Moscow Aviation Institute, Moscow (1991).
- V. V. Didkovskiy and B. I. Knyukh, Experimental investigation of convective heat transfer in a circular tube with heating of hydrocarbons in the presence of the thermal destruction reaction, *Sib. Fiz.-Tekh. Zh.* No. 4, 150–153 (1991).
- S. G. Diyakonov, V. I. Yelizarov and A. G. Laptev, Determination of the efficiency of mass exchangers on the basis of conjugated physical and mathematical simulation, *Teor. Osnovy Khim. Tekhnol.* 26(1), 33–42 (1992).
- S. G. Diyakonov, V. I. Yelizarov and A. G. Laptev, Mathematical simulation of heat transfer in gas–liquid mixture turbulent flow through a channel, *Trudy Mosk. Energ. Inst.* No. 644, 5–11 (1991).
- A. R. Dorokhov and M. I. Shilyayev, Concerning the generalization of experimental data on mass transfer in simultaneous heat and mass transfer, *Sib. Fiz.-Tekh. Zh.* No. 6, 11–14 (1991).
- A. R. Dorokhov, M. I. Shilyayev and V. I. Kazakov, About heat transfer between a cylinder and a bubbling bed, *Sib. Fiz.-Tekh. Zh.* No. 3, 31–36 (1991).
- Yu. Ye. Dyban, Heat transfer and hydrodynamics of air flow in a plane slit channel with a transversely placed triangular rod, *Prom. Teplotekh.* 13(4), 40–47 (1991).
- Ye. P. Dyban, E. Ya. Epik and V. D. Melnik, Heat transfer of prismatic elements located above a plate, *Prom. Teplotekh.* 13(4), 3–12 (1991).
- A. G. Genin, A. P. Koval, S. P. Manchkha and V. G. Sviridov, Investigation of heat transfer and hydrodynamics for pulsing water discharge in a circular tube. In *Heat and Mass Transfer—MIF-92* (Proceedings of the 2nd Minsk International Heat and Mass Transfer Forum, 18–22 May 1992), Vol. 1, Part 1, pp. 97–100. Luikov Heat and Mass Transfer Institute, Minsk (1992).
- G. A. Globov and V. B. Matveyev, Flow and heat transfer of a turbulent swirled jet developing in a cylindrical channel. In *Heat Exchange and Friction in Engines and Power Plants of Flying Vehicles*, pp. 39–49. Kazan Aviation Institute, Kazan (1990).
- A. V. Gorin, A. G. Khoruzhenko and V. M. Chupin, Natural convection from a heat source in a narrow slit. In *Hydrodynamics and Heat/Mass Transfer in Fixed Granular Beds*, pp. 128–138. Institute of Thermophysics, Novosibirsk (1991).
- A. V. Gorin and D. F. Sikovskiy, Heat/mass transfer and friction in flow around a cylinder in a granular bed and a narrow slit. In *Hydrodynamics and Heat/Mass Transfer in Fixed Granular Beds*, pp. 21–31. Institute of Thermophysics, Novosibirsk (1992).
- V. G. Gorobets and V. V. Treputnev, Natural convection heat transfer of surfaces with continuous and discrete finning. In *Heat and Mass Transfer—MIF-92* (Proceedings of the 2nd Minsk International Heat and Mass Transfer Forum, 18–22 May 1992), Vol. 1, Part 1, pp. 154–158. Luikov Heat and Mass Transfer Institute, Minsk (1992).
- V. A. Grabezhnaya, M. Ya. Suvorov and N. M. Turchin, Intensification of heat transfer in circular pipes with knurled screw profiles. In *Heat and Mass Transfer—MIF-92* (Pro-

- ceedings of the 2nd Minsk International Heat and Mass Transfer Forum, 18–22 May 1992), Vol. 1, Part 1, pp. 101–104. Luikov Heat and Mass Transfer Institute, Minsk (1992).
- S. Ye. Gusev and G. G. Shklover, Free-convective heat transfer in bundles of horizontal tubes. In *Heat and Mass Transfer—MIF-92* (Proceedings of the 2nd Minsk International Heat and Mass Transfer Forum, 18–22 May 1992), Vol. 1, Part 1, pp. 105–108. Luikov Heat and Mass Transfer Institute, Minsk (1992).
- G. I. Isayev, I. T. Arabova, G. K. Abdullayeva and F. Kh. Mamedov, Heat transfer of a moving organic heat carrier at supercritical pressures. In *Heat and Mass Transfer—MIF-92* (Proceedings of the 2nd Minsk International Heat and Mass Transfer Forum, 18–22 May 1992), Vol. 1, Part 2, pp. 80–83. Luikov Heat and Mass Transfer Institute, Minsk (1992).
- V. S. Kesarev and A. P. Kozlov, Convective heat transfer in a semi-spherical depression immersed in a turbulized flow. In *Heat and Mass Transfer—MIF-92* (Proceedings of the 2nd Minsk International Heat and Mass Transfer Forum, 18–22 May 1992), Vol. 1, Part 1, pp. 14–17. Luikov Heat and Mass Transfer Institute, Minsk (1992).
- A. A. Khalatov, I. V. Shevchuk and I. A. Izgoreva, Heat on a convex surface. In *Heat and Mass Transfer—MIF-92* (Proceedings of the 2nd Minsk International Heat and Mass Transfer Forum, 18–22 May 1992), Vol. 1, Part 1, pp. 62–65. Luikov Heat and Mass Transfer Institute, Minsk (1992).
- A. A. Khalatov, I. V. Shevchuk and M. M. Mitrakhovich, Heat transfer and hydrodynamics in a turbulent flow with a longitudinal pressure gradient on a convex surface, *Prom. Teplotekh.* **13**(4), 12–18 (1991).
- A. Ye. Khodak, Specific features of heat transfer in rotating channels, *Sib. Fiz.-Tekh. Zh.* No. 3, 51–53 (1991).
- K. G. Kornev, G. I. Mukhamadullina and E. V. Skvortsov, About the lower estimate of heat transfer in a hydrodynamic grid. In *Filtration of Multiphase Systems* (Proceedings of the 10th All-Union Seminar, Novosibirsk, 17–20 December 1990), pp. 49–55. Novosibirsk (1991).
- A. V. Kostromin, M. M. Grigoriyev, V. V. Kuzmin and V. M. Loskutov, Thermal characteristics of a pulsing turbulent flow in a converging nozzle. In *Heat Exchange and Friction in Engines and Power Plants of Flying Vehicles*, pp. 14–17. Kazan Aviation Institute, Kazan (1990).
- A. A. Kriveshko and L. G. Chernyakov, Heat transfer and resistance of tubes with internal discrete finning. In *Heat and Mass Transfer—MIF-92* (Proceedings of the 2nd Minsk International Heat and Mass Transfer Forum, 18–22 May 1992), Vol. 1, Part 1, pp. 125–128. Luikov Heat and Mass Transfer Institute, Minsk (1992).
- V. B. Kuntyshev and A. E. Piir, Heat transfer intensification in bundles of tubes by the method of radial cutting of transverse fins. *Izv. VUZov, Neft. Gaz* No. 1, 69–74 (1991).
- Kh. K. Kurbanov, B. A. Permyakov and D. U. Sugirov, Investigation of the effect of a barrier installed downstream of heat exchanging pipes on heat transfer and aerodynamics, *Izv. Akad. Nauk TSSR, Ser. Fiz.-Mat., Tekh., Khim. Geol. Nauk* No. 4, 104–108 (1991).
- K. M. Lasenko, B. F. Shaidak and L. P. Safonov, Calculation of additional energy losses in the case of open air cooling of gas turbines, *Trudy TsKTI* No. 261, 35–46 (1990).
- V. P. Lebedev, V. V. Lemanov and S. Ya. Misyura, The efficiency of the heat screening in highly turbulent flows, In *Heat and Mass Transfer—MIF-92* (Proceedings of the 2nd Minsk International Heat and Mass Transfer Forum, 18–22 May 1992), Vol. 1, Part 2, pp. 11–13. Luikov Heat and Mass Transfer Institute, Minsk (1992).
- Yu. S. Levitan and N. N. Panchenko, Spectral characteristics of the vorticity and temperature pulsations in turbulent flow with heat sources, *J. Engng Phys.* **61**(5), 741–748 (1991).
- V. V. Lemanov and S. Ya. Misyura, Measurements in a two-dimensional turbulent flow with the aid of an automated thermoanemometer, *Sib. Fiz.-Tekh. Zh.* No. 3, 112–115 (1991).
- A. T. Lipchin, Numerical investigation of the supercritical convection in a vertical plane layer for a fixed transverse heat flow. In *Convective Flows*, pp. 32–46. Perm State Pedagogical Institute, Perm (1991).
- V. I. Malkovskiy, Unsteady-state heat exchange in a turbulent boundary layer on the change in the wall heat fluxes in time, *Izv. RAN, Energetika* No. 1, 150–155 (1992).
- V. P. Maslov and Ye. A. Kiselyova, The asymptotics of convective gas flow through a heat evolving different-scale porous medium, *Dokl. Akad. Nauk SSSR* **322**(2), 284–288 (1992).
- A. N. Mikelevich, T. S. Korniyenko and M. Kh. Kishinevskiy, Turbulent heat and mass transfer on a rough wall at large Prandtl (Schmidt) numbers. In *Heat Transfer in Power Plants and Improvement of the Efficiency of Their Operation*, pp. 58–61. Voronezh Polytechnic Institute, Voronezh (1991).
- B. I. Mokin and Yu. V. Dementiyev, Concerning the problem of the error in accounting for the quantity of heat released by a superheated vapour flow, *Izv. VUZov, Energetika* No. 10, 56–59 (1991).
- Yu. A. Molotilin, A two-dimensional process of heat and mass transfer in a cooled matrix. In *Applied Problems of Aeromechanics and Geocosmic Physics*, pp. 63–65. Moscow Physicotechnical Institute, Moscow (1991).
- V. Ye. Nakoryakov, Hydrodynamics and heat transfer in porous media. In *Topical Problems of Thermal Physics: Power Engineering and Ecology*, pp. 3–29. Institute of Thermophysics, Novosibirsk (1991).
- O. D. Nikishova, V. V. Oleksyuk and O. O. Otkalenko, About the unsteady-state convective heat transfer in the boundary layer of an inhomogeneous fluid. In *Heat and Mass Transfer—MIF-92* (Proceedings of the 2nd Minsk International Heat and Mass Transfer Forum, 18–22 May 1992), Vol. 1, Part 2, pp. 104–107. Luikov Heat and Mass Transfer Institute, Minsk (1992).
- M. I. Nizovtsev, Heat transfer in the zone of propagation of the opposing wall jet. In *Heat and Mass Transfer—MIF-92* (Proceedings of the 2nd Minsk International Heat and Mass Transfer Forum, 18–22 May 1992), Vol. 1, Part 2, pp. 100–103. Luikov Heat and Mass Transfer Institute, Minsk (1992).
- A. N. Opanasenko, Free-convective heat and mass transfer between cavities through a channel differently orientated in the gravity field. In *Heat and Mass Transfer—MIF-92* (Proceedings of the 2nd Minsk International Heat and Mass Transfer Forum, 18–22 May 1992), Vol. 1, Part 2, pp. 108–111. Luikov Heat and Mass Transfer Institute, Minsk (1992).
- B. V. Perepelitsa and A. M. Nasibulov, Experimental investigation of unsteady-state heat transfer in turbulent fluid flow in channels. In *Heat and Mass Transfer—MIF-92* (Proceedings of the 2nd Minsk International Heat and Mass Transfer Forum, 18–22 May 1992), Vol. 1, Part 1, pp. 26–29. Luikov Heat and Mass Transfer Institute, Minsk (1992).
- G. B. Petrazhitskiy, A. M. Pylayev and N. M. Stankevich, Self-similar solutions of the natural convection heat transfer problem with foreign gas injection. In *Heat and Mass Transfer—MIF-92* (Proceedings of the 2nd Minsk International Heat and Mass Transfer Forum, 18–22 May 1992), Vol. 1, Part 2, pp. 117–120. Luikov Heat and Mass Transfer Institute, Minsk (1992).
- V. A. Petruschenkov, Free convection of the splitted screened current-leading system, *Vestsi Akad. Navuk Belarusi, Ser. Fiz.-Energ. Navuk* No. 1, 97–103 (1992).
- Yu. L. Podkopyayev, About the convection of a fluid having a variable viscosity. In *Approximate Analytical and Numerical Methods of Solving Boundary-value Problems*, pp. 31–37. Kazakh State University, Alma-Ata (1990).
- Ya. S. Podstrigach, O. I. Dublenich and Yu. A. Chernukha, Solution of the heat conduction problem for three-layer plates with a moving filling, *Mat. Metody Fiz.-Mekh. Polya* No. 33, 1–3 (1991).
- V. N. Popov and Ye. P. Valuyeva, Heat transfer and hydrodynamics in unsteady-state turbulent fluid flow in a circular tube. In *Heat and Mass Transfer—MIF-92* (Proceedings of

- the 2nd Minsk International Heat and Mass Transfer Forum, 18–22 May 1992), Vol. 1, Part 1, pp. 133–136. Luikov Heat and Mass Transfer Institute, Minsk (1992).
- N. I. Rasyuk, G. V. Maslovskiy and L. A. Ivanova, Heat transfer in longitudinal flow past screens with longitudinal plane fins, *Teploenergetika* No. 1, 74–75 (1992).
- O. V. Remizov and G. A. Kapinos, Heat transfer in vertical tubes in the case of simultaneous effect of free and forced convection. In *Heat and Mass Transfer—MIF-92* (Proceedings of the 2nd Minsk International Heat and Mass Transfer Forum, 18–22 May 1992), Vol. 1, Part 2, pp. 129–131. Luikov Heat and Mass Transfer Institute, Minsk (1992).
- O. V. Remizov and G. A. Kapinos, Heat transfer in vertical tubes in the case of simultaneous effect of free and forced convection. In *Heat and Mass Transfer—MIF-92* (Proceedings of the 2nd Minsk International Heat and Mass Transfer Forum, 18–22 May 1992), Vol. 1, Part 2, pp. 129–131. Luikov Heat and Mass Transfer Institute, Minsk (1991).
- V. M. Repukhov and T. N. Gorislavets, The heat screen efficiency on a curvilinear surface, *Prom. Teplotekh.* 13(4), 47–51 (1991).
- V. V. Ris, Ye. M. Smirnov and A. Ye. Khodak, Heat transfer in turbulent flow in rotating channels. In *Heat and Mass Transfer—MIF-92* (Proceedings of the 2nd Minsk International Heat and Mass Transfer Forum, 18–22 May 1992), Vol. 1, Part 1, pp. 31–34. Luikov Heat and Mass Transfer Institute, Minsk (1992).
- Ye. A. Ryabitskiy, Numerical investigation of the equilibrium stability of a cylindrical fluid layer in the presence of internal heat sources, *Prikl. Mekh. Tekh. Fiz.* No. 6, 67–72 (1991).
- A. F. Ryzhkov and V. A. Mikula, Resonance regimes in blown different-fraction and most vibrational layers, *J. Engng Phys.* 61(5), 782–789 (1991).
- N. S. Safarova and Ye. M. Khabakhpasheva, Development of the transient process in turbulent heat transfer. In *Heat and Mass Transfer—MIF-92* (Proceedings of the 2nd Minsk International Heat and Mass Transfer Forum, 19–22 May 1992), Vol. 1, Part 2, pp. 136–139. Luikov Heat and Mass Transfer Institute, Minsk (1992).
- P. S. Savoiskiyy and V. S. Ivryayev, Investigation of heat transfer in the process of substance destruction, *Problemy Metallurg. Proizvod.* No. 108, 66–70 (1991).
- V. V. Serebryannikov and V. N. Skorik, A complex of programs of heat transfer simulation in the channels of radio-electronic apparatus. In *Thermometry and Heat Saving*, pp. 40–45. Institute of the Problems of Energy Saving, Kiev (1991).
- I. A. Shangin, A mathematical model of the process of heat and mass transfer in an electric insulator. In *The Problems in the Development of Life-support Complexes for the Crews of Flying Vehicles*, pp. 52–55. Moscow Aviation Institute, Moscow (1991).
- Yu. I. Shanin, V. A. Afanasiyev and O. I. Shanin, Hydrodynamics and heat transfer in cooling systems with intersecting channels. 1. Hydrodynamic characteristics, *J. Engng Phys.* 61(5), 717–725 (1991).
- Yu. I. Shanin, V. A. Afanasiyev and Ye. S. Yemeliyanov, Enhancement of heat transfer by means of spherical cavities on the walls of the channels. In *Problems of Thermal Physics in Nuclear Technology*, pp. 62–66. Moscow Physicotechnical Institute, Moscow (1991).
- V. K. Shchukin, A. L. Ruslanov, V. L. Romanovskiy and A. I. Mironov, Computational evaluation of heat transfer from a cylinder in a cross flow under stringent conditions. In *Heat Exchange and Friction in Engines and Power Plants of Flying Vehicles*, pp. 53–56. Kazan Aviation Institute, Kazan (1990).
- V. M. Shevtsova, A. Ye. Indeikina and Yu. S. Ryazantsev, Investigation of thermocapillary convection in a two-layer fluid, *J. Engng Phys.* 61(5), 732–740 (1991).
- V. M. Šimonis and V. P. Schukis, Heat transfer and hydrodynamics in gas-cooled helical channels. In *Heat and Mass Transfer—MIF-92* (Proceedings of the 2nd Minsk International Heat and Mass Transfer Forum, 18–22 May 1992), Vol. 1, Part 1, pp. 150–153. Luikov Heat and Mass Transfer Institute, Minsk (1992).
- A. V. Starchenko, Numerical investigation of the deposition of solid particles in laminar motion of gas suspension in a plane horizontal channel. In *Gas Dynamics*, pp. 85–90. Scientific-Research Institute of Applied Mathematics and Mechanics at the Tomsk State University, Tomsk (1991).
- O. B. Strelchuk and Yu. V. Sokolov, The areas of effective use of heat transfer surfaces made from anisotropic-porous material. In *Energy Saving by the Commercial System of Heat Supply*, pp. 31–40. Leningrad (1991).
- Ye. P. Sukhovich, A group of locally anisotropic models of the second-order turbulence for describing heat and mass transfer. In *Heat and Mass Transfer—MIF-92* (Proceedings of the 2nd Minsk International Heat and Mass Transfer Forum, 18–22 May 1992), Vol. 1, Part 2, pp. 22–25. Luikov Heat and Mass Transfer Institute, Minsk (1992).
- I. Truskov and V. Shokol'ko, Effect of the structure of the pulse flow of a gas medium on the efficiency of heat transfer. In *Urgent Problems of Fundamental Sciences* (Proceedings of the International Scientific Technical Conference, Moscow, 28 October–3 November 1991), Vol. 8, pp. 114–115. Moscow (1991).
- P. V. Tsoi, T. Negmatov and Kh. Kh. Sadulayev, Heat transfer of the Couette flow, *Izv. Akad. Nauk Tadzh. SSR, Otd. Fiz.-Mat. Geol. Nauk* No. 4, 81–83 (1990).
- Ye. V. Uabortseva, Natural convection in a liquid heated by the front of the self-propagating high-temperature synthesis. In *Problems of Heat and Mass Transfer—91*, pp. 85–86. Luikov Heat and Mass Transfer Institute, Minsk (1991).
- V. A. Vaigant, Solution stabilization the non-uniform boundary-value problem for the equations of a viscous heat conducting gas, *Dinam. Sploshn. Sredy* No. 101, 31–52 (1991).
- P. A. Vakulchik and A. N. Rashid, Investigation of the convergence of an implicit difference scheme used for solving the problem of numerical simulation of thermoconvective processes inside of a cylindrical vessel, *Differents. Uravn.* 27(10), 1817–1819 (1991).
- N. N. Vereda, Yu. A. Izyumov and V. I. Yudin, Concerning the use of the $k-\epsilon$ turbulence model in curvilinear coordinates. In *Improvement of the Methods for Hydraulic Calculation of Water Transmitting and Cleaning Constructions*, pp. 16–21. Saratov Polytechnic Institute, Saratov (1991).
- V. B. Veselovskiy and M. V. Timoshenko, Numerical simulation of the processes of hydrodynamics and heat transfer in pipelines of energy plants. In *The Dynamics of the Hydro-systems of Energy Plants of Flying Apparatus*, pp. 138–145. Institute of Technical Mechanics, Kiev (1991).
- Yu. V. Vidin, A. K. Fedyukovich, V. A. Antifyeyev and V. G. Shmelyov, A laboratory facility for complex investigation of heat transfer of a freely moving medium. In *Collected Papers on Thermal Engineering*, No. 5, pp. 136–139. USSR State Committee for Public Education, Moscow (1991).
- Yu. Vilemas, Ye. Ušpuras and P. Poškas, Turbulent heat transfer in tubes in the region of small Reynolds numbers. In *Heat and Mass Transfer—MIF-92* (Proceedings of the 2nd Minsk International Heat and Mass Transfer Forum, 18–22 May 1992), Vol. 1, Part 2, pp. 35–41. Luikov Heat and Mass Transfer Institute, Minsk (1992).
- R. I. Yankauskas, V. M. Polyukhovich and S. A. Rimkya-vichyus, Heat transfer from the fillings of spheres in annular channels, *Vestsi Akad. Navuk Belarusi, Ser. Fiz.-Energ. Navuk* No. 1, 69–72 (1992).
- L. S. Yanovskiy and O. V. Dobrocheyev, Enhancement of heat transfer in the flow of oil products in the channels of heat exchanging apparatus, *Khim. Neft. Mashinostroyeniye* No. 10, 2–4 (1991).
- D. V. Yefremov, L. S. Yanovskiy and G. B. Sapgir, Specific features of heat and mass transfer in turbulent flow of reactive fuels in heated channels. In *Heat and Mass Transfer—*

- MIF-92 (Proceedings of the 2nd Minsk International Heat and Mass Transfer Forum, 18–22 May 1992), Vol. 1, Part 2, pp. 72–75. Luikov Heat and Mass Transfer Institute, Minsk (1992).
- V. S. Yegorov and V. A. Sutsepina, Investigation of convective heat transfer on the removal of ice coating from a plane surface by a water stream. In *Calculation of the Elements of Hydraulic Systems, Machines and Constructions*, pp. 21–26. Moscow Automobile–Road Institute, Moscow (1990).
- V. M. Yegorova, L. M. Levitan, V. I. Moroz and M. S. Khaganov, Calculation of heat transfer in a large-size gas furnace with a rolling-out hearth, *Trudy TsNIITMASH* No. 255, 35–40 (1991).
- V. I. Yeliseyev and Yu. P. Sovit, Hydrodynamics and heat exchange in a tube with a bundle of moving rods, *Vestsi Akad. Navuk Belarusi, Ser. Fiz.-Energ. Navuk* No. 1, 76–83 (1992).
- V. M. Yepifanov, A. P. Kareyev and A. A. Kurakin, Calculation of the temperature state of permeable end surfaces of a curvilinear channel, *Teploenergetika* No. 1, 71–73 (1992).
- V. F. Yudin and Ye. D. Fedorovich, Heat transfer of the bundles of oval finned tubes. In *Heat and Mass Transfer—MIF-92* (Proceedings of the 2nd Minsk International Heat and Mass Transfer Forum, 18–22 May 1992), Vol. 1, Part 1, pp. 58–61. Luikov Heat and Mass Transfer Institute, Minsk (1992).
- V. I. Zavelion, A complex analysis of conjugated heat transfer and thermally stressed state of the wall with liquid flow in an ellipsoidal tube, *Izv. VUZov, Energetika* No. 1, 70–73 (1992).
- A. N. Zharov and A. V. Sharkov, Investigation of convective heat transfer in a plane channel with discrete heat supply to the walls. In *Heat and Mass Transfer—MIF-92* (Proceedings of the 2nd Minsk International Heat and Mass Transfer Forum, 18–22 May 1992), Vol. 1, Part 1, pp. 113–116. Minsk (1992).
- V. G. Zubkov, Effect of flow acceleration on the structure of turbulent flows and heat transfer. In *Heat and Mass Transfer—MIF-92* (Proceedings of the 2nd Minsk International Heat and Mass Transfer Forum, 18–22 May 1992), Vol. 1, Part 2, pp. 76–79. Luikov Heat and Mass Transfer Institute, Minsk (1992).
- O. V. Zverev and N. N. Pilyugin, Calculation of heat transfer and friction of a blunt body in the supersonic flow of a chemically equilibrium air–xenon mixture, *Teplofiz. Vysok. Temp.* 29(6), 1164–1170 (1991).
- L. M. Zysina-Molozhen, L. S. Petukhov and V. Ye. Savinova, Heat transfer in cooled blade apparatus of the GIN-25-A turbine, *Trudy TsKTI* No. 261, 105–116 (1990).
- HEAT AND MASS TRANSFER IN DISPERSE AND TWO-PHASE SYSTEMS**
- Abbas Falikh Hassan and G. I. Palchyonok, Heat transfer to extended surfaces in the volume over a fluidized bed. 1. A finned horizontal tube, *Izv. VUZov, Energetika* No. 1, 78–83 (1992).
- E. G. Aznakayev, Transfer processes in multicomponent mixtures of gases and liquids, *Prikl. Mekh. Tekh. Fiz.* No. 6, 122–128 (1991).
- P. S. Belyayev, An installation for investigating the heat and mass transfer characteristics in disperse media, *Khim. Neft. Mashinostroyeniye* No. 2, 23–25 (1992).
- A. N. Berezhnoi and V. N. Shekurov, Approximation of the temperature dependence for the mutual diffusion coefficient of helium-containing vapour–gas systems, *Trudy Mosk. Energ. Inst.* No. 644, 91–95 (1991).
- I. V. Derevich and V. M. Yeroshenko, Boundary conditions for heat and mass transfer equations of roughly dispersed aerosols in a turbulent flow, *J. Engng Phys.* 61(4), 546–553 (1991).
- L. M. Galiyeva and Yu. P. Gupalo, About the motion and mass transfer of moderately sized bubbles in a fluidized bed, *Izv. Akad. Nauk SSSR, Mekh. Zhidk. Gaza* No. 6, 44–50 (1991).
- A. G. Glebov and I. G. Panyavin, Concerning the procedure of thermal calculation of optically dense jets of jet-drop emitters. In *Power Plants for Space Technology (Investigation, Design, Application)*, pp. 29–35. Moscow Aviation Institute, Moscow (1991).
- L. S. Gurevich, I. N. Moreva, V. V. Petrovskiy, A. V. Pustovoi and A. S. Shelukhin, Cryosorptional pumping of gases by the SKT-2B coal cooled by solid nitrogen, Preprint No. P-A-D857 of the Scientific-Research Institute of Electro-physical Apparatus, pp. 1–13 (1990).
- A. K. Karyshev and S. I. Manyunin, A method for solving the inverse problem of the optics of heterogeneous media with allowance for the discrete structure of real media, *Izv. VUZov, Energetika* No. 2, 84–89 (1992).
- A. V. Kosterin, E. V. Skvortsov and M. G. Khranchenkov, Mass transfer in the course of filtration of solutions in crack-porous media, *J. Engng Phys.* 61(6), 971–975 (1991).
- O. L. Kotlyarov, A mathematical model of transfer, heating and crushing of polydisperse powder by a high-speed plasma jet. In *Thermometry and Heat Saving*, pp. 75–80. Institute of the Problems of Energy Saving, Kiev (1991).
- A. D. Matsepuro and V. I. Kordonskiy, Concerning the process of charge inflow on the particles of the dispersed phase of electrorheological suspensions. In *Problems of Heat and Mass Transfer—91*, pp. 27–32. Luikov Heat and Mass Transfer Institute, Minsk (1991).
- V. A. Naumov and L. V. Kondratiyev, Mathematical simulation of heat and mass transfer in polydisperse gas–droplet flow in a hollow scrubber. In *Thermometry and Heat Saving*, pp. 69–75. Institute of the Problems of Energy Saving, Kiev (1991).
- A. P. Nesenchuk and I. A. Bokun, The temperature field of a thermofluidized bed with an immersed plane wall. In *Investigation of Heat and Mass Transfer in Apparatus with Dispersed Systems*, pp. 47–50. Luikov Heat and Mass Transfer Institute, Minsk (1991).
- A. N. Raschepkin, G. N. Danilova and V. M. Azarskov, Heat transfer of a two-phase flow of ammonium–oil mixtures in heated coils, *Kholod. Tekh.* No. 9, 7–10 (1991).
- A. F. Ryzhkov, Hydrodynamics and mass/heat transfer in vibrofluidized disperse media, *Sib. Fiz.-Tekh. Zh.* No. 5, 75–78 (1991).
- V. D. Seleznyov, V. I. Tokmantsev and I. P. Aleksandrychev, Kinetic models of adsorption and desorption. In *Kinetic Theory of Evaporation and Condensation Transfer Processes* (Proceedings of the International School-Seminar, Minsk, September 1991), pp. 38–50. Luikov Heat and Mass Transfer Institute, Minsk (1991).
- A. A. Shraiber, A. M. Podvysotskiy and V. V. Dubrovskiy, A mathematical model of a three-phase flow with destruction of particles in collisions. In *Thermometry and Heat Saving*, pp. 15–23. Institute of the Problems of Energy Saving, Kiev (1991).
- M. P. Shuvalov, Heat and mass transfer in decomposing materials with the closed initial porosity. In *Applied Problems of Aeromechanics and Geocosmic Physics*, pp. 47–52. Moscow Physicotechnical Institute, Moscow (1991).
- N. N. Smirnova and V. B. Soloviyov, Evaluation of filtration heat transfer in a heterogeneous medium with inlet conditions on a moving boundary, *J. Engng Phys.* 61(2), 313–318 (1991).
- K. S. Strelkova, V. M. Marushkin and A. V. Rezvov, Heat transfer in tube flow of water–coal suspension, *Teploenergetika* No. 12, 55–59 (1991).
- A. I. Tamarin, A. F. Dolidovich and T. S. Akhremkova, Some characteristics of mass transfer in adsorption of vapour-like organic components by a granulated catalyst–adsorbent, *Vestsi Akad. Nauk BSSR* No. 3, 87–91 (1991).
- A. A. Vinberg, L. I. Zaichik and V. A. Pershukov, A model for calculating turbulent gas-disperse jet flows, *J. Engng Phys.* 61(4), 554–563 (1991).

V. I. Yelizarov and A. G. Laptev, Mathematical simulation of volumetric mass transfer coefficients on contact devices with account for nonuniform distribution of phases in a gas-vapour-liquid layer. In *Mass Exchange Processes and Apparatus of Chemical Technology*, pp. 4–10. Kazan Chemical-Technological Institute, Kazan (1991).

A. V. Yemyashev, V. V. Dementiyev, L. V. Lisovskaya and Ye. M. Cherednik, A prognostic model for determining the parameters of gas-phase saturation of porous bases, *Khim. Tvyord. Topliva* No. 1, 116–120 (1992).

RADIATION HEAT TRANSFER

- E. Z. Apshtein, V. I. Sakharov and A. V. Shevoroshkin, Radiative heat transfer in supersonic spatial and axisymmetric air flow around evaporating bodies, *Teplotfiz. Vysok. Temp.* **29**(6), 1178–1183 (1991).
- A. G. Baikov, Analysis of the process of radiative heating of a plate in the regular regime, *Izv. Sev.-Kavk. Nauch. Tsentra Vyssh. Shk., Tekh. Nauk* No. 4, 6–8 (1990).
- O. N. Baukin and A. I. Korneyev, Interaction of a powerful laser radiation with a solid deformed body. In *Extremal States of Material*, pp. 229–234. Moscow (1991).
- A. S. Berezovskiy and I. F. Zherybiyev, Numerical calculation of heat and mass transfer processes in composite material in radiative heating. In *Approximate Analytical and Numerical Methods of Solving Boundary-value Problems*, pp. 13–23. Kazakh State University, Alma-Ata (1990).
- P. N. Bogdanovich and V. M. Belov, The laws governing the process of thermal radiation in the zone of contact of rubbing bodies, *Dokl. Akad. Nauk Belarusi* **36**(1), 38–42 (1992).
- G. V. Derevyabko and P. S. Koltun, Calculation of radiative-conductive heat transfer of semi-transparent bodies by the Monte Carlo method, *J. Engng Phys.* **61**(4), 680–684 (1991).
- L. A. Dombrovskiy, A. V. Kolpakov and S. T. Surzhikov, About the possibility of using transport approximation in calculation of transfer of directed radiation in anisotropically scattering erosive jet, *Teplotfiz. Vysok. Temp.* **29**(6), 1171–1177 (1991).
- A. V. Gorbатов and Ye. V. Samuilov, A diffractive model of the interaction of IR-radiation with a porous carbon particle. In *Investigation of Electric Discharges in the Atmosphere*, pp. 99–100. Yaroslavl State University, Yaroslavl (1991).
- L. V. Guriyanov, Methodological foundations for the design of the pyrometer radiation receiver. *Problemy Energoberezheniya* No. 7, 74–76 (1991).
- N. Z. Gusev, Calculation of the mutual radiation of bodies, *Sbornik Nauch.-Metod. Statei po Teplotekh.* No. 5, 68–72 (1991).
- V. I. Kormilitsyn and M. G. Lyshkov, Effect of moisture addition to the furnace on the intensity of radiative heat transfer, *Teplotenergetika* No. 1, 41–44 (1992).
- I. B. Krasnyuk, T. T. Riskiyev and T. P. Salikhov, Concerning the transfer of powerful laser radiation in optical media: origination of “optical turbulence”, *J. Engng Phys.* **61**(1), 21–25 (1991).
- S. A. Krupennikov, Modification of the zonal method of radiative heat transfer calculation, *Izv. VUZov, Chyorn. Metallurg.* No. 1, 102–103 (1992).
- M. K. Kulbekov, Investigation of certain processes of radiative heat transfer in firing of fuel-containing ceramic materials. In *Interaction of Neutral and Charged Particles with Material*, pp. 37–42. Kazakh Pedagogical Institute, Alma-Ata (1990).
- V. A. Kuzmin, Problems of computational experiments of radiative and complex heat transfer. In *Heat Exchange and Friction in Engines and Power Plants of Flying Vehicles*, pp. 17–24. Kazan Aviation Institute, Kazan (1990).
- V. A. Kuzmin and Ye. I. Maratkanova, Effect of various factors on radiative heat transfer in combustion. In *Combustion and Gas Dynamics in Aviation Engines*, pp. 47–54. Kazan Aviation Institute, Kazan (1990).
- A. A. Makhotkin, Analysis of the processes of radiative heat transfer from the unified methodological standpoint. In *Topical Problems of Thermal Physics: Power Engineering and Ecology*, pp. 137–148. Institute of Thermophysics, Novosibirsk (1991).
- N. I. Moskalenko, Yu. A. Ilijin and G. V. Kayumova, A measuring complex of high spectral resolution for the investigation of flames, *Zh. Prikl. Spektrosk.* **56**(1), 122–127 (1992).
- A. G. Plita and Ye. A. Yefremova, Effect of the size of soot particles on the spectral emissivity of flame, *Prom. Teplotekh.* **13**(4), 60–63 (1991).
- A. V. Rozhankovskiy, Calculation of the stationary regime of heating a standard specimen by an electron beam with allowance for radiation losses. In *Models and Methods in Investigation and Design of Welding Automatic Units*, pp. 85–88. Moscow Institute of Electronic Machine Building, Moscow (1990).
- N. A. Rubtsov, Heat and mass transfer in emitting media. In *Topical Problems of Thermal Physics: Power Engineering and Ecology*, pp. 59–74. Institute of Thermophysics, Novosibirsk (1991).
- N. A. Savvinova, Effect of radiation reflection on the formation of temperature field in phase transition of semi-transparent material. In *Topical Problems of Thermal Physics: Power Engineering and Ecology*, pp. 131–136. Institute of Thermophysics, Novosibirsk (1991).
- G. G. Spirin and Ye. A. Strekalova, A criterion for evaluating the effect of radiation in unsteady measurements of thermophysical characteristics. In *Thermophysical Properties of the Working Bodies and Heat Carriers in the Present-day Power Engineering*, pp. 67–71. Moscow Aviation Institute, Moscow (1991).
- Yu. A. Surinov, Integral equations of coupling between resolvents for different statements of problems of radiation transfer and radiative heat exchange theory, *Dokl. Akad. Nauk SSSR* **321**(6), 1173–1177 (1991).
- M. A. Taimarov, Toward the calculation of the process of radiative heat transfer in boilers. In *Mass Exchange Processes and Apparatus of Chemical Technology*, pp. 116–125. Kazan Chemical-Technological Institute, Kazan (1991).
- B. P. Tikhomirov, About the difference approximation of heat flux on non-orthogonal grids in multi-dimensional radiative heat transfer problems, *Vopr. Atom. Nauki Tekh., Ser. Mat. Model. Fiz. Protseessov (Moscow)* No. 2, 88–91 (1991).
- I. V. Vlasov, Calculation of the indicatrix for the system of optical radiation formation with an extended emitter in an attenuating medium. In *Power Plants for Space Technology (Investigation, Design, Application)*, pp. 16–22. Moscow Aviation Institute, Moscow (1991).
- I. V. Vlasov, A. V. Gusev, V. V. Zharov and V. S. Nikolayenko, Radiative transfer through cylindrical layers. In *Power Plants for Space Technology (Investigation, Design, Application)*, pp. 22–29. Moscow Aviation Institute, Moscow (1991).
- I. V. Vlasov, V. S. Nikolayenko and V. A. Samodergin, Calculation of the spatial distribution of energy from a set of cylindrical radiation sources. In *Problems of Developing Power Plants for Flying Vehicles and the Questions of Their Use in National Economy*, pp. 31–39. Moscow Aviation Institute, Moscow (1991).
- V. P. Zamurayev, Allowance for anisotropic scattering in calculation of combined heat transfer in a plane layer on a grid with an arbitrary optical thickness of the step, *Sib. Fiz.-Tekh. Zh.* No. 4, 14–19 (1991).
- Ye. G. Zaulichnyi, The characteristics of a finned heat exchanger with radiative heat removal into the surrounding space, *Sib. Fiz.-Tekh. Zh.* No. 3, 37–44 (1991).

HIGH-TEMPERATURE THERMOPHYSICS

V. T. Fed'ko and S. S. Kiyanov, Form formation and heat transfer of the splashes of melted metal in the process of welding in CO₂, *Svaroch. Proizvod.* No. 3, 29–31 (1992).

A. G. Gnedovets and A. A. Uglov, Heat exchange of an emitting particle with a rarefied plasma flow, *Teplofiz. Vysok. Temp.* **29**(6), 1184–1191 (1991).

A. N. Golovanov, Concerning the origination of self-vibrational processes on liquid supply into a plasma jet, *J. Engng Phys.* **61**(4), 650–655 (1991).

V. D. Golyshev and M. A. Gonik, Experimental investigation of the thermophysical properties of high-temperature melts, Preprint No. 255 of the Institute of Thermophysics, pp. 1–43. Novosibirsk (1991).

V. V. Kharitonov, A. A. Plakseyev, V. V. Voskoboinikov and D. Yu. Tarutin, Thermal regimes of cooled copper targets in the case of intense local heating, *Teplofiz. Vysok. Temp.* **29**(5), 941–948 (1991).

L. A. Kulagina, Measurement of the surface temperature of heat protecting materials with the aid of the television brightness analyzer, In *Theoretical and Experimental Investigations of Certain Problems of Aerohydrodynamics*, pp. 37–44. Moscow Physicotechnical Institute, Moscow (1991).

Ye. I. Mikulin, V. I. Yepifanova, V. N. Potapov and L. V. Khmara, Cooling of an electrically ionising CO-laser with the aid of a turbomachine assembly, *Trudy MGTU* No. 554, 56–61 (1991).

Yu. P. Raizer and M. N. Shneider, The longitudinal structure of the cathode parts of a glowing discharge, *Teplofiz. Vysok. Temp.* **29**(6), 1041–1052 (1991).

Yu. V. Trofimov, V. B. Omelyanchenko and A. T. Nikitin, Homogeneous nucleation in liquid-metal heat carriers saturated with hydrogen, *Teplofiz. Vysok. Temp.* **29**(5), 949–953 (1991).

V. L. Vinogradov and A. V. Kostanovskiy, Determination of the parameters of boron nitride melting, *Teplofiz. Vysok. Temp.* **29**(6), 1112–1120 (1991).

L. K. Zarembo, Ye. K. Guseva, S. V. Titov and K. E. Toom, The use of self-heating of acoustic resonators for measuring the heat transfer coefficient, *Zav. Lab.* **57**(9), 51–52 (1991).

LOW-TEMPERATURE PHYSICS

O. A. Gerashchenko, T. G. Grishchenko, L. V. Dekusha and V. P. Salo, Thermometric instruments for investigations at low temperatures, *Prom. Teplotekh.* **13**(4), 64–69 (1991).

V. Ye. Kulina, Heat transfer and hydrodynamics in cryogenic fluids, *Izv. VUZov, Energetika* No. 9, 121–126 (1991).

L. L. Vasiliyev, S. V. Konev, L. Ye. Kanonchik, A. S. Zhuravlyov and L. S. Domorod, Heat exchange processes in cryogenic heat pipes, *Vestsi Akad. Navuk Belarusi, Ser. Fiz.-Energ. Navuk* No. 1, 51–55 (1992).

Ye. G. Zaulichnyi, Possibilities for improving the characteristics of a refrigerator-emitter by using finned heat pipes as luminous elements, *Sib. Fiz.-Tekh. Zh.* No. 4, 20–26 (1991).

A. D. Zhuchkov, Concerning the contact heat transfer at low temperatures. In *Modern Problems of Thermophysical Provision of Electrophysical Installations* (Proceedings of the Thermophysical Seminar, Sukhumi, 13–15 June 1990), pp. 139–147. Sukhumi (1991).

S. I. Zinchenko, G. B. Smykov and A. N. Shamichev, Modeling of the heat exchanging apparatus for a cryogenic helium installation and experimental data, Preprint No. 91-146 of the Institute of the Physics of High Energies, pp. 1–14. Protvino (1991).

HEAT AND MASS TRANSFER IN PHASE AND CHEMICAL CONVERSIONS

F. Abud, V. V. Klimenko, Yu. A. Fomichev and Yu. Ye. Shvaikovskiy, Experimental investigation of the burn-out heat transfer of boiling nitrogen in a vertical channel under forced motion conditions, *Trudy Mosk. Energ. Inst.* No. 644, 113–123 (1991).

Yu. O. Afanasiyev, Natural convection heat and mass transfer in condensation of a vapour-gas mixture on a vertical surface, *Sib. Fiz.-Tekh. Zh.* No. 3, 3–9 (1991).

V. V. Akimenko, V. B. Glasko, V. D. Kalner and Yu. V. Kalner, Concerning the control of cooling in hardening with allowance for the effect of stresses on phase conversions, *J. Engng Phys.* **61**(5), 845–850 (1991).

A. V. Alyabiyeva and V. V. Mansurov, Kinetics of condensation at the stage of simultaneous origination of the processes of nucleation and growth of droplets. In *Kinetic Theory of Evaporation and Condensation Transfer Processes* (Collected Papers of the International School-Seminar, Minsk, September 1991), pp. 57–59. Luikov Heat and Mass Transfer Institute, Minsk (1991).

A. A. Avdeyev, Spontaneous boiling-up of a two-phase heat carrier in ascending motion, *Atomn. Energ.* **71**(2), 162–165 (1991).

A. A. Avdeyev, B. F. Balunov and V. I. Kiselyov, Heat transfer in bubbling layers at high pressures, *Teplofiz. Vysok. Temp.* **30**(1), 132–138 (1992).

G. G. Bartolomei and V. P. Kovrizhnykh, Correlation of experimental data on hydraulic drag in subcooled boiling, *Teploenergetika* No. 12, 38–41 (1991).

V. K. Bazylev, V. A. Korotchenko and V. E. Skvortsov, Non-destructive control of the evaporation rate from an active coating of thermocathodes of electronic-beam instruments, *Elektron. Tekh., Ser. 4*, No. 3, 18–19 (1991).

O. Bekmuradov, Heat transfer of a freezing water layer, *Izv. Akad. Nauk TSSR, Ser. Fiz.-Mat., Tekh. Khim. Geol. Nauk* No. 5, 28–35 (1991).

A. V. Bogdanov, A. L. Itkin and Ye. G. Kolesnichenko, Transfer processes in a thermodiffusional chamber in photo-stimulated condensation, *Izv. Akad. Nauk SSSR, Mekh. Zhidk. Gaza* No. 6, 95–104 (1991).

S. A. Bolotin, S. M. Anisimov and A. A. Yermoshkin, Optimisational investigations of heat and mass transfer in indirectly evaporative-type apparatus, *Izv. VUZov, Stroit. Arkhit.* No. 11, 7–10 (1991).

A. A. Borodkin, V. D. Portnov, Yu. I. Pustyakov and V. Ya. Sasin, Mathematical simulation of the process of liquid condensation in heat pipes with axial grooves. In *Heat Pipes and Heat Pumps*, pp. 58–64. Luikov Heat and Mass Transfer Institute, Minsk (1991).

A. L. Burka, M. G. Litvintsev and N. A. Rubtsov, The non-stationary problem of transpiration cooling in a porous-permeable wall, *Sib. Fiz.-Tekh. Zh.* No. 3, 10–20 (1991).

A. T. Don, N. I. Ibragimov, Ye. P. Pakhomov, P. K. Khabibulayev and G. P. Chernyshov, Sublimation of the yttrium-stabilised zirconium dioxide in the atmosphere of air and in the medium of combustion products, *Teplofiz. Vysok. Temp.* **29**(5), 1035–1037 (1991).

V. G. Dresvyannikov, Intensification of the processes of H₂O condensation in discharge devices. In *Plasma Converters of Energy*, pp. 25–29. Institute of the Problems of Energy Saving, Kiev (1991).

R. S. Durnesku, Monitoring of the thermostat infra-red system thermal regime by exposing the zone of condensation to electric field, *Sib. Fiz.-Tekh. Zh.* No. 6, 146–149 (1991).

I. I. Gogonin and A. Ye. Silkachev, Heat transfer and critical heat fluxes in boiling on finned surfaces, *Teplofiz. Vysok. Temp.* **29**(6), 1127–1133 (1991).

K. S. Gorbachyov, V. Ye. Poznyak and V. F. Prikhodko, Simulation of boiling heat transfer of a cryogenic fluid in a tube bundle, *Khim. Neft. Mashinostroyeniye* No. 11, 22–23 (1991).

V. I. Gorbato, V. Ye. Zinoviye and B. V. Vlasov, The anomalies of thermophysical properties near the points of first-kind phase transitions in experiments with periodic heating, *Teplofiz. Vysok. Temp.* **29**(6), 1103–1107 (1991).

M. I. Ivanov, Evaporation of liquid from capillary-porous elements in the case of surface-nonuniform distribution of heat fluxes and of heat carrier, *Izv. VUZov, Mashinostroyeniye* Nos 11–12, 59–63 (1990).

O. I. Ivanov and V. O. Mamchenko, A complex of investigations of condensation heat transfer on promising surfaces, *Vestsi Akad. Navuk Belarusi, Ser. Fiz.-Energ. Navuk* No. 1, 84–92 (1992).

- A. A. Ivashkevich, The start of intensive vapour formation in a tube, *Teplotekhnika* No. 1, 65–67 (1992).
- Yu. G. Izmailov, Ye. A. Utkin and G. P. Vyatkin, Unsteady isothermal evaporation of liquids in cylindrically shaped apparatus, *J. Engng Phys.* **61**(5), 790–794 (1991).
- B. Ya. Kamenetskiy, Formation of deposits in boiling on horizontal surfaces, *Teplotekhnika* No. 8, 77–82 (1991).
- B. Khairiddinov, V. D. Kim and B. Ch. Kholliyev, Kinetics of drying and hydrodynamics of a layer of fruit in a sun-light heated greenhouse-dryer, *Geilotekhnika* No. 5, 67–70 (1991).
- A. M. Kichigin and I. L. Piore, Analysis of different means of fixing burnt-out heat transfer in boiling, *Prom. Teplotekh.* **13**(4), 69–76 (1991).
- V. I. Klyuchnikov, About some means of heat transfer enhancement in sublimation channels. In *Heat Transfer in Power Plants and Improvement of the Efficiency of Their Operation*, pp. 126–130. Voronezh Polytechnic Institute, Voronezh (1991).
- V. I. Klyuchnikov and V. V. Faleyev, Intensification of the process of sublimation under the conditions of a rarefied medium. In *Heat Transfer in Power Plants and Improvement of the Efficiency of Their Operation*, pp. 108–113. Voronezh Polytechnic Institute, Voronezh (1991).
- A. A. Kotov, V. F. Pulyayev and V. V. Samoilenko, Experimental investigation of heat transfer in nitrogen dioxide vapour condensation from an air–vapour mixture in a dynamic two-phase layer, *Vestsi Akad. Navuk Belarusi, Ser. Fiz.-Energ. Navuk* No. 1, 55–58 (1992).
- V. B. Kruglov, Boiling of perfluorodimethylamine on the surface with matrix arrangement of heat sources. In *Problems of Thermal Physics in Nuclear Engng*, pp. 17–25. Moscow Physicotechnical Institute, Moscow (1991).
- A. P. Kryukov, Kinetic analysis of the surface evaporation and condensation processes. In *Kinetic Theory of Evaporation and Condensation Transfer Processes* (Proceedings of the International School-Seminar, Minsk, September 1991), pp. 3–21. Luikov Heat and Mass Transfer Institute, Minsk (1991).
- A. N. Kucherov, Uniform heating, evaporation and burst of a water aerosol droplet, *J. Engng Phys.* **61**(2), 253–261 (1991).
- V. V. Levdanskiy and Van Viet Hoang, Rarefied gas flow in a channel with account for phase conversions on its surface. In *Kinetic Theory of Evaporation and Condensation Transfer Processes* (Collected Papers of the International School-Seminar, Minsk, September 1991), pp. 60–67. Luikov Heat and Mass Transfer Institute, Minsk (1991).
- Ye. Mikolaichak, S. V. Konev and V. M. Khaustov, Boiling heat transfer in the heat pipe evaporator at small inclination angles. In *Heat Pipes and Heat Pumps*, pp. 138–145. Luikov Heat and Mass Transfer Institute, Minsk (1991).
- A. I. Nakorchevskiy, B. N. Basok and I. V. Gaskevich, Flow of effervescing liquid in long channels and the onset of critical regimes, *Teplofiz. Vysok. Temp.* **29**(6), 1121–1126 (1991).
- V. Ye. Nakoryakov, V. A. Mukhin and P. T. Petrik, Film boiling on an inclined surface immersed in a granular medium. In *Hydrodynamics and Heat/Mass Transfer in Fixed Granular Beds*, pp. 31–41. Institute of Thermophysics, Novosibirsk (1991).
- O. S. Petryayev and V. V. Maiorov, Heat transfer intensity in boiling of a mixture of ethylene glycol with water. In *Heat Transfer in Power Plants and Improvement of the Efficiency of Their Operation*, pp. 79–84. Voronezh Polytechnic Institute, Voronezh (1991).
- V. P. Polishchuk, P. Ye. Sychev, S. G. Chernykh and I. M. Yartsev, Concerning the measurement of the rate of evaporation into vacuum and of the saturated vapour pressure of substances on the basis of evaporation-induced heat effect, *Teplofiz. Vysok. Temp.* **29**(6), 1238–1240 (1991).
- V. M. Polyayev and A. A. Genbach, Monitoring of the internal characteristics of boiling in a porous system, *Trudy MGTU* No. 554, 224–237 (1991).
- V. M. Polyayev and A. A. Genbach, The model of the process of vapour formation in porous structures for developed bubble boiling. In *Heat Transfer in Power Plants and Improvement of the Efficiency of Their Operation*, pp. 22–28. Voronezh Polytechnic Institute, Voronezh (1991).
- A. V. Rasskazov and S. K. Myasnikov, Mass transfer and phase composition inversion during growth of two-phase crystalline layers, *Teor. Osnovy Khim. Tekhnol.* **26**(1), 3–24 (1992).
- A. I. Sardak and P. A. Barabash, Calculation of heat transfer in the case of complete vapour condensation in the interior of a horizontal tube, *Teplotekhnika* No. 12, 52–55 (1991).
- A. S. Selivanov and V. G. Popov, About the equilibrium of a vapour bubble in a conical pair. In *Collected Papers of the Moscow Institute of Railway Transport Engineers*, No. 822, pp. 57–62 (1991).
- A. V. Shafranovskiy and V. V. Kurkovskaya, Experimental investigation of mass transfer in a laminar gas phase during rectification in a slit channel with one wetted wall. In *Production of Nitrogen Fertilizers*, pp. 66–82. Moscow (1991).
- V. V. Shebela, Non-linear capillary waves on the surface of a vigorously evaporating liquid film. In *Plasma Convertors of Energy*, pp. 49–51. Institute of the Problems of Energy Saving, Kiev (1991).
- I. N. Shishkova, Numerical investigation of the processes in a cryocondensational module. In *Kinetic Theory of Evaporation and Condensation Transfer Processes* (Proceedings of the International School-Seminar, Minsk, September 1991), pp. 93–94. Luikov Heat and Mass Transfer Institute, Minsk (1991).
- A. Ye. Sinkevich, Concerning the determination of the mean heat transfer coefficient for vapour condensation in a vertical channel, *Vestsi Akad. Navuk Belarusi, Ser. Fiz.-Energ. Navuk* No. 1, 58–65 (1992).
- D. N. Vandyshev and V. N. Sotonin, Piesogravimetric investigation of the kinetics of the deposition of volatile vapours. In *Kinetic Theory of Evaporation and Condensation Transfer Processes* (Collected Papers of the International School-Seminar, Minsk, September 1991), p. 95. Luikov Heat and Mass Transfer Institute, Minsk (1991).
- A. A. Vasiliyev, Heat transfer and crisis in water boiling in vacuum on surfaces with one-layer net coatings, *Prom. Teplotekh.* **13**(4), 33–40 (1991).
- A. K. Verigina, Investigation of heat transfer in deposition of coatings by condensation of plasma fluxes in vacuum, *Elektron. Obrab. Mater.* No. 6, 21–24 (1991).
- A. Ya. Voloshchuk, Yu. A. Koshmarov and V. V. Andreyev, Evaporation of fire hazardous solvents in drying electric-insulating coatings under unsteady thermal conditions, *Lakokras. Mater. Ikh Primeniye* No. 2, 45–48 (1992).
- A. Yu. Vorobiyov, V. A. Petrov, V. Ye. Totov and A. P. Chernyshov, Experimental investigation of high-melting oxide vapour condensation in the case of the surface heating of a target in air by laser radiation, *Teplofiz. Vysok. Temp.* **29**(5), 981–987 (1991).
- V. S. Vysotskiy, Generalization of experimental results on the discharge of boiling-up nitrogen dioxide on depressurization of a pressurized vessel, *Vestsi Akad. Navuk Belarusi, Ser. Fiz.-Energ. Navuk* No. 1, 92–97 (1992).
- I. Kh. Yenikeyev, Calculation of drying of moist particles in apparatus with opposite swirled flows, *J. Engng Phys.* **61**(5), 770–777 (1991).
- A. V. Zhuchkov, Calculation of the process of vapour desublimation from a vapour–gas mixture flow. In *Heat Transfer in Power Plants and Improvement of the Efficiency of Their Operation*, pp. 15–22. Voronezh Polytechnic Institute, Voronezh (1991).
- Ye. B. Zotov and A. V. Bepalov, Interphase heat transfer in an injection apparatus. In *Kinetic Theory of Evaporation and Condensation Transfer Processes* (Proceedings of the International School-Seminar, Minsk, September 1991), pp. 91–92. Luikov Heat and Mass Transfer Institute, Minsk (1991).

HEAT AND MASS TRANSFER IN RHEOLOGICALLY COMPLEX FLUIDS

- A. G. Bondarenko and N. A. Kudryashov, Anomalous sound and low-frequency instability in an incompressible viscous fluid with soluble gas bubbles, *Izv. Akad. Nauk SSSR, Mekh. Zhidk. Gaza* No. 5, 130–137 (1991).
- U. I. Ivanov, Effect of the boundary phase structure on heat transfer of rheological systems. In *Heat and Mass Transfer—MIF-92* (Proceedings of the 2nd International Heat and Mass Transfer Forum), Vol. 6, pp. 164–168. Luikov Heat and Mass Transfer Institute, Minsk (1992).
- I. A. Konakhina, A mathematical model of the process of heat transfer in steady-state non-linear viscoelastic fluid flow in tubes with helical knurling, *Trudy Mosk. Energ. Inst.* No. 644, 35–43 (1991).
- G. A. Perepelitsyn, G. V. Ryabchuk and V. P. Remnev, Distribution of temperatures in the non-Newtonian fluid film flowing over the internal surface of a rotating conical nozzle, *Trudy Mosk. Energ. Inst.* No. 644, 11–19 (1991).
- A. A. Shaikhutdinov and Ye. K. Vachagina, A method for solving the problem of heat transfer in steady viscoelastic fluid flow in a convergent channel, *Trudy Mosk. Energ. Inst.* No. 644, 28–34 (1991).
- A. R. Sharapov, Bifurcational analysis of the equation characterizing heat transfer in the Newtonian medium flow in an infinite circular pipe, *Trudy Mosk. Energ. Inst.* No. 644, 44–51 (1991).
- A. G. Yakupov, Experimental investigation of heat transfer and hydrodynamics in linear-viscous fluid flow in a circular tube with tape flow swirlers, *Trudy Mosk. Energ. Inst.* No. 644, 78–85 (1991).

HEAT AND MASS TRANSFER IN TECHNOLOGICAL PROCESSES

- T. F. Badilenko, V. F. Demchenko and Yu. B. Chuikov, Thermal processes in application of coatings on a cooled substrate in an electronic-beam device, *Problemy Spets. Elektrometallurg.* No. 4, 36–40 (1991).
- I. I. Boiko and R. M. Abelmakhiyanov, The procedure of fire modelling of recuperative heat exchangers, *Problemy Metallurg. Proizvod.* No. 106, 20–25 (1991).
- V. V. Bubelo and V. D. Deigraf, Some results of computer calculations of heat transfer in thermally treated concrete under the conditions of multidimensional control of solidification, *Izv. VUZov, Stroit. Arkhit.* No. 8, 128–132 (1991).
- I. V. Domanskiy and S. G. Kalyakin, Mass transfer in viscous fluid mixing in a rotor-film apparatus with hinge blades, *Teor. Osnovy Khim. Tekhnol.* 26(1), 71–76 (1992).
- G. R. Engelgardt, A. D. Davydov and Ye. Kozak, Solution of mass transfer problems in electrochemical technology, *Elektrokhimiya* 27(9), 1075–1085 (1991).
- A. D. Gorbunov, Prediction of the time for the heating of ingots in pit furnaces, *Stal* No. 12, 49–52 (1991).
- N. M. Fialko, V. G. Prokopov, V. G. Sarioglo and A. A. Grachyov, Investigation of the thermal state of printing assemblies under the gas welding technological conditions, *Dokl. Akad. Nauk Ukrainy (Dokl. Akad. Nauk UkrSSR)* No. 12, 50–56 (1991).
- N. M. Fialko, V. G. Prokopov, Yu. V. Sherenkovskiy, Yu. S. Borisov and V. N. Korzhik, Specific features of the processes of heat transfer under the conditions of forming gas-thermal coatings from composite powders, *Dokl. Akad. Nauk Ukrainy (Dokl. Akad. Nauk UkrSSR)* No. 10, 87–92 (1991).
- V. S. Ibrayev and V. Ye. Kremnev, The choice of the optimal diameter of tubes for recuperative heat exchangers, *Problemy Metallurg. Proizvod.* No. 106, 36–39 (1991).
- V. I. Kazakov, Absorption of nitrogen oxides in centrifugal bubbling apparatus, *Sib. Fiz.-Tekh. Zh.* No. 3, 45–50 (1991).
- K. Kazakyavichnys and D. Narbutene, Concerning the distortion of the temperature field around a crack in ceramic material, *Energetika* No. 1, 96–103 (1991).

- A. N. Korotin, K. V. Chernov, V. F. Nikishov, V. P. Lukiyanov and A. M. Smirnov, Mathematical simulation of a contact apparatus with a reduced drag, *Izv. VUZov, Energetika* No. 10, 59–63 (1991).
- S. A. Krupennikov, Solution of the conjugate problem of heat transfer in a heating furnace, *Izv. VUZov, Chyorn. Metallurg.* No. 9, 91–93 (1991).
- I. S. Kudryavtsev, B. M. Lekakh, Ye. D. Fedorovich and B. I. Gimpelson, Determination of the temperature pulsation characteristics of the heat exchanger heating surfaces in the course of their design, *Teploenergetika* No. 1, 67–70 (1992).
- Yu. M. Matrevityi, I. V. Yelchishcheva and T. V. Lotsman, Modelling of the thermal state of the cooled elements of furnaces of non-ferrous metallurgy, *Prom. Teplotekh.* 13(4), 19–25 (1991).
- V. G. Milkov and A. I. Markov, Evaluation of the temperature field uniformity of electrically heated glasses from the results of thermovision control. In *Collected Papers*, No. 8, pp. 107–116. Moscow Institute of Radiotechnics, Electronics and Automatics, Moscow (1990).
- V. G. Minkina and V. N. Popov, Heat and mass transfer in the process of producing silicon layers at a reduced pressure, *Neorg. Mater.* 28(1), 5–9 (1992).
- B. I. Nigmatulin, V. Ye. Krosheilin and Ya. D. Khodzhaev, Mathematical simulation of the phenomenon of repeated filling in a system of parallel heated channels, *Teplofiz. Vysok. Temp.* 29(5), 973–980 (1991).
- A. N. Nikolayev and V. A. Malyusov, Calculation of the efficiency of mass transfer in hollow vortical apparatus, *Teor. Osnovy Khim. Tekhnol.* 26(1), 25–32 (1992).
- D. A. Pereverzev and A. G. Lebedev, Reduction of the boundary heat transfer conditions for computational investigations of the temperature state and relative thermal displacements of the items of power plants, *Problemy Mashinostroyeniya* No. 36, 83–95 (1991).
- O. S. Popova and S. P. An, Effect of reduced temperatures on the solidification of cement systems. In *Progressive Technology of Concrete for Transport Constructions*, pp. 40–43. Leningrad Institute of Rail-road Transport Engineers, Leningrad (1991).
- N. N. Prokhorov and V. M. Polunin, Computational analysis of the effect of local heat sinks on the reduction of longitudinal deformations in butt welding of plates, *Svaroch. Proizvod.* No. 1, 3–5 (1992).
- V. G. Prokopov, Yu. I. Shvets, N. M. Fialko, N. O. Meranova, V. N. Korzhik and Yu. S. Borisov, Effect of the thermophysical properties of base material on heat transfer processes on application of gas-thermal coatings, *Svaroch. Proizvod.* No. 1, 33–35 (1992).
- M. P. Reznichenko and V. M. Chupin, A heatovision system in the study of thermal fields on planes. In *Hydrodynamics and Heat/Mass Transfer in Fixed Granular Beds*, pp. 149–156. Institute of Thermophysics, Novosibirsk (1991).
- Kh. Kh. Sarkulov, R. A. Kazova, T. Khaidarov and T. A. Alteev, Simulation of heat transfer in a shaft furnace in the process of iron phosphide oxidizing roasting, *Trudy Inst. Khim. Nauk AN KazSSR* No. 74, 80–89 (1991).
- L. M. Uliyev, Flow and heat transfer of a highly viscous fluid in a circular convergent nozzle, *Teor. Osnovy Khim. Tekhnol.* 26(2), 243–253 (1992).

HEAT AND MASS TRANSFER IN BIOLOGICAL SYSTEMS

- V. P. Belousov, The methodological aspect of the problem of mathematical simulation of the heat-protecting properties of clothing. In *Collected Papers on Thermal Engineering*, No. 7, pp. 123–128. USSR State Committee for Public Education, Moscow (1991).
- Yu. N. Yakubov, S. A. Saidov and Sh. M. Mirzayev, Calculation of the temperature field of ground under special boundary conditions, *Geliotekhnika* No. 8, 71–73 (1991).

HEAT AND MASS TRANSFER IN BUILDINGS

- Zh. D. Batpenov and T. D. Batpenov, The thermal regime of a residential cottage-type building with a heat-supplying system of different capacity. In *Contribution of the Scientists of the Tselinograd Institute of Civil Construction into the Acceleration of Scientific-Technical Progress* (Proceedings of the Scientific-Technical Conference of Scientific Workers, Tselinograd, 1-5 April 1991), pp. 123-124. Tselinograd (1991).
- V. V. Blagodatnyi and F. A. Chegrintsev, Toward the problem of evaluating the quality of gas distribution in hermetically sealed rooms of ships. In *Marine Power Plants*, pp. 13-19. Nikolayev Ship-building Institute, Nikolayev (1991).
- A. Yu. Bushuyev and V. V. Gorskiy, Concerning a certain approach to the construction of the technique for designing multi-layered heat-protecting constructions, *J. Engng Phys.* **61**(3), 465-471 (1991).
- A. R. Fert, L. F. Chernykh and I. V. Zhukova, Evaluation of the thermal efficiency of the experimental residential building in the city of Kiev, *Nauka Tekh. v Gor. Khozyaistvo* No. 76, 8-13 (1991).
- V. N. Ishchenko and L. F. Chernykh, The law of regulation and thermal stability of the heating system in the case of unsteady-state thermal regime of a building, *Izv. VUZov, Stroit. Arkhit.* No. 8, 89-83 (1991).
- V. N. Ishchenko and L. F. Chernykh, Formulae for analytical investigations of the unsteady-state heat exchange of buildings, *Izv. VUZov, Stroit. Arkhit.* No. 11, 110-111 (1991).
- Yu. A. Kalyadin, Thermal engineering and ventilation of the objects of transport construction. In *Collected Papers of the All-Union Scientific-Research Institute of Transport Construction*, pp. 10-15. Moscow (1991).
- I. Z. Kashkinbayev, Investigation and application of conductive heating of stressed concretes in the joints of precast reinforced concrete frames. In *Scientific-Technical Progress in Civil Engineering and the Means of Its Acceleration under New Conditions of Economy Management*, pp. 114-123. Kazakh Polytechnic Institute, Alma-Ata (1990).
- N. N. Kozhevnikov, Thermal protection of engineering constructions under the conditions of the Furthest North. In *Topical Problems of Thermal Physics: Power Engineering and Ecology*, pp. 123-130. Institute of Thermophysics, Novosibirsk (1991).
- L. Ye. Lymbina, An operational method for determining heat losses through a wall in dynamic regime, In *Improvement of Engineering Equipment of Buildings and Constructions*, pp. 34-36. Chelyabinsk State Technical University, Chelyabinsk (1990).
- K. A. Mezilov, B. E. Khairiddinov, T. P. Chuguyevets and A. A. Ergashev, Solar light-heated greenhouse as a complex system. I. Mathematical simulation of convective heat and mass transfer in a closed volume of the geliogreenhouse, *Geliotekhnika* No. 6, 17-21 (1991).
- R. D. Oktyabrskiy, Optimization of heat-exchangers, *Vodostabzhen. San. Tekh.* No. 1, 17-18 (1991).
- S. N. Osipov and V. M. Staroverov, Unsteady-state thermal regime in thermally insulated small-volume rooms, *Izv. VUZov, Energetika* No. 5, 112-116 (1991).
- P. V. Shevchenko, A. N. Pantyukh, N. P. Moroz and N. A. Nekrasov, Improvement of the heating blocks of heating systems, *Montazh. Spets. Raboty v Stroitelstve* No. 5, 9-10 (1991).
- Ye. I. Shifrin, Concerning the optimized calculation of the heat balance for conditioned ship buildings, *Sudostroit. Prom., Obshch. Vopr. Sudostroyeniya* No. 11, 38-44 (1991).
- V. A. Smirnov, Experience of modernization and exploitation of a garage for thawing loose cargo, *Prom. Energetika* No. 11, 18-19 (1991).

HEAT AND MASS TRANSFER IN THE ENVIRONMENT

- V. N. Aksyonov, Ye. G. Andreyev, I. N. Ivanova and I. N. Tkachyova, Evaluation of heat fluxes from ocean to the atmosphere in the case of droplet transfer, *Vestnik MGU, Ser. 3*, **33**(2), 56-63 (1992).
- Ye. P. Anisimova, Ch. Garbolevskiy, G. N. Panin and M. Shpakovskiy, About the effect of droplet-bubble exchange on the heat losses of a water basin, *Vodn. Resursy* No. 5, 199-202 (1991).
- Ye. P. Anisimova, M. A. Nosov and A. A. Speranskaya, About the determination of the heat balance components on the water-air interface under free convection conditions, *Vodn. Resursy* No. 6, 190-192 (1991).
- P. L. Arseniyev and A. A. Pek, Simulation of hydrothermal heat and mass transfer in the formation of deposits associated with the zones of deep-lying fractures, *Geologiya Rudn. Messtorozh.* **33**(5), 26-38 (1991).
- S. Besinbayev and A. A. Kavyakin, Estimation of the dependence of filtration rate on the interdrainage distance in the case of the washing of soils. In *Approximate Analytical and Numerical Methods for Solving Boundary-value Problems*, pp. 44-48. Kazakh State University, Alma-Ata (1990).
- A. G. Bokovikov and V. I. Klimok, Numerical simulation of the effect of main winds on heat and mass transfer in the Issyk-Kul lake, *Vodn. Resursy* No. 1, 31-38 (1992).
- A. P. Braslavskiy and M. M. Kumarina, Calculation of the temperature of cooled water with combined schemes of the systems of technical water supply for TEPP and AEPP, *Izv. VNII Gidrotekh.* **224**, 25-30 (1991).
- V. F. Brekhovskikh, I. R. Gabitov and V. V. Romanov, Simulation of the processes of mass transfer in bottom deposits, *Vodn. Resursy* No. 6, 193-195 (1991).
- V. F. Brekhovskikh, Z. V. Volkova, G. N. Nanin and O. Yu. Tarakanov, The role of thermal stratification of the near-surface water layer in gas exchange with the atmosphere, *Vodn. Resursy* No. 5, 30-36 (1991).
- V. S. Bychkov, I. V. Komkov and S. V. Ferronskiy, A technique for estimating heat transfer from the air and water temperature behaviour for 24 hours, *Vodn. Resursy* No. 1, 39-46 (1992).
- V. B. Farforovskiy, Analysis of the results of hydrothermal investigations of water basins of natural and laboratory conditions, *Izv. VNII Gidrotekh.* **224**, 3-8 (1991).
- T. B. Ishchuk, A. V. Nazarov and S. F. Borodina, The results of hydrothermal investigations of the scattering water discharge of the Irkutsk HEPP-10, *Izv. VNII Gidrotekh.* **224**, 61-46 (1991).
- Yu. A. Kalyadin, Calculation of heat transfer of underground constructions with constant power heat sources. In *Collected Papers of the All-Union Scientific-Research Institute of Transport Construction*, pp. 60-65. Moscow (1991).
- V. N. Kosolapov, V. A. Chugunov and V. P. Urnyak, Heat transfer in underground energy-saving systems of mine air conditioning, *Prom. Teplotekh.* **13**(2), 50-58 (1991).
- V. A. Kyakk, Comparison of the results of model and natural investigations of the water basin-cooler, *Izv. VNII Gidrotekh.* **224**, 21-25 (1991).
- A. I. Martynenko, Calculation of gaseous harmful materials in various systems of heating, *Problemy Metallurg. Proizvod.* No. 106, 70-73 (1991).
- A. I. Muchitsa, Numerical investigation of the friction heat scattering during measurement of the geometric gradient by a heat probe, *Prom. Teplotekh.* No. 4, 77-81 (1991).
- G. G. Tsyppin, A mathematical model of phase transitions "ice-water-steam" in weakly penetrable frozen grounds, *Izv. Akad. Nauk SSSR, Mekh. Zhidk. Gaza* No. 6, 72-78 (1991).
- P. A. Yanitskiy, Ye. A. Kudryavtsev, N. I. Shaburova and S. S. Karavayev, Formation of a thawing halo around a group of pipelines sited in embankment, *Sib. Fiz.-Tekh. Zh.* No. 6, 28-33 (1991).