

Heat and mass transfer bibliography— Soviet works

O. G. MARTYNYENKO

Heat and Mass Transfer Institute, Minsk 220728, U.S.S.R.

(Received 14 May 1990)

BOOKS

- S. M. Belonosov, V. G. Ovsienko and V. Ya. Karachun, *Application of Integral Concepts to the Solution of Heat Conduction Problems and Viscous Liquid Dynamics*. Izd. Vyscha Shkola, Kiev (1989).
- N. M. Bogdanov (Editor), *Phase Conversions and High-energy Processes* (Collected Papers). Izd. Ural. Otd. AN SSSR, Sverdlovsk (1988).
- S. G. Diyakonov (Editor), *Mass Transfer Processes and Apparatus of Chemical Technology* (Collected Papers). Izd. Kazan. Tekhnol. Inst., Kazan (1988).
- Heat and Mass Transfer Processes in Power Plants*. Sborn. Nauch. Trudov ITMO AN BSSR, Minsk (1989).
- A. A. Khalatov, *The Theory and Practice of Swirled Streams*. Izd. Naukova Dumka, Kiev (1989).
- G. N. Kruzhilin (Editor), *Thermohydraulic Processes in the Elements of Electric Power Station Equipment* (Collected Papers). Gos. Nauch. Issled. Energ. Inst., Moscow (1988).
- L. L. Levitan and L. Ya. Borevskiy, *Holography of Steam-Water Streams*. Izd. Energoatomizdat, Moscow (1989).
- A. G. Lukiyonov, L. Yu. Artyukh and P. G. Itskova, *Resonance Equilibrium in the Problems of Combustion Theory*. Izd. Nauka, Alma-Ata (1989).
- O. A. Makhotkin, *Mathematical Foundation of Radiative Heat Transfer*. Izd. Vychisl. Tsentr SO AN SSSR, Novosibirsk (1988).
- N. A. Rubtsov, Ye. I. Averkov and A. A. Yemeliyanov, *Heat Radiation Properties of Materials in Condensed State*. Izd. Inst. Teplofiz., Novosibirsk (1988).
- V. K. Shchukin (Editor), *Heat Transfer and Friction in the Engines and Power Plants of Flying Vehicles* (Collected Papers). Izd. Kazan. Aviat. Inst. (1988).
- Yu. A. Surinov (Editor), *The Methods of Radiative and Combined Heat Transfer Theory and their Application*. Mosk. Obshch. Ispyt. Prirody. Izd. Nauka, Moscow (1989).
- A. P. Tishin (Editor), *Mathematical Simulation of High-temperature Processes in Power Plants*. Izd. Nauka, Moscow (1989).

PAPERS—GENERAL

- B. I. Bubnovich and P. M. Kolesnikov, Numerical study of mixed convection of liquid between horizontal concentric cylinders, *Prepr. No. 3 of the Heat and Mass Transfer Institute of the BSSR Academy of Sciences*, Minsk (1989).
- V. L. Dragun, S. A. Filatov, T. Ye. Valdayeva, T. A. Yeremenko and I. V. Khodan, Interactive methods of computational thermography in experimental study of heat transfer processes in radioelectronic equipment, *Prepr. No. 4 of the Heat and Mass Transfer Institute of the BSSR Academy of Sciences*, Minsk (1989).
- V. M. Gurevich, Simple analogue computing conductive calorimeters, *Izmerit. Tekh.* No. 5, 32–33 (1989).
- A. V. Kletskiy (Editor), *Thermophysical Properties of Working Bodies and Processes of Cryogenic Technology* (Collected Papers). Izd. Inst. Kholod. Prom., Leningrad (1988).

- Yu. K. Malikov, V. G. Lisiyenko and A. Ye. Vostrotin, The construction of superelements for the problems of heat conduction and potential, *Inzh.-fiz. Zh.* **55**(6), 1020–1027 (1988).
- I. S. Mitsko and A. P. Smolenchuk, The laws governing ignition and combustion of porous composite solid fuels, *Prepr. No. 6 of the Heat and Mass Transfer Institute of the BSSR Academy of Sciences*, Minsk (1989).
- V. A. Petrov, N. V. Marchenko and V. N. Yeliseyev, Radiative-conductive energy transfer in condensed media, *Itogi Nauki i Tekh. Ser. teplo-i massoobmen. VINITI* No. 3, 37–63 (1989).
- A. M. Sidorov and A. D. Duchkov, Mechanisms of heat transfer in rocks, *Trudy Inst. Geol. i Geofiz. SO AN SSSR* No. 726, 1–96 (1989).
- A. A. Staroverov and B. V. Bulin, Interphase heat transfer in fluidized-spouting bed apparatus. In *Intensification of Alumina Production*, pp. 27–32. Leningrad (1988).
- M. Sh. Tulemyshev (Editor), *Conditions and Methods for Early Desheathing of Ferroconcrete Products* (Collected Papers). Izd. Frunz. Politekh. Inst., Frunze (1988).
- V. F. Vasilevskiy and V. I. Mazhukin, Numerical solution of the unsteady-state heat conduction problem on the adaptive grid with distinct separation of the first-order discontinuity region, *Prepr. No. 14 of the Institute of Applied Mathematics of the USSR Academy of Sciences* (1989).
- A. A. Yegorov, Concerning the effective algorithms for calculating the problems of heat localization in peak regimes, *Prepr. No. 2 of the Institute of Applied Mathematics of the USSR Academy of Sciences* (1989).

HEAT CONDUCTION

- I. V. Adylova, Optional control of the system described by the non-linear heat conduction equation without prior estimates. In *Mathematical Simulation of Unsteady-state Processes*, pp. 80–85. Alma-Ata (1988).
- G. I. Aldoshin, A. S. Golosov, V. I. Zhuk, A. A. Lopashev and D. M. Chubarov, Determination of thermal diffusivity from non-stationary temperatures in heating by local heat sources, *Inzh.-fiz. Zh.* **55**(6), 989–997 (1988).
- G. F. Alekseyev, Analysis of the stability of numerical solutions of linear and non-linear heat conduction problems. In *Heat Transfer Problems in Construction*, pp. 65–70. Rostov-on-Don (1989).
- S. V. Alekseyev, M. A. Andrianov, I. K. Yermolayev, I. Kh. Moroz and I. V. Talayev, Thermal conductivity of fired high-voltage porcelain mass, *Steklo i Keramika* No. 1, 22–23 (1989).
- M. M. Alimov and E. V. Skvortsov, The estimation of flow rate characteristics in the theory of filtration and heat conduction *Prikl. Matem. Mekh.* **59**(3), 462–468 (1989).
- V. P. Avdeyev, Opposing functional for the linear stationary heat conduction problems, *Trudy MVTU* No. 523, 3–7 (1989).
- R. A. Bakhtiarov and L. A. Vorobjova, A method for solving

- three-dimensional unsteady-state heat conduction problems for fusion and solidification of metals and alloys. In *The Production and Properties of Refractory Materials*, pp. 50–53. Moscow (1989).
- A. V. Belevtsev, A. V. Gulevich, A. V. Zrodnikov, V. V. Kumskiy, I. I. Sviridenko and A. A. Ulanovskiy, Formulae of the disturbance theory for estimating the azimuthal temperature non-uniformity in deformed circular channels, *Teplofiz. Vysok. Temp.* No. 1, 74–79 (1989).
- P. V. Belousov, L. I. Yegorova, A. I. Konovalenko and A. M. Malyutin, Transient characteristics of a cooled calorimetric detector of heat fluxes. In *Mechanics of Fast Processes*, pp. 73–76. Tomsk (1989).
- Ye. A. Belov, Ye. S. Platonov and G. Ya. Sokolov, Determination of the thermal conductivity of heat-insulating materials by the method of integral temperature estimation, *Izmerit. Tekh.* No. 5, 33–35 (1989).
- V. T. Borukhov, L. Ye. Borisevich and A. P. Yelistratov, Control of temperature regime on the solid body surfaces, *Vesti AN BSSR, Ser. Fiz.-Energ. Nauk* No. 1, 32–36 (1989).
- B. L. Bozhenko, The finite-element approach to the solution of heat conduction problems for thick plates, *Mat. Metody i Fiz.-Mekh. Polya (Kiev)* No. 29, 58–62 (1989).
- V. N. Brazhko, N. A. Kovalyova and G. I. Maikapar, A method for measuring heat flux by means of thermo-indicating coatings, *Uch. Zapiski TsAGI* 20(1), 1–12 (1989).
- P. G. Danilayev, Yu. F. Gortyshov and A. P. Kuzmin, Numerical solution of the non-classical problem of calculating the one-dimensional non-stationary temperature field. In *Heat Transfer and Friction in Engines and Power Plants of Flying Vehicles*, pp. 12–16. Kazan (1988).
- N. N. Danilov and V. G. Netrevozhko, Heat conduction in a cylinder with an envelope in the presence of variable heat sources in them. In *Phase Conversions and High-power Processes*, pp. 127–131. Sverdlovsk (1988).
- O. M. Degtyareva and R. Kh. Khasanov, Finite-difference modelling of unsteady-state heat conduction in two-dimensional areas. In *Heat and Mass Transfer in Chemical Technology*, pp. 63–66. Kazan (1988).
- I. I. Fedik and V. I. Kozhukhovskiy, Determination of non-stationary temperature fields by the Ritz method by using orthogonalization, *Mat. Metody i Fiz.-Mekh. Polya (Kiev)* No. 29, 55–58 (1989).
- F. M. Fedorov, Application of the boundary method for solving the heat conduction problems with axial symmetry. In *Differential Equations and their Application*, pp. 47–54. Yakutsk (1989).
- F. M. Fedorov and T. A. Savvinova, Analytical solution of the Stefan-kind problems by the boundary method. In *Differential Equations and their Application*, pp. 55–63. Yakutsk (1989).
- M. D. Gaisinskiy, On application of Wiener integrals to the theorem of the existence and uniqueness of solution to the heat conduction equation with the singular source function, *Dokl. AN Uz.SSR* No. 5, 3–5 (1989).
- N. M. Galin, V. Yu. Demiyenko and M. Yu. Lipov, The laws governing temperature fluctuations in the metal of boiler waterwall tubes (Collected Papers), *Izd. Mosk. Energ. Inst.* No. 191, 54–64 (1988).
- O. A. Gavrilenko, A. V. Khrasnokutskiy, B. A. Merisov and G. Ya. Khadzhay, Thermal conductivity of some alloys with "form memory" in the region of phase transition, *Teplofiz. Vysok. Temp.* 27(2), 399–400 (1989).
- B. V. Gera and Ye. Ya. Chaplya, Determination of the characteristics of lumped heat sources in a half-space with specified heat conduction conditions and temperature distribution over its surface, *Mat. Metody i Fiz.-Mekh. Polya (Kiev)* No. 29, 46–51 (1989).
- A. G. Gnedovets, Concerning the contribution of the processes of the transfer of charges to heat transfer of metal particles treated in a rarefied plasma jet, *Inzh.-fiz. Zh.* 58(1), 95–105 (1990).
- V. G. Gorobets and A. G. Platonov, Thermal calculation and optimization of longitudinally finned surfaces subjected to the effect of external pollutions. In *Heat and Mass Transfer in Technological Processes*, pp. 108–117. Kiev (1988).
- Yu. F. Gortyshov, S. R. Ashikhmin and Sh. Kh. Zaripov, Concerning the calculation of thermal deformations of a non-uniformly heated plate. In *Heat Transfer and Friction in Engines and Power Plants of Flying Vehicles*, pp. 7–11. Kazan (1988).
- M. A. Gromov, Thermophysical characteristics of the water extract of coffee, *Pishch. Prom.* No. 5, 43–45 (1989).
- Ye. G. Ivanik, Two-dimensional stationary heat conduction problem for a cylinder reinforced with thin inclusions, *Matem. Fiz. i Nelinein. Mekh. (Kiev)* No. 12, 51–54 (1989).
- G. M. Ivanova and S. P. Yachina, A mathematical model of temperature characteristics of the "Sapphire-22" transformers, *Sborn. Mosk. Energ. Inst.* No. 184, 64–68 (1988).
- K. A. Kazakyavichyus, Thermal destruction of water-cooled ceramic rods, *Trudy AN Lit.SSR* No. 4, 75–82 (1989).
- Yu. L. Khrestovoy, V. P. Saiko and S. L. Golub, Calculation and programming of the three-dimensional nonstationary heat conduction problem in the non-uniform region, *Energet. Mashinostr. (Kharkov)* No. 48, 29–35 (1989).
- L. V. Kim, The iteration regularization method in solving the coefficient inverse heat conduction problem. In *Mechanics of Reacting Media and its Application*, pp. 235–243. Novosibirsk (1989).
- I. I. Kirillov, I. N. Sadikov and V. N. Stepanov, Non-stationary temperature field over the length of an electrically heated flat thin plate. In *Present-day Problems of Hydrodynamics and Heat Transfer in the Elements of Power Plants and Cryogenic Engineering*, pp. 20, 23. Moscow (1988).
- Ye. G. Kirasov, Effective algorithms for calculating unsteady-state heat conduction in a multi-layered plate, *Izv. AN SSSR, Energ. Transp.* No. 2, 115–120 (1989).
- A. V. Klimovich, Ye. Ya. Litovskiy and A. V. Korobcinikov, A mathematical model for measuring thermal conductivity by the non-stationary hot-wire method, *Ogneupory* No. 1, 48–52 (1989).
- Yu. M. Kolyano and I. O. Goy, A non-classical heat conduction problem for crystals with inclusions, *Matem. Fiz. i Nelinein. Mekh. (Kiev)* No. 11, 56–61 (1989).
- Yu. M. Kolyano and B. V. Kovalechuk, The static problem of thermo-elasticity for half-space with thin inclusions, *Matem. Fiz. i Nelinein. Mekh. (Kiev)* No. 12, 58–63 (1989).
- G. N. Kononenko and T. V. Yarosh, Study of the formation of temperature fields in a thermotray, *Nauka i Tekhnika v Gorn. Khoz. (Kiev)* No. 70, 19–22 (1989).
- V. I. Kotenev, An approximate method for solving the problems of unsteady-state heat conduction, *Izv. AN SSSR, Energ. Transp.* No. 3, 111–116 (1989).
- V. I. Kovalevskiy, V. S. Burochkin and P. M. Kharitonov, A technique for engineering calculation of the efficiency of screening thermal insulation on a computer. In *Heat Transfer Problems in Building*, pp. 53–56. Rostov-on-Don (1989).
- V. A. Kozlov, V. G. Maziya and A. V. Fomin, The inverse thermoelasticity problem, *Prepr. No. 5 of the Institute of Mechanical Engineering of the USSR Academy of Sciences*, Leningrad (1989).
- V. P. Kozlov, V. S. Adamchik and V. N. Lipovtsev, The solution of Dirichlet and Heuman's problems in application to the study of unsteady-state heat conduction, *Inzh.-fiz. Zh.* 58(1), 141–145 (1990).
- V. A. Kudinov, A. D. Roslyakov and V. F. Penkov, An approximate analytical method for solving stationary multi-dimensional heat conduction problems for arbitrary-shape bodies. In *Heat Transfer and Friction in Engines and Power Plants of Flying Vehicles*, pp. 29–36. Kazan (1988).
- V. I. Kudrya, Concerning the solvability of the boundary-value problem of the heat conduction equation in the domains with variable cross-section and movable boundary by the method of potentials. In *Applied Problems of Mathematics and Physics*, pp. 68–75. Kiev (1988).

- R. A. Kusainova and V. V. Pak, Calculation of the temperature field distribution for an arc interacting with the Zr-cathode. In *Mathematical Simulation of Unsteady-state Processes*, pp. 14–19. Alma-Ata (1988).
- L. A. Lepin, About the number of solutions of a boundary-value problem from the theory of non-linear thermal conductivity, *Dokl. Inst. Prikl. Matem. No. 3(3)*, 87–90 (1988).
- A. B. Levin, V. G. Malinin and Yu. P. Semenov, Temperature field in a multi-layer temperature-controlled thermally stressed elements, *Nauch. Trudy Mosk. Lesotekh. Inst. No. 207*, 37–42 (1988).
- V. S. Loginov, The temperature field of the active element of an electrotechnical device, *Elektrichestvo No. 4*, 79–82 (1989).
- B. Ya. Lyubov, Mathematical analysis of heat conduction and diffusion processes in metallic materials, *Fiz. Metal. Metalloved. 67(1)*, 5–35 (1989).
- A. D. Mamedov, The problem of optimal mobile control for the heat conduction process, *Differents. Uravn. (Minsk) 25(6)*, 994–1000 (1989).
- I. N. Meleshko, Yu. A. Malevich, R. I. Yesman and Ye. S. Matyush, Application of the method of thermal complex potential theory for calculating heat flux in cast blanks, *Izv. VUZov, Energetika No. 6*, 81–84 (1989).
- A. S. Naida and A. I. Soloviyov, On certain exact solutions of heat conduction problems for plates with a circular cut, *Samolyotostr.: Tekh. Vozd. Flota No. 56*, 95–98 (1989).
- A. G. Naryzhnyi, V. N. Saprykin and G. I. Yadin, A technique for solving non-linear non-stationary heat conduction problems in curvilinear systems of orthogonal coordinates. In *The Problems of Elasticity and Plastic Deformation of a Solid Body*, pp. 41–44. Kharkov (1988).
- E. S. Naval, Application of the moment method to the problem of controlling heat evolving systems, *Matem. Issled. (Kishinev) No. 108*, 68–84 (1989).
- I. P. Nazarenko and I. G. Panevich, A simplified method for calculating the electrical conductivity, electronic thermal conductivity and thermal diffusion of argon, *Teplotfiz. Vysok. Temp. 27(3)*, 482–489 (1989).
- Ya. M. Naziyev, Design equations for cylindrical monotonous-regime calorimeters with variable thermal characteristics of material, *Izv. VUZov, Neft Gaz No. 2*, 45–50 (1989).
- G. A. Nesenenko, Application of the beam asymptotic method for obtaining an approximate analytical solution of the problem of infinite plate heating by a non-linear heat source. In *Heat Transfer Problems in Building*, pp. 56–65. Rostov-on-Don (1989).
- N. I. Nikitenko, Heat transfer in intense unsteady-state processes, *Inzh.-fiz. Zh. 55(6)*, 997–1005 (1988).
- Z. Nuridinov and Kh. Madzhidov, Calculation of the thermal conductivity of complicated ethers of phthalic acid at high temperatures and pressures, *Dokl. AN Tadz. SSR 31(9)*, 581–585 (1988).
- L. S. Ostapenko, The effect of thermocycling parameters on the temperature field of the uniaxially loaded constructive element, *Kholod. Tekh. i Tekhnol. (Kiev) No. 48*, 44–49 (1989).
- V. V. Panasenko, Ye. I. Rybalov and B. N. Yudayev, Numerical investigation of the stationary three-dimensional temperature field of semiconducting microcircuits with the heat conduction coefficient depending on temperature, *Nauch. Trudy Mosk. Lesotekh. Inst. No. 207*, 42–53 (1988).
- V. K. Petrovskiy and K. A. Kuchinskiy, Computational study of temperature fields of synchronous turbo-engines for determining the optimal rotor construction. In *Machine Methods for Optimization, Modelling and Planning Experiments*, pp. 102–107. Novosibirsk (1988).
- G. I. Petrunin, V. G. Popov and M. I. Timoshechkin, The effect of admixtures and intermediate composition on the lattice thermal conductivity of synthetic garnets, *Fiz. Tvyord. Tela (Leningrad) 31(7)*, 139–143 (1989).
- V. S. Popovich, Solution of stationary heat conduction problems for contacting thermosensitive bodies, *Mat. Metody i Fiz.-Mekh. Polya (Kiev) No. 29*, 51–55 (1989).
- P. I. Porshnev and A. M. Yaremenko, A two-dimensional model for the positive column of a glowing discharge of atmospheric pressure, *Vestsi AN BSSR, Ser. Fiz.-Energ. Nauk No. 1*, 69–72 (1989).
- V. N. Pustovalov and M. I. Shevchenko, Conversion of the boundary conditions of heat transfer on a turbine disk to the hub radius, *Energet. Mashinostr. (Kharkov) No. 48*, 35–38 (1989).
- S. B. Reznik and G. V. Turovtsev, The study of the thermal conductivity of a system of bodies with non-ideal heat contact by the method of boundary integral equations. In *Applied Problems of Mathematics and Physics*, pp. 110–114. Kiev (1988).
- A. A. Rusyaukas, Estimation of the effect of a two-dimensional temperature field in the process of measurement of the heat conduction coefficient by the plate method. In *Heat and Mass Transfer Processes in Power Plants*, pp. 45–48. Minsk (1989).
- S. V. Saley, Asymptotic behaviour of a free boundary for $t \rightarrow \infty$ in a certain Stefan problem on the semiaxis in the presence of heat sources, *Matem. Fiz. i Nelinein. Mekh. (Kiev) No. 11*, 83–89 (1989).
- V. G. Sevastyanov, Solution of the inverse heat conduction problem based on the inhomogeneous information about the temperature field, *Trudy TsNII Tekhnol. Mashinostr. No. 210*, 78–94 (1989).
- Yu. S. Shatalov, The derivation of the functional-integral equation for the coefficients of the generalized heat conduction equation. In *Functional-differential Equations*, pp. 64–75. Perm (1989).
- Ye. V. Shelimanova, Calculation of the thermal state of the matrix-polymer system in the process of corrugated tube shaping. In *Heat and Mass Transfer Apparatuses*, pp. 3–7. Kiev (1988).
- V. M. Sineglazov and A. G. Protasov, Calculation of temperature field and thermoelastic stresses of sealing rings being dried, *Samolyotostr.: Tekh. Vozd. Flota (Kharkov) No. 56*, 98–104 (1989).
- G. V. Sinyutin and Yu. V. Taldonov, An analytical method for solving the non-uniform heat conduction equation for a thermo-emission transformer, *Atomnaya Energiya 66(2)*, 131–132 (1989).
- Yu. B. Sviridov, Solution of the initially boundary-value heat and mass transfer problem by the method of exponential moments (an infinite interval), *Matem. Issledov. (Kishinev) No. 108*, 91–107 (1989).
- V. Z. Svoiskiy, An approximate method for calculating the heat conduction coefficients of gas mixtures, *Inzh.-fiz. Zh. 58(2)*, 296–301 (1990).
- A. A. Tarzimanov and F. R. Gabitov, Thermal conductivity of steam at pressures and temperatures up to 30 MPa and 700°C, *Teplotenergetika No. 7*, 5–8 (1989).
- B. G. Tepikin, R. I. Markov, K. Tlebayev and V. A. Kovtunets, Heat transfer in irradiated materials. In *Problems of Solid Body Physics and Optics*, pp. 29–32. Alma-Ata (1988).
- B. L. Timan and V. M. Fesenko, Thermoelastic stresses in a three-layered plate exchanging heat with the ambient undergoing temperature variation at a constant speed. In *Physicochemical Processes of Material Treatment by Concentrated Energy Fluxes*, pp. 262–266. Moscow (1989).
- Yu. I. Travkin, Periodic problems of the elasticity and heat conduction theory with mixed boundary conditions. In *Magnetic, Thermal and Vibroacoustic Processes in Electric Machines*, pp. 58–62. Kharkov (1988).
- T. N. Travkina and M. A. Zatuchnaya, The two-dimensional problem of temperature distribution in cooling fins with a variable heat transfer coefficient. In *Magnetic Thermal and Vibroacoustic Processes in Electric Machines*, pp. 65–71. Kharkov (1989).
- O. S. Tsakanyan and N. A. Koshevaya, The Quasi-analogue method for determining thermal contact resistances, *Prepr. No. 305 of the Institute for Problems of Mechanical*

- Engineering of the Ukr. SSR Academy of Sciences*, Kiev (1989).
- N. A. Tseligorov, A technique for calculating the temperature fields of a block of radioelectronic device in the course of radiative heat transfer with a heated surface, *Izv. VUZov, Elektromekhanika* No. 3, 78–81 (1989).
- A. G. Usmanov, The kinetics of transfer processes and the information theory. In *Heat and Mass Transfer in Chemical Technology*, pp. 135–144. Kazan (1988).
- A. T. Usov and L. A. Shevchuk, A technique for scaling temperature fields of aviation constructions under different conditions of experiment, *Uch. Zapiski TsAGI* 20(1), 126–130 (1989).
- V. A. Varivoda and V. Kh. Kirillov, Heat conduction equation for a frost-covered radial fin. The solution of the boundary problem for a fin of rectangular profile, *Kholod. Tekh. i Tekhnol. (Kiev)* No. 48, 26–31 (1989).
- V. F. Vasilevskiy and V. I. Mazhukin, Numerical solution of the non-stationary heat conduction problem on the adaptive grid by an explicit isolation of the region of first-order discontinuity, *Prepr. No. 14 of the Institute of Applied Mathematics of the U.S.S.R. Academy of Sciences* (1989).
- V. P. Vavilov and S. V. Finkelshtein, Two approaches to the solution of the one-dimensional inverse heat control problem, *Defektoskopiya* No. 4, 59–62 (1989).
- Yu. V. Vidin, Prediction of eigenvalues in the non-stationary heat conduction problem for a two-layered plate. In *Heat Transfer Problems in Building*, pp. 56–58. Rostov-on-Don (1989).
- V. M. Vigak, Solution of the problem of controlling the thermal stress of an elastic layer, *Matem. Fiz. i Nelinein. Mekh. (Kiev)* No. 2, 42–45 (1989).
- I. M. Vinnik, R. R. Yakimovich and V. N. Terletskiy, The influence of the relationship between the heat losses and strength of internal rigidity fins on their optimal choice in evacuated protection panels, *Vestnik Lvov. Politekh. Inst.* No. 233, 18–19 (1989).
- G. N. Voloshin, G. Ye. Gorelik, I. L. Kupriyanov and V. N. Chachin, Thermal regime of a crystallizer in the process of continuous production of fibrous composite materials, *Dokl. AN BSSR* 33(5), 426–429 (1989).
- G. V. Voronkov and G. P. Boikov, Thermal audition of a radiation-heated square beam. In *Heat Transfer Problems in Building*, pp. 3–6. Rostov-on-Don (1989).
- B. Ye. Vugmeister, The kinetics of transfer and excitation energy dissipation in solid solutions. In *Heat and Mass Transfer in Technological Processes*, pp. 48–63. Kiev (1988).
- L. N. Yakub, Thermal conductivity of solidified inert gases sublimation and fusion, *Vysokochist. Veshchestva* No. 3, 64–67 (1989).
- I. F. Zherebyatiyev and K. K. KENZHETAYEV, A complex of applied programs for numerical solution of unsteady-state heat conduction and diffusion problems. In *Mathematical Simulation of Unsteady-state Processes*, pp. 74–80. Alma-Ata (1988).
- Yu. A. Zhuravlyov and N. M. Tsirelman, Use of the principle of equivalent body in the grid method, *Trudy Ufim. Aviat. Inst.* No. 12, 102–105 (1988).
- V. I. Ziskin, A. V. Choba, V. V. Pasichnyi and G. A. Frolov, Determination of the heat conduction coefficient of heat-protective materials in the regime of self-similar heating, *Teplofiz. Vysok. Temp.* 27(2), 274–278 (1989).
- S. B. Zolotov, The strength of polymer fibers simultaneously undergoing unsteady-state thermal and mechanical loading, *Nauch. Trudy Mosk. Lesotekh. Inst.* No. 207, 121–130 (1988).
- A. V. Afanasiyev, L. L. Kalishevskiy and V. G. Krapivtsev, Formation of temperature and velocity fields in a heat releasing layer of spheres. In *Present-day Problems of Hydrodynamics and Heat Transfer in the Elements of Power Plants and Cryogenic Engineering*, pp. 10–16. Moscow (1988).
- S. N. Alaverdov, A. B. Vatazhin and V. A. Stepp, Subsonic high-temperature gas flow heat transfer in three-dimensional curvilinear channels, *Izv. AN SSSR, Mekh. Zhidk. Gaza* No. 3, 93–99 (1989).
- S. V. Alekseyenko, S. Yu. Belov, D. M. Markovich and S. I. Shtork, Hydrodynamics of tube bundles in cross flow, *Inzh.-fiz. Zh.* 58(1), 5–11 (1989).
- S. D. Amosov and U. I. Goldshleger, Heat and mass transfer processes while thermal-carbon recovery of silica, *Heat and Mass Transfer in Chemically Reacting Systems. Proc. Int. School-Seminar*, Minsk, 25 September–1 October 1988, Pt 1, pp. 14–23. Minsk (1988).
- B. V. Anipko, Enhancement of heat transfer a rolled-spiral finning for tube bundles, *Prepr. No. 308 of the Institute for Problems of Mechanical Engineering of the Ukr. SSR Academy of Sciences*, Kiev (1989).
- A. D. Aralov, R. Sh. Ayupov and V. M. Fomin, Hydrodynamics and heat transfer of single impact jets in the process of drying of photographic materials, In *Technology of Magnetic Carriers and Photographic Materials (Substances, Properties, Processes)*, pp. 130–140. Moscow (1988).
- V. S. Belyayev and Yu. D. Chashechkin, Free thermo-concentrated convection regimes above a localized heat source, *Izv. AN SSSR, Mekh. Zhidk. Gaza* No. 2, 27–34 (1989).
- I. E. Blutshtein and B. M. Kochanov, Generalization of experimental data on heat transfer enhancement for a non-linear viscous fluid flow in a circular tube with local flow twistlers, *Sborn. Nauch. Trudov Mosk. Energ. Inst.* No. 177, 65–75 (1988).
- V. N. Bogachuk, B. N. Yudayev and A. L. Novennikov, Enhancement of heat transfer between a jet and a barrier behind a single protrusion, *Prom. Teplotekh.* 11(3), 26–29 (1989).
- A. A. Bogomolov and B. N. Yudayev, Study of heat transfer of a high-speed water-air jet interacting with an obstacle. In *Present-day Problems of Hydrodynamics and Heat Transfer in the Elements of Power Plants and Cryogenic Engineering*, pp. 82–87. Moscow (1988).
- N. Ye. Boitsuk, Application of mechanical analogs to calculation of liquid mass oscillations in a partially filled vessel. In *Heat and Mass Transfer Processes in Single and Two-phase Systems*, pp. 51–54. Dnepropetrovsk (1988).
- P. M. Brdlik, Yu. P. Semenov and A. V. Khromenko, Certain features of heat transfer and hydrodynamics of a forced flow around a horizontal cylinder, *Nauch. Trudy Mosk. Lesotekh. Inst.* No. 207, 5–15 (1988).
- A. B. Bredikhin and S. V. Zhubrin, Numerical calculation of flow and heat transfer in tubes with cyclically repeated flow area geometry, *Sborn. Nauch. Trudov Mosk. Energ. Inst.* No. 191, 11–21 (1988).
- A. B. Bredikhin, S. V. Zhubrin and V. P. Motulevich, The step method for solving hydrodynamic and heat transfer problems in the regions with periodically varying cross-section, *Izv. AN TSSR, Ser. Fiz.-Tekh. Khim. Geol. Nauk* No. 3, 34–40 (1989).
- A. P. Burdukov, A. R. Dorokhov and V. I. Zhukov, Experimental study of free convection heat transfer in horizontal layers of mineral oil under vacuum, *Izv. SO AN SSSR, Ser. Tekh. Nauk* No. 2, 24–33 (1989).
- V. N. Dakhno and Zh. P. Mozhayeva, Effect of turbulence on heat transfer of a block of jets interacting with a barrier. In *Present-day Problems of Hydrodynamics and Heat Transfer in the Elements of Power Plants and Cryogenic Engineering*, pp. 88–93. Moscow (1988).
- N. N. Danilov, Free-convective heat transfer in a vertical plane channel at the given heat fluxes on the walls. In *Phase Conversions and High-power Processes*, pp. 37–42. Sverdlovsk (1988).
- HEAT AND MASS TRANSFER BETWEEN A SOLID BODY AND A FLUID**
- Yu. N. Abramov, N. M. Moziak, K. R. Shangareyev and V. V. Shevelev, Experimental study of heat transfer in short channels with internal heat sources. In *Heat and Mass Transfer in Chemical Technology*, pp. 59–62. Kazan (1988).

- S. G. Dezideriyev, V. I. Lokay, Yu. R. Mironov, M. K. Faizulin and A. V. Shchukin, Internal coefficients of hydraulic resistance and heat transfer of permeable water materials. In *Heat Transfer and Friction in Engines and Power Plants of Flying Vehicles*, pp. 12–16. Kazan (1989).
- O. V. Dobrocheyev, A. S. Petin and A. K. Ustinov, Experimental study of heat transfer and hydrodynamics in a dissociating gas flow, *Nauch. Trudy Mosk. Lesotekh. Inst.* No. 207, 62–75 (1988).
- R. N. Dyachuk, Concerning thermal calculations of a main pipe-line while in service, *Izv. AN SSSR, Energet. Transp.* No. 2, 136–142 (1989).
- Ye. P. Dyban, B. D. Bileka and V. A. Melnikov, Hydraulic resistance of inlet channels of the cooling system of a rotor, *Prom. Teplotekh.* 11(2), 3–7 (1989).
- V. I. Dyuzhev, V. M. Matveyev and Ye. V. Okhupkin, Heat transfer enhancement in annular channels by means of spiral-wire finning, *Trudy Tsentr. Inst. Aviats. Motorostr.* No. 1239, 144–161 (1989).
- V. Ya. Entin, Temperature stabilization by the choice of constructive power characteristics of the elements of thermal objects. In *Development and Improving of Automatization Systems of Textile and Light Industry Based on Micro-processor Engineering*, pp. 64–69. Leningrad (1988).
- M. K. Faizulin, The temperature state of permeable wafer materials. In *Heat Transfer Processes in Single and Two-phase Systems*, pp. 108–111. Dnepropetrovsk (1988).
- D. F. Faizullayev and I. B. Primov, Conjugated problem of heat transfer of a non-isothermal viscous incompressible liquid flow in a plane-parallel channel with porous walls, *Dokl. AN Uz. SSR* No. 8, 13–16 (1989).
- A. V. Faturin and N. A. Nadyrov, A laminar boundary layer in the presence of the longitudinal pressure gradient of separation parameter. In *Heat Transfer and Friction in Engines and Power Plants of Flying Vehicles*, pp. 65–69. Kazan (1988).
- V. I. Fedorov and Z. A. Martsenyuk, Modelling and calculation of unsteady-state processes in an outlet side branch and headers. In *Heat and Mass Transfer Processes in Technological Processes*, pp. 68–72. Kiev (1988).
- K. Kh. Filfanov, Unsteady-state heat transfer in a cylindrical channel with the decrease in time of the heat carrier and wall temperature. In *Heat Transfer and Friction in Engines and Power Plants of Flying Vehicles*, pp. 4–7. Kazan (1988).
- P. A. Filimonov, Study of heat transfer of a quartz heated piezoresonator at small flow velocities. In *The Problems of Reactor Thermophysics*, pp. 93–96. Moscow (1989).
- A. B. Gabitova and F. A. Garifullin, Numerical investigation of convective motion in a flat horizontal elasto-viscous fluid layer. In *Heat and Mass Transfer in Chemical Technology*, pp. 47–54. Kazan (1988).
- A. G. Gnedovets and A. A. Uglov, Concerning heat and mass transfer near the phase interface at small Reynolds numbers, *Teplotfiz. Vysok. Temp.* 27(3), 539–549 (1989).
- A. N. Golovanov, Concerning the effect of small power disturbances on heat transfer processes in some problems of the mechanics of reacting media. In *Hydromechanics and Heat and Mass Transfer in Weightlessness*, pp. 155–156. Novosibirsk (1989).
- G. F. Gorshkov, The effect of coherent structures on flow and heat transfer of subsonic jet flow past an obstacle in the self-oscillation regime, *Prom. Teplotekh.* 11(2), 20–27 (1989).
- T. M. Grigoriyeva and S. V. Zhurbin, The effect of surface permeability on heat transfer in a porous body, *Izv. VUZov, Mashinostroeniye* No. 4, 55–58 (1989).
- M. A. Grishin, Yu. B. Timofeyev and V. V. Kubarov, Numerical simulation of heat transfer in a gas suspension with non-equilibrium distribution of components, *Prom. Teplotekh.* 11(2), 40–43 (1989).
- M. P. Ignatiyev and S. Ya. Yarkho, Effect of the height of combined agitators on heat transfer and hydraulic resistance of annular channels. In *Present-day Problems of Hydrodynamics and Heat Transfer in the Elements of Power Plants and Cryogenic Engineering*, pp. 77–82. Moscow (1988).
- N. P. Iliyev and V. N. Popov, Heat transfer and turbulent liquid flow in an annular channel, *Sborn. Nauch. Trudov Mosk. Energ. Inst.* No. 191, 102–111 (1988).
- V. M. Ivanov and V. I. Malkovskiy, Experimental study of unsteady-state heat transfer on an automated rig. In *Thermohydrodynamic Processes in the Elements of Electric Power Stations*, pp. 184–191. Moscow (1988).
- A. A. Khalatov and A. N. Borroto, Local heat transfer in a cylindrical channel with a complete and partial flow swirling at the inlet. In *Heat and Mass Transfer in Technological Processes*, pp. 3–11. Kiev (1988).
- Ye. I. Khodorov, V. M. Iliyashenko and V. B. Kvasha, A balance problem in interphase heat and mass transfer processes, *Zh. Prikl. Khim.* 62(5), 1071–1079 (1989).
- A. A. Khudenko, L. G. Semenyuk, V. I. Moiseyev and N. A. Shvachko, Calculation heat and mass transfer processes in contact heat utilizers, *Izv. VUZov, Energetika* No. 7, 86–90 (1989).
- V. A. Knyazik and A. S. Shteinberg, The study of the kinetics of fast reactions by the method of electro-thermal explosion. *Heat and Mass Transfer in Chemically Reacting Systems. Proc. Int. School-Seminar*, Minsk, 25 September–1 October 1988, Pt 1, pp. 143–152. Minsk (1988).
- A. M. Konakhin and B. A. Kumirov, Experimental study of heat transfer and hydrodynamics of non-isothermal liquid flow in tubes with annular projections at small Reynolds numbers, *Sborn. Nauch. Trudov Mosk. Energ. Inst.* No. 177, 57–62 (1988).
- I. P. Korniyukhin and A. S. Okhotin, A system of equations of convective heat and mass transfer in porous bodies, *Prom. Teplotekh.* 11(3), 18–25 (1989).
- O. N. Kostikov and A. M. Fedushkin, Calculation of heat transfer coefficients of closed asynchronous electroengine stands with allowance for the ventilator construction. In *Magnetic Thermal and Vibro-acoustic Processes in Electric Machines*, pp. 54–57. Kharkov (1989).
- N. S. Kosykh, V. V. Nikitin and G. B. Zdanavichyus, Study of heat transfer in pipe-line fittings, *Khim. Neft. Mashinost.* No. 3, 7–8 (1989).
- N. N. Kovalnogov, D. L. Kuznetsov and I. Yu. Abramov, The efficiency of a laminar screen behind permeable and cooled regions. In *Heat Transfer and Friction in Engines and Power Plants of Flying Vehicles*, pp. 20–25. Kazan (1988).
- I. V. Kozhevnikov, M. K. Bologa, I. A. Koshukhar and V. V. Gramatskiy, Concerning the effect of liquid electrization on electroconvective heat transfer, *Izv. AN MSSR, Ser. Fiz.-Tekh. Mat. Nauk* No. 2, 68–70 (1989).
- A. P. Kozlov and A. N. Shchelkov, Heat transfer in channels with sudden expansion. In *Heat and Mass Transfer Processes in One- and Two-phase Systems*, pp. 28–30. Dnepropetrovsk (1988).
- Yu. V. Krasnoukhov, B. L. Paskar, V. A. Prokhorov and A. V. Shchedrin, A review of the temperature regime of the elements of power equipment, *Trudy TsKTI* No. 243, 94–101 (1988).
- A. R. Kuznetsov, A. Ya. Ageyev and S. A. Kuznetsova, Turbulent flow of a fibrous suspension in a tube, *Inzh.-fiz. Zh.* 58(2), 223–229 (1990).
- M. P. Leonchuk, Ye. Ye. Shvetsov and I. V. Shvetsova, Calculation of spatial heat and mass transfer in the (R, G, Z) geometry. *Prepr. No. 1977 of the Institute of Physics and Power Engineering*, Obninsk (1989).
- V. S. Leshukov, Mathematical simulation of gas-dynamic and thermal processes in the wall material evaporating on exposure to a radiative flux, *Izv. AN SSSR* 53(4), 754–760 (1989).
- F. N. Lisin, I. F. Guletskaya and M. V. Bondar, Convective heat transfer in a gas suspension over the starting length of a cylindrical channel. In *The Problems of Rational Use of Fuel-energy Resources in Non-ferrous Metallurgy*, pp. 122–123. Sverdlovsk (1989).
- V. I. Malkovskiy and V. M. Ivanov, Unsteady-state cooling of wire current lead in a non-viscous gas flow, *Izv. AN SSSR, Energ. Transp.* No. 3, 54–56 (1989).

- S. D. Mamchenko, G. B. Froishteter and V. R. Kravchenko, A mathematical model of a tubular scraping reactor for heat and mass transfer enhancement in high-viscous non-Newtonian fluids, *Neftepererab. Nefiekhim. (Kier)* No. 36, 38–42 (1989).
- V. I. Manzhaley, Experimental study of the attenuation of shock waves and heat transfer by bodies after gas detonation in chambers. In *Mechanics of Reacting Media and its Application*, pp. 123–132. Novosibirsk (1989).
- O. G. Martynenko, A. A. Soloviyov and A. D. Solodukhin, Convective instability of a free-convective vortex, *Inzh.-fiz. Zh.* **58**(3), 416–419 (1990).
- V. V. Matveyev, M. V. Aleksandrov and M. S. Volkov, Heat transfer in the channels in the field of centrifugal forces. In *Present-day Apparatuses for Processing Heterogeneous Media*, pp. 120–127. Leningrad (1988).
- T. V. Mendeleyeva, Heat transfer of gradient flow around non-isothermal bodies with injection and suction of the boundary layer. In *Heat and Mass Transfer in Technological Processes*, pp. 34–38. Kiev (1988).
- A. P. Mezentsev, Heat release from rotating large-diameter cylinders, *Prom. Energetika* No. 6, 40–43 (1989).
- V. K. Migay, Heat transfer in tubes with discrete roughness, *Teplotekhnika* No. 7, 2–5 (1989).
- Yu. G. Nazmeyev and V. A. Minenkov, Thermal explosion in non-linear-viscous fluid flow with boundary conditions of the third kind, *Shorn. Nauch. Trudov Mosk. Energ. Inst.* No. 177, 15–19 (1988).
- A. N. Nikiforov, A. V. Fedorov and R. N. Khusainov, The effect of low-frequency pulsations of flow-rate on turbulent flow in a diffuser. In *Heat Transfer and Friction in Engines and Power Plants of Flying Vehicles*, pp. 45–51. Kazan (1988).
- A. N. Oblivin, A. I. Pozhitok and Yu. G. Druganov, Convective cooling (heating) heat and mass transfer of damp capillary-porous materials, *Nauch. Trudy Mosk. Lesotekh. Inst.* No. 207, 15–24 (1988).
- A. N. Opanasenko, Free convective heat transfer in the channels of nuclear power plants with different orientation in the gravity field, *Prepr. No. 1960 of the Institute of Physics and Power Engineering*, Obninsk (1989).
- S. N. Osipov and M. F. Pshonik, Certain theoretical aspect of calculation of free convective flow velocity fields in a limited space, *Izv. VUZov. Energetika* No. 4, 91–94 (1989).
- N. Ye. Petrov and V. N. Popov, Numerical simulation of heat and mass transfer processes and turbulent flow in a tube cooled by helium with supercritical state parameters, *Teplotfiz. Vysok. Temp.* **27**(3), 506–514 (1989).
- V. A. Petrushchenkov and Yu. A. Filippov, Free convective heat transfer in extended thin-wall split elements of current-carrying systems, *Elektrichestvo* No. 3, 56–59 (1989).
- V. Yu. Pikus, I. L. Shrader and A. S. Shamarokov, Study of thermohydraulic characteristics of heat exchanger with a screening tube bundle, *Teplotekhnika* No. 7, 44–47 (1989).
- N. D. Pismenskaya, V. I. Zabolotskiy and N. P. Gnusin, Mass transfer and power characteristics of membrane channels with thin screen separators, *Khim. Tekhnol. Vody* **11**(4), 370–375 (1989).
- V. I. Polezhayev, Convection and heat and mass transfer under weightlessness conditions. In *Hydromechanics and Heat and Mass Transfer in Weightlessness*, pp. 6–19. Novosibirsk (1988).
- Yu. V. Polezhayev and Yu. N. Shishkin, Possibilities of modelling turbulent heat transfer of hypersonic flow around bodies in jets of limited size, *Teplotfiz. Vysok. Temp.* **27**(1), 104–108 (1989).
- A. V. Poroshin and V. V. Serebryakov, Heat transfer in an annular magnetohydrodynamic channel at finite magnetic Reynolds numbers, *Magnitn. Gidrodinam.* No. 1, 90–102 (1989).
- L. I. Pushkarev, Application of the Monte Carlo method to the solution of conjugated heat transfer problems. In *Heat and Mass Transfer in Technological Processes*, pp. 78–82. Kiev (1988).
- Sh. M. Rakhimbayev and V. I. Ilyin, Enhancement of heat transfer process of high-viscous non-Newtonian systems. In *Energy-saving Technology of Building Materials*, pp. 78–82. Belgorod (1988).
- A. A. Romanov, A. S. Korsun and V. I. Petrovichev, Heat transfer of a single spherical heat releasing element. In *Heat and Mass Transfer in Technological Processes*, pp. 42–48. Kiev (1988).
- N. A. Rubtsov, A. M. Timofeyev and N. N. Ponomarev, A conjugated problem of unsteady-state radiative convective heat transfer of a thin plate in a flow. In *Heat Transfer and Friction in Single-phase Flows*, pp. 111–122. Novosibirsk (1988).
- A. L. Ruslanov, A. I. Mironov, V. S. Kolkunov and V. G. Loginov, The effect of external turbulence on heat transfer of the nose of a cylinder in a cross flow under constrained conditions. In *Heat Transfer and Friction in Engines and Power Plants of Flying Vehicles*, pp. 74–77. Kazan (1988).
- Yu. V. Sanochkin, Thermocapillary convection in a thin layer of non-uniformly heated liquid, *Izv. AN SSSR. Mekh. Zhidk. Gaza* No. 2, 120–128 (1989).
- B. A. Saraf, Thermophysical processes in the chambers of contact heat exchangers of heating boilers. In *The Problems of Engineering Equipment*, pp. 134–144. Moscow (1989).
- Yu. P. Semenov and A. M. Orekhov, Numerical study of turbulent mixed convection on a vertical plate, *Nauch. Trudy Mosk. Lesotekh. Inst.* No. 207, 24–37 (1988).
- V. A. Sevostyanov, I. G. Boiko and V. S. Ivanenko, External heat transfer of centrifugal-eccentric heat pipes of electric machines. In *Magnetic Thermal and Vibrational-acoustic Processes in Electric Machines*, pp. 37–41. Kharkov (1989).
- Yu. I. Shanin, V. A. Afanasiyev, V. N. Fedoseyev and O. I. Shanin, Heat transfer and hydraulic resistance in corrugation cooling systems with heat supply to one side. In *The Problems of Reactor Thermophysics*, pp. 38–43. Moscow (1989).
- Ye. V. Shelimanova, Experimental study of hydraulic resistance and heat transfer of a system of jets impinging on a concave surface. In *Heat and Mass Transfer Processes in Single- and Two-phase Systems*, pp. 4–7. Dnepropetrovsk (1988).
- A. A. Shulga, Investigation of local characteristics of convective heat transfer of the sphere packing element. In *Heat Transfer Processes in Single- and Two-phase Systems*, pp. 112–115. Dnepropetrovsk (1988).
- M. Kh. Strelets and M. L. Shur, The effect of compressibility on hydrodynamics and heat transfer in subsonic viscous gas flows in channels in the presence of recirculation zones, *Teplotfiz. Vysok. Temp.* **27**(2), 292–299 (1989).
- V. V. Stulov, Heat transfer between a jet and a wall. In *Heat and Mass Transfer Processes in Single- and Two-phase Processes*, pp. 12–15. Dnepropetrovsk (1988).
- V. B. Sudarev, The effect of the converging shape on heat transfer in an annular channel, *Trudy TsKTI* No. 243, 123–127 (1988).
- E. A. Tairov, Non-linear modelling of the dynamics of heat transfer in a channel with a single-phase heat carrier, *Izv. AN SSSR. Energet. Transp.* No. 1, 150–156 (1989).
- G. P. Velichenko, V. S. Tsviklis and I. A. Verner, Determination of hydraulic losses of the channels of the heat exchanger matrix with discontinuous spacers. In *Ship Power Plants*, pp. 96–106. Nikolayev (1989).
- V. N. Vladimirov, V. M. Kalganov and I. A. Titova, Study of devices of convective cooling in broaching furnaces with a protective gaseous medium. In *Heat and Mass Transfer in Technological Processes*, pp. 82–86. Kiev (1988).
- A. M. Vorobiyov, V. I. Zhuk, V. P. Sizov and D. N. Chubarov, Analysis of the unsteady-state thermal model of a thin-membrane heat flux transducer, *Inzh.-fiz. Zh.* **58**(2), 264–271 (1990).
- A. V. Voronkevich, The effect of variable physical properties of a refrigerant on heat transfer of a laminar jet entering an impass chamber, *Nauch. Trudy Mosk. Lesotekh. Inst.* No. 207, 105–110 (1988).

- M. M. Yesmukhanov, The effect of interphase heat transfer on the microstructure of the non-uniform solid phase flow field. In *Present-day Problems of Gasdynamics and Heat and Mass Transfer and Ways for Improving the Efficiency of Power Plants*, p. 46. Moscow (1989).
- S. F. Yevlanov, The influence of free convection on the stability of stationary flames, *Fiz. Gor. Vzryva* **25**(4), 57–59 (1989).
- I. V. Yolkin, Simulation in the course of heat transfer and hydrodynamics investigations on integral rigs. In *Thermohydrodynamic Processes in the Elements of Electric Station Equipment*, pp. 191–195. Moscow (1988).
- L. Ye. Yushina and B. G. Blyashov, The study of heat transfer of a cylinder in a cross flow by the heat and mass transfer analogy method, *Prom. Teplotekh.* **11**(2), 37–40 (1989).
- A. I. Zhakin, Electrodynamic systems and their use for heat and mass transfer enhancement. In *Hydromechanics and Heat and Mass Transfer in Weightlessness*, pp. 45–55. Novosibirsk (1988).
- P. V. Zhirkov, Heat and mass transfer in polymerization reactors of mixing and displacement. In *Heat and Mass Transfer in Chemically Reacting Systems. Proc. Int. School-Seminar*, Minsk, 25 September–1 October 1988, Pt 2, pp. 131–138. Minsk (1988).
- V. Ye. Zhukov, The effect of Coriolis forces on the regimes of heat transfer and temperature distribution in liquid nitrogen near a heat releasing surface, *Izv. SO AN SSSR, Ser. Tekh. Nauk* No. 1, 11–19 (1989).
- V. I. Zinchenko, Concerning the solution of heat and mass transfer problems of flow around non-isothermal bodies. In *Mechanics of Reacting Bodies and its Application*, pp. 180–194 (1989).

RADIATIVE HEAT TRANSFER

- G. A. Agapov, V. N. Iliyev, V. A. Kostylev, V. V. Filippov and V. Ya. Frolov, Investigation and development of electro-radiators without a liquid heat carrier, *Izv. VUZov, Energetika* No. 1, 100–103 (1989).
- L. A. Bakaleinikov and M. G. Vasiliyev, The asymptotics of the solution of a radiative-conductive heat transfer problem under the conditions of predominating radiative heat transfer, *Zh. Tekh. Fiz.* **58**(12), 2279–2285 (1988).
- V. S. Batalov, Dynamic dilatometry as a means for determining thermoradiative characteristics of metals at high temperatures, *Teplofiz. Vysok. Temp.* **27**(2), 403–404 (1989).
- S. P. Detkov and O. A. Bryukhovskikh, A two-zone model for heat transfer in a furnace, *Inzh.-fiz. Zh.* **58**(1), 108–114 (1990).
- V. D. Goldin, Radiative heat transfer of blunt bodies in a three-dimensional hypersonic hydrogen-helium mixture flow. In *The Mechanics of Reacting Media and its Application*, pp. 194–203. Novosibirsk (1989).
- A. V. Gorbato and Ye. V. Samuilov, Radiative heat transfer from a wall bordering on plasma, *Izv. SO AN SSSR, Ser. Tekh. Nauk* No. 1, 3–5 (1989).
- V. A. Gorichenko, Calculation of radiative heat transfer in cylindrical constructions. In *Computational Study of Experimental and Power Plants*, pp. 137–141. Obninsk (1989).
- N. G. Iliyashenko, Thermal radiation absorption by the sea water film. In *Conversion and Application of the Thermal Energy of the Ocean*, pp. 55–57. Vladivostok (1988).
- G. N. Isakov and R. A. Dekhtyar, Relaxation analysis of the laws governing heterogeneous ignition of polymers in radiative-convective heat transfer, *Fiz. Gor. Vzryva* **25**(4), 3–9 (1989).
- M. A. Izyumov and V. M. Supranov, A program for calculating generalized angular coefficients. In *Heat Transfer in Steam Generators. Proc. All-Union Conf.*, June 1988, pp. 277–281. Novosibirsk (1988).
- A. M. Kozhurintsev, A technique for calculating heat transfer in the furnace heating boilers. In *Increase of the Reliability*

- and Efficiency of Power Supply to the Objects of Municipal Services*, pp. 56–66. Moscow (1988).
- V. A. Kuzmin and Ye. I. Maratkanova, Inverse refinement of experimental determination of temperature by means of thermal radiation. In *Heat Transfer and Friction in Engines and Power Plants of Flying Vehicles*, pp. 36–41. Kazan (1988).
- S. V. Maksimenko, Optical break-down near the surface of refractory metals in the atmosphere of inert gases due to heating and evaporation of surface microdefects, *Teplofiz. Vysok. Temp.* **27**(2), 408–410 (1989).
- Yu. V. Polezhayev, V. A. Tlevtsezhev and V. L. Strakhov, Investigation of the behaviour of composite materials under the conditions of combined effect of radiative-convective heat fluxes, *Teplofiz. Vysok. Temp.* **27**(2), 341–346 (1989).
- I. N. Popkov and V. A. Tovstonog, Analysis of heat transfer in light-scattering material under the action of a limited source of collimated radiation, *Izv. SO AN SSSR, Ser. Tekh. Nauk* No. 2, 3–8 (1989).
- A. S. Romanov, About the comparison of the solutions of Cauchy problem for an integrodifferential equation of radiative heat transfer, *Trudy MVTU* No. 523, 106–111 (1989).
- G. K. Rubin, Hierarchic calculations of radiative heat transfer in electric furnaces, *Teplofiz. Vysok. Temp.* **27**(2), 327–334 (1989).
- N. A. Rubtsov, N. N. Ponomarev and A. M. Timofeyev, Radiative-convective heat transfer on a thin plate in the conjugated statement of the problem, *Teplofiz. Vysok. Temp.* **27**(3), 557–562 (1989).
- Yu. I. Shvets, O. I. Didenko and O. D. Lipovetskaya, Unsteady-state conjugated heat transfer of flow around thin radiating bodies. In *Heat Transfer in Technological Processes*, pp. 11–14. Kiev (1988).
- S. I. Sogokon, V. A. Korobkin and A. B. Sogokon, A technique for measuring the temperature dependence of birefringence, *Optika Spektrosk.* **66**(3), 633–635 (1989).

HEAT AND MASS TRANSFER IN PHASE AND CHEMICAL CONVERSIONS

- A. Ye. Aleksandrov, Measurement of the heat flux density of thermal treatment. In *Present-day Problems of Hydrodynamics and Heat Transfer in the Elements of Power Plants and Cryogenic Engineering*, pp. 122–126. Moscow (1988).
- A. B. Andrianov and S. P. Malyschenko, The effect of the characteristics of porous coatings on boiling heat transfer, *Izv. AN SSSR, Energet. Transp.* No. 1, 139–149 (1989).
- N. P. Anfimova and N. V. Sitnikova, Boiling cryogenic liquid corresponding to the 1st kind crisis, *Boiling and Condensation (Riga)* No. 12, 64–71 (1988).
- V. A. Antonenko, Rupture of thin liquid films under the conditions of intensive steam generation. *Prom. Teplotekh.* **11**(2), 27–31 (1989).
- V. V. Arkhipov, V. I. Deyev and D. Yu. Tartutin, About effect of the spikes of release on burnout heat transfer of helium boiling in tubes. In *The Problems of Reactor Thermophysics*, pp. 97–100. Moscow (1989).
- V. I. Astapova and V. S. Bobrovich, Calculation of the kinetics of evaporation of non-ideal three-component mixtures. In *Heat and Mass Transfer Processes in Power Plants*, pp. 21–25. Minsk (1989).
- B. P. Avksentyuk, V. V. Ovchinnikov and V. Ya. Plotnikov, The self-maintaining boiling up front, *Izv. SO AN SSSR, Ser. Tekh. Nauk* No. 2, 17–23 (1989).
- I. V. Barmin, N. A. Verezub, E. S. Kopeliovich, V. V. Rakov and Ye. S. Yurova, About the effect of certain factors on the properties of semi-conducting materials produced by non-crucible zone melting under the conditions of micro-accelerations. In *Hydromechanics and Heat and Mass Transfer Under Zero Gravity*, pp. 132–141. Novosibirsk (1989).
- M. K. Bologa and V. P. Korovkin, On the role of dispersion

- in condensation heat transfer enhancement in electric field, *Elektron. Obrab. Mater.* No. 1, 33–35 (1989).
- S. G. Bondarenko, A. N. Fomin, Yu. A. Hizhikov, V. A. Volkov and A. V. Shulga, Pool boiling of subcooled liquid with unsteady-state heat release on a vertical surface. In *The Heat and Mass Transfer Processes in Single and Two-phase Systems*, pp. 83–87. Dnepropetrovsk (1988).
- V. P. Belyakov and V. V. Budrik, Developed bubble boiling heat transfer model, *Izv. AN SSSR, Energet. Transp.* No. 3, 77–88 (1989).
- Yu. M. Brodov, K. E. Arosan and A. Yu. Ryabchikov, Condensation of a transverse vapour flow on vertical tubes, *Teploenergetika* No. 5, 44–47 (1989).
- V. M. Budov, I. I. Gogolin and I. A. Shemagin, Condensation heat transfer of quiescent vapour on a single horizontal cylinder, *Izv. SO AN SSSR, Ser. Tekh. Nauk* No. 4, 11–16 (1989).
- A. A. Bulatov, F. M. Gimranov, N. Kh. Zinnatullin and T. G. Fazylyzanov, Calculation of the process of centrifugal liquid film evaporation in the absence of heat supply. In *Heat and Mass Transfer in Chemical Technology*, pp. 77–82. Kazan (1988).
- A. L. Burenkova, B. A. Makarov and F. M. Chistyakov, About the calculation of the process of condensation in a vertical circular and an annular channels, *Trudy MTU* No. 522, 109–116 (1988).
- V. D. Chaika, Calculation of the components of thermal balance of water boiling on horizontal tubes, *Boiling and Condensation (Riga)* No. 12, 38–49 (1988).
- P. S. Chernyakov and Yu. A. Kirichenko, Calculation of the dynamics of steam bubbles and heat transfer coefficient in bubble pool boiling of cryogenic fields in the fields of mass forces, *Prepr. No. 42 of the Physico-Technical Institute for Low Temperatures*, Moscow (1988).
- B. V. Davydenko, Calculation of the process of drying a moving capillary-porous tape with allowance for the conjugation conditions. In *Heat and Mass Transfer in Technological Processes*, pp. 23–29. Kiev (1988).
- V. M. Deyev, V. K. Andreyev, B. A. Vakhnenko, A. N. Savin and V. S. Kharitonov, Unsteady-state subcooled boiling heat transfer of helium. In *The Problems of Reactor Thermophysics*, pp. 100–103. Moscow (1989).
- B. S. Dobronets and A. N. Dubnikov, Automatization of calculation and construction of temperature fields of reservoirs-coolers of thermal electric and atomic electric power plants, *Izv. VNI Gidrotekh.* No. 210, 30–37, 78 (1988).
- A. L. Dushkin and A. I. Kolomentsev, Condensation of vapour bubbles in subcooled liquid flow, *Teplofiz. Vysok. Temp.* 27(1), 116–121 (1989).
- V. L. Fedorov and L. F. Fedorov, Determination of the boundary for the beginning of intensive surface boiling in tubes, *Izv. VUZov, Energetika* No. 110–113 (1989).
- Sh. A. Gaidarov, Concerning the calculation of the boiling critical heat flux with allowance for the effect of the material wall thickness and of the heating surface diameter, *Boiling and Condensation (Riga)* No. 12, 24–27 (1988).
- A. G. Gnedovets, The kinetics of heat and mass transfer of a droplet evaporating and growing in its own vapour due to condensation. In *Physico-chemical Processes of Material Treatment by Concentrated Energy Fluxes*, pp. 110–126. Moscow (1989).
- I. I. Gogonin and S. I. Lazarev, Experimental study of condensation heat transfer and flow dynamics of a moving vapour on the surface of a horizontal cylinder, *Inzh.-fiz. Zh.* 58(2), 181–188 (1990).
- I. I. Gogonin and N. I. Grigoriyeva, Estimation of the effect of surface tension on heat transfer of condensate running down vertical fins, *Boiling and Condensation (Riga)* No. 12, 109–121 (1988).
- I. I. Gogonin and A. Ye. Silkachyov, Boiling heat transfer under the conditions of free convection, *Izv. AN SSSR, Ser. Tekh. Nauk* No. 1, 5–10 (1989).
- Yu. F. Gortyshev, I. N. Nadyrov and G. B. Muraviyov, The study of hydrodynamics heat transfer and modelling of the first boiling crisis in high-porous structures, *Sborn. Nauch. Trudov Mosk. Energ. Inst.* No. 177, 3–9 (1988).
- V. M. Gribkov, V. M. Yeroshenko and K. V. Karmastin, Analysis of the process of melting in a vertical annular gap under the conditions of heat exchange with a forced heat carrier flow, *Inzh.-fiz. Zh.* 58(2), 214–220 (1990).
- I. N. Iliyina, D. M. Blumberg and I. K. Veidenberg, Heat and mass transfer of a condensing vapour-gas stream in apparatuses with active packing, *Boiling and Condensation (Riga)* No. 12, 122–125 (1988).
- A. V. Karpyshev, Study of the natural convection film boiling crisis of a strongly subcooled liquid. In *Present-day Problems of Hydrodynamics and Heat Transfer in the Elements of Power Plants and Cryogenic Engineering*, pp. 57–62. Moscow (1988).
- A. Khanov, A. Nuryagdyev, O. V. Movlanova and Ch. Kh. Khanov, About the dimensionless relations of evaporation and condensation heat and mass transfer in a close volume, *Izv. AN Tadzh. SSR, Ser. Fiz.-Tekh., Khim. Geol. Nauk* No. 4, 42–48 (1989).
- B. M. Khusid, V. B. Erenburg and E. A. Zaltsgendler, Solidification heat transfer of oligometric compositions in a cylindrical vessel, *Sborn. Nauch. Trudov Mosk. Energ. Inst.* No. 177, 29–34 (1988).
- Yu. A. Kirichenko, K. V. Rusanov and Ye. G. Tyurina, Experimental study of boiling heat transfer of nitrogen in a flat slot channel formed by a heat transfer surface and a perforated plate, *Boiling and Condensation (Riga)* No. 12, 5–56 (1988).
- A. V. Klimenko, A. V. Shelepen and A. G. Sinitsyn, Heat transfer and the conditions of floating of drops having the temperature greatly differing from the liquid temperature, *Izv. SO AN SSSR, Ser. Tekh. Nauk* No. 4, 90–106 (1989).
- N. Yu. Koloskova and A. I. Beloyan, Application of open thermosyphons in the system of cooling metallurgical plants. In *Heat and Mass Transfer in Technological Processes*, pp. 63–77. Kiev (1988).
- A. G. Konyushenko, Study of the process of cooling powerful transistors with the aid of thermosyphons. In *Optimization of the Working Regimes of Electric Drives*, pp. 38–41. Krasnoyarsk (1988).
- A. G. Kostin and V. N. Domanov, The analysis of the methods available for calculating evaporation heat transfer, *Izv. VNI Gidrotekh.* No. 210, 12–17, 77 (1988).
- S. M. Krivtsov, Experimental determination of the heat transfer coefficient and of the critical heat flux density for water boiling on a capillary-porous surface. In *Searching for the Ways to Increase the Efficiency of Energy Conversion in the Elements of High-power Equipment*, pp. 47–52. Leningrad (1988).
- P. S. Kuts and V. Ya. Shklyar, The kinetics of convective drying of thin materials, *Prom. Teplotekh.* 11(5), 55–59 (1989).
- A. V. Kuzmich, Evaporation of water-alcoholic solution from a free surface and a capillary-porous body into a rarified gaseous medium. In *Heat and Mass Transfer Processes in Power Plants*, pp. 26–29. Minsk (1989).
- V. G. Labeish, Heat extraction in liquid cooling of metal, *Stal* No. 3, 100–103 (1989).
- P. P. Lutsik and B. P. Dromenko, A method for determining the coefficients of linear thermal expansion and shrinkage of solid porous bodies in drying, *Prom. Teplotekh.* 11(2), 56–62 (1989).
- V. O. Mamchenko and A. L. Yemelianov, The effect of a gap between a heat-exchange tube and a condensate-removing fin on condensation heat transfer. In *Thermophysical Properties of Working Bodies and the Processes of Cryogenic Technique*, pp. 69–71. Leningrad (1988).
- P. V. Mamontov, A set-up for investigating heat transfer processes in boiling under the conditions of vibrational effects. In *The Heat and Mass Transfer Processes in Single- and Two-phase Systems*, pp. 100–103. Dnepropetrovsk (1988).

- A. V. Mikhailov, Mathematical simulation of the process of quiescent vapour film condensation on a vertical surface, *Trudy TsKTI* No. 243, 41–50 (1988).
- A. V. Mikhailov, V. A. Permyakov and M. B. Krasilnikov, Experimental study of the enhancement of vapour condensation heat transfer on a tubular surface, *Trudy TsKTI* No. 243, 78–85 (1988).
- Z. I. Nagolkina and V. A. Senatos, A technique for calculating temperature fields over the length of polymer film formation. In *Heat and Mass Transfer in Technological Processes*, pp. 29–34. Kiev (1988).
- Ye. I. Nesis, Thermoacoustic phenomena in boiling of liquids, *Boiling and Condensation (Riga)* No. 12, 5–14 (1988).
- S. Ye. Nesis, Ye. V. Borisov and S. V. Kuyan, Installation for studying thermomechanical oscillations of a heater in a boiling liquid with pulsed heat supply, *Boiling and Condensation (Riga)* No. 12, 21–23 (1988).
- R. I. Nigmatulin, N. S. Khabyev and V. Sh. Shagapov, The effect of the abnormal influence of the component composition in the acoustics of boiling solutions, *Dokl. AN SSSR* 304(6), 1323–1328 (1989).
- V. V. Nizovtsev, Study of local radiation-induced natural convection in a thin layer of evaporating liquid, *Zh. Prikl. Mekh. Tekh. Fiz.* No. 1, 138–145 (1989).
- N. Yu. Ostrovskiy, Calculation of heat transfer rate in boiling of mixtures, *Prom. Teplotekh.* 11(2), 34–37 (1989).
- N. Yu. Ostrovskiy, The effect of an ascending vapour–liquid flow and liquid viscosity on heat transfer enhancement in a large volume. In *The Heat and Mass Transfer Processes in Single- and Two-phase Systems*, pp. 88–91. Dnepropetrovsk (1988).
- L. K. Pervushin, The study of the process of self-evaporating liquid boiling-up in cylindrical channels, *Izv. VUZov, Energetika* No. 4, 100–103 (1989).
- G. B. Petrazhitskiy and Ye. S. Ibragimov, Study of melting processes in phase-transition heat receivers with horizontal heat-exchanging pipes arranged in a large number of rows, *Sborn. Nauch. Trudov Mosk. Lesotekh. Inst.* No. 207, 95–105 (1988).
- I. A. Petrova and V. M. Zaslavskiy, Heat transfer enhancement by means of thin hydrophobic coatings, *Energet. Mashinost. (Kharkov)* No. 48, 72–76 (1989).
- A. I. Podbereskiy and G. I. Zhuravskiy, Heat transfer of an ice–water mixture flow, *Kholod. Tekh.* No. 3, 29–31 (1989).
- V. P. Popov, Heat and mass transfer in the processes of chemical deposition of semiconductive and dielectric layers from a gas phase. In *Heat and Mass Transfer in Chemically Reacting System, Proc. Int. School-Seminar*, Minsk, 25 September–1 October 1988, pp. 139–148. Minsk (1989).
- I. A. Prokhorov, Specific features of chemically reacting heat carrier condensation in a tube bundle of an air-cooled condenser, *Vestsi AN BSSR, Ser. Fiz.-Energet. Navuk* No. 3, 73–82 (1989).
- K. B. Radeyev, The effect of waves on film condensation heat and mass transfer, *Prepr. No. 9 of the Heat and Mass Transfer Institute of the BSSR Academy of Sciences*, Minsk (1989).
- V. G. Rifert, A. I. Sardak, V. V. Lysykh, V. L. Podberesnyi and S. V. Grigorenko, Experimental study of heat transfer in dropwise condensation within horizontal tubes, *Inzh.-fiz. Zh.* 58(3), 488–493 (1990).
- V. G. Rifert and V. V. Treputnev, Condensation heat transfer of moving vapour inside vertical shaped tubes and channels, *Boiling and Condensation (Riga)* No. 12, 102–108 (1988).
- A. V. Ruchkin, V. G. Fomenko, Ye. A. Sidorchuk and O. M. Nempochenko, The effect of the disturbance of thermal equilibrium on the determination of electric parameters of strata, *Geol. Nefti, Gaza* No. 1, 5–10 (1989).
- D. Ye. Rusov, A model of the process of dielectric liquid boiling up in a strong electric field, *Boiling and Condensation (Riga)* No. 12, 57–63 (1988).
- A. Yu. Ryabchikov, K. E. Aronson, L. N. Kondakov and A. I. Gubina, Modelling of the processes of hydrodynamics and heat transfer of vapour condensing in vertical heat-exchangers with shaped tubes, *Trudy TsKTI* No. 243, 66–72 (1988).
- S. I. Rymasny and V. I. Gaidukov, The study of the saturated vapour condensation on an endothermically solvable heat absorber, *Teploenergetika* No. 4, 62–64 (1989).
- R. A. Sadykov, V. V. Migunov, M. M. Gidiyatullin and D. G. Pobedimskiy, Toward the problem of calculating the heating surface of material in drum dryer. In *Heat and Mass Transfer in Chemical Technology*, pp. 102–108. Kazan (1988).
- R. G. Safin, L. G. Golubev and V. N. Bashkirov, Study of the process of drying by reduced pressure with conductive heat supply. In *Present-day Apparatuses for Processing Heterogeneous Media*, pp. 83–87. Leningrad (1988).
- A. A. Shapoval, V. K. Zaripov and M. G. Semena, Calculation of boiling heat transfer enhancement on the surface with porous coatings, *Izv. AN SSSR, Energet. Transp.* No. 3, 63–68 (1989).
- Z. P. Shulman, I. L. Ryklina, E. V. Ivashkevich and G. M. Pashik, The effect of non-isothermicity on rheokinetics of solidification of epoxy compositions, *Sborn. Nauch. Trudov Mosk. Energ. Inst.* No. 177, 23–29 (1988).
- I. I. Stolonogov, A. A. Abrosimov and A. M. Grushevenko, Bubble boiling of hydrocarbon liquids, *Khim. Technol. Topliv. Masel* No. 8, 45–47 (1989).
- V. A. Suslov and Ye. V. Alekseyev, Calculation of heat transfer coefficient in evaporating apparatus of the industry, *Bumazh. Prom.* No. 2, 30–31 (1989).
- N. P. Timchenko and N. I. Kobasko, Specific features of the process of cooling in thermal treatment of metals. In *Heat and Mass Transfer in Technological Processes*, pp. 86–93. Kiev (1988).
- V. I. Tolubinskiy, V. A. Antonenko, G. R. Kudritskiy and Yu. G. Chistyakov, Vibrational effect on boiling heat transfer in power technological equipment, *Prom. Teplotekh.* 11(3), 3–7 (1989).
- A. N. Tsoi and L. P. Kondaurova, Nitrogen boiling-up in the case on unsteady-state heat release at different pressures, *Inzh.-fiz. Zh.* 58(2), 188–190 (1990).
- N. V. Tyabin, V. A. Balashov, V. V. Shiilyannikov and S. G. Kochemasov, Study of heat transfer in porous-structure condensers, *Sborn. Nauch. Trudov Mosk. Energ. Inst.* No. 177, 34–39 (1988).
- A. K. Ustinov and A. P. Solodov, The study of the jet condensation two-phase flow structure by the optical method. In *Thermo-technical Problems of Energy-saving Technologies in Textile and Light Industries*, pp. 142–149. Moscow (1989).
- N. A. Vinogradova, A. A. Yesyutkin, V. N. Ivanov and A. P. Inkov, Automatization of the studies of heat transfer processes in mechanical constructions, *Sborn. Nauch. Trudov Mosk. Energ. Inst.* No. 211, 80–83 (1989).
- T. I. Vishevskaia, M. S. Pronin, N. M. Tsirulnichenko and I. V. Trankovskaya, Mathematical simulation of drying damp brown coal in an unsteady-state gas stream. In *Modelling of Thermophysical Processes*, pp. 53–59. Krasnoyarsk (1989).
- I. A. Volchenok and G. Ye. Gorelik, Concerning the effect of re-evaporation on the uniformity of coating thickness, *Inzh.-fiz. Zh.* 58(2), 285–288 (1990).
- Yu. I. Volovik, Evaporation of a liquid drop blown by superheated steam. In *Heat and Mass Transfer in Technological Processes*, pp. 93–103. Kiev (1988).
- V. V. Yagov and G. I. Samokhin, Physical model and experimental study of the crises in the region of low reduced pressures, *Sborn. Nauch. Trudov Mosk. Energ. Inst.* No. 191, 85–94 (1988).
- T. Yugai, A. F. Chalykh, Ye. V. Stolyarov and E. E. Liverant, The effect of twisted tape inserts on burnout heat transfer in rod assemblies. In *Thermohydrodynamic Processes in the Elements of Electric Station Equipment*, pp. 95–106. Moscow (1988).
- T. Yugai, A. I. Yemeliyanov, Ye. V. Stolyarov, A. F.

Chalykh and S. Yu. Savvin, The effect of the geometry and heat transfer intensifiers on burnout heat transfer and hydraulic resistance in rod assemblies. In *Thermohydrodynamic Processes in the Elements of Electric Station Equipment*, pp. 79-94. Moscow (1988).

A. Zh. Zhamalov, The use of the energy of sun for drying building materials, *Geliotekhnika* No. 4, 56-61 (1989).

HEAT AND MASS TRANSFER IN DISPERSE AND TWO-PHASE SYSTEMS

- G. M. Anosova, Yu. M. Dashevskiy and R. I. Shnevrova, A two-phase heat carrier flow in horizontal tubes. In *Thermohydrodynamic Processes in the Elements of Power Equipment of Electric Power Stations*, pp. 58-70. Moscow (1988).
- S. R. Ashukhmin and Yu. F. Gortyshev, Temperature fields and critical thermal loads in high-porous structures. In *Heat and Mass Transfer in Chemical Technologies*, pp. 112-117. Kazan (1988).
- A. A. Avdeyev, A universal relation for calculating the rate of gravitational rise of bubbles. *Teplotekhnika* No. 7, 16-19 (1989).
- I. M. Azhmukhamedov, Derivation of relations for calculating hydrodynamic characteristics of a liquid film on a rotating disc, *Inzh.-fiz. Zh.* **58**(3), 441-447 (1990).
- B. F. Balunov, Ye. L. Smirnov, A. S. Babykin and T. S. Zhivitskaya, Hydrodynamic stability of a natural-circulation loop with a boiling heat carrier, *Trudy TsKTI* No. 242, 91-100 (1988).
- P. A. Barabash, V. G. Rifert, L. S. Bobe, B. G. Rittenberg and V. B. Filonenko, Heat and mass transfer of water evaporating into an air flow in a centrifugal apparatus with a regular packing, *Boiling and Condensation (Riga)* No. 12, 72-80 (1988).
- M. K. Bezrodnyi and Yu. V. Antoshko, Hydrodynamics of the ascending fluid film and vapour streams in a vertical annular channel, *Inzh.-fiz. Zh.* **58**(3), 425-431 (1990).
- M. K. Bezrodnyi and V. M. Podgoretskiy, Limiting heat transfer in a horizontal two-phase thermosiphon, *Inzh.-fiz. Zh.* **58**(1), 63-68 (1990).
- M. K. Bezrodnyi, S. S. Volkov and V. M. Podgoretskiy, Hydrodynamic characteristics of the "choking" regime of two-phase flow under the conditions of a horizontal thermosiphon, *Izv. VUZor, Energetika* No. 2, 100-103 (1989).
- V. M. Bogomolov and V. P. Ryazanov, Specific features of heat transfer in sintering roasting of lead charges, *Izv. VUZor, Tsvetn., Metallurg.* No. 2, 39-45 (1989).
- V. A. Borodulya, Yu. S. Teplitskiy, Yu. G. Yepanov and I. I. Markevich, Heat transfer between fluidized beds of coarse particles and horizontal bundles of tubes, *Prom. Teplotekh.* **11**(2), 47-53 (1989).
- B. A. Borzov, S. V. Iliyev and V. M. Kozlov, Discharge capacity of safety valves operating in the regime of the working medium boiling-up, *Energomashinostroeniye* No. 9, 40-42 (1989).
- V. S. Burgasov, B. G. Ganchev and V. V. Trishin, Gravitational liquid film flow down the walls of a vertical slit. In *Present-day Problems of Hydrodynamics and Heat Transfer in the Elements of Power Plants and Cryogenic Engineering*, pp. 106-112. Moscow (1988).
- Yu. A. Buyevich and U. M. Mambetov, Interphase mass transfer and moisture transpiration in a medium with double porosity, *Inzh.-fiz. Zh.* **58**(3), 470-478 (1990).
- B. S. Bylinkin, P. A. Gorshenin and B. M. Mitin, Study of hydraulic losses in a rotating bubbling heat exchanger, *Trudy Tsent. Inst. Aviats. Motorostroen.* No. 1239, 132-137 (1989).
- V. Yu. Chekhovich and N. I. Pecherkin, Heat and mass transfer and friction on the wall in a vertical gas-liquid stream, *Izv. SO AN SSSR, Ser. Tekh. Nauk* No. 4, 3-10 (1989).
- A. B. Disyayev and N. V. Fomin, An experimental set-up for studying absorption in a slot channel. In *Thermophysical Properties of Working Bodies and the Processes of Cryogenic Technique*, pp. 119-129. Leningrad (1988).
- A. S. Dudko, Equations of isothermal motion of a dissolving bubble in the field of centrifugal forces, *Dokl. AN Ukr. SSR A*, No. 4, 77-80 (1989).
- A. K. Dudko, G. E. Kan, V. Ye. Gusev and I. O. Dreiyer, Foam formation in the course of tube flow of gas-liquid mixtures. In *Mass Transfer in Chemical Technologies*, pp. 5-10. Riga (1988).
- A. A. Dushkin, Turbulent coagulation of condensate drops in a cylindrical channel, *Teplotiz. Vysok. Temp.* **27**(2), 335-340 (1989).
- L. B. Gavin and S. V. Medvedev, A two-parametric model of a two-phase turbulent nonisothermal jet with particles burning in vapour-phase regime, *Fiz. Gor. Vzryva* **25**(5), 62-69 (1989).
- R. K. Gazizov and A. A. Gubaidulin, The growth of the effect on an obstacle of shock-wave disturbance in a gas on an obstacle during 1st passage through a bubble screen with variable gas content, *Teplotiz. Vysok. Temp.* **27**(3), 534-538 (1989).
- V. A. Gerliga and V. I. Skalozubov, A polydisperse nonequilibrium model of bubble vapour-liquid flow, *Teplotiz. Vysok. Temp.* **27**(3), 522-527 (1989).
- A. G. Gnedovets and A. A. Uglov, Concerning heat and mass transfer between a drop and a gas at small Knudsen numbers. In *Physical-Chemical Treatment of Materials by Concentrated Energy Fluxes*, pp. 126-137. Moscow (1989).
- M. A. Golomidov, N. K. Shchikno, M. F. Mikhalev, M. V. Aleksandrov and O. V. Davydov, Formation and growth of granules under the conditions of an impulsively fluidized bed. In *The Present-day Apparatus for the Treatment of Heterogeneous Media*, pp. 44-48. Leningrad (1988).
- R. S. Gorelik, O. N. Kashinskiy and V. Ye. Nakoryakov, Heat transfer from a wall to an ascending bubble flow at low velocities of the liquid phase, *Teplotiz. Vysok. Temp.* **27**(2), 300-305 (1989).
- S. V. Gvozdev-Karelin, F. A. Mutashkin and I. V. Sharnin, Experimental study of the laws governing mass transfer from a single freely rising bubble by the method of holographic interferometry, *Sborn. Nauch. Trudov Mosk. Energ. Inst.* No. 177, 120-126 (1988).
- Ye. M. Ivanov, Efficiency of treatment of microparticles in hot gas flows. In *Physico-chemical Processes of Treatment of Materials by Concentrated Energy Fluxes*, pp. 137-149. Moscow (1989).
- O. N. Kashinskiy and A. V. Petukhov, Evolution of hydrodynamic characteristics of an ascending plug flow, *Izv. SO AN SSSR, Ser. Tekh. Nauk* No. 1, 61-65 (1989).
- D. A. Khlestkin and S. V. Kurzin, The effect of back pressure on specific flow rates of boiling-up water with discharge through short channels, *Teplotekhnika* No. 7, 8-12 (1989).
- V. A. Khmylnin and N. V. Bulanov, Heat transfer to emulsion being pumped through a pipe. In *Phase Conversions and High-power Processes*, pp. 101-104. Sverdlovsk (1989).
- Yu. D. Khodzhaev, Hydrodynamics and thermophysics of a vapour-liquid flow in the system of parallel channels, *Izv. SO AN SSSR, Ser. Tekh. Nauk* No. 1, 37-43 (1989).
- P. L. Kirillov, I. P. Smogalev, R. V. Shumskiy and Yu. Yu. Shtein, Measurement of shear stress on the tube wall in a high-pressure water flow, *Teplotekhnika* No. 5, 47-50 (1989).
- P. M. Kolesnikov and V. V. Leskovets, Numerical study of nonequilibrium two-phase flows in axisymmetric laval nozzles, *Inzh.-fiz. Zh.* **58**(1), 27-35 (1990).
- V. N. Kolykhanov and A. I. Tereshchenko, Experimental study of the boiling-up liquid flow in long pipelines. In *Heat and Mass Transfer Processes on Single- and Two-phase Systems*, pp. 96-99. Dnepropetrovsk (1988).
- I. P. Korniyukhin, A mathematical model of heat and mass transfer in a package of fabrics under the conditions of steam penetration. In *Thermotechnical Problems of Energy Saving*

- Technologies in Textile and Light Industry*, pp. 23–33. Moscow (1989).
- I. P. Korniyukhin, A. S. Okhotin, Ye. A. Ganin and A. A. Saveliyev, The trends in calculations of heat and mass transfer processes in the packages of clothes, *Sborn. Nauch. Trudov Mosk. Energ. Inst.* No. 191, 31–39 (1988).
- V. P. Korovkin, G. V. Sekrieru and F. M. Sazhin, Analysis of the relationship between capillary and disjoining pressures, *Matem. Issled. (Kishinev)* No. 108, 27–32 (1989).
- S. B. Koshelev, A. A. Plakseyev and V. V. Kharitonov, Unsteady-state forced convection heat transfer in spherical fillings, *Teplotenergetika* No. 4, 64–65 (1989).
- N. V. Kozina and V. P. Bobkov, Concerning the effect of gas bubbles on heat transfer in channels, *Prepr. No. 1991 of the Institute of Physics and Power Engineering*, Obninsk (1989).
- A. Ye. Kroshilin and V. Ye. Kroshilin, Investigation of the properties and range of applicability of the model of a two-phase flow with slipping. In *The Improvement of the Operating Regimes of Atomic Power Stations*, pp. 68–78. Moscow (1989).
- L. I. Krupnik, P. V. Ovsiyenko, V. N. Olenik and V. G. Ainshtein, Random motion of solid particles and energy dissipation in a two-phase flow, *Inzh.-fiz. Zh.* **58**(2), 207–214 (1990).
- S. V. Kurzin, The effect of initial thermodynamic parameters on the critical regimes of boiling-up water discharge through short channels, *Izv. SO AN SSSR, Ser. Tekh. Nauk* No. 2, 9–16 (1989).
- S. V. Kurzin and D. A. Khlestkin, Computation of the regimes of boiling-up water discharge through orifices into the medium with back pressure, *Teplotenergetika* No. 10, 67–69 (1989).
- I. A. Kuznetsov, Steady-state heat and mass transfer at the interphase in the main stream. In *Heat and Mass Transfer in Single- and Two-phase Systems*, pp. 8–11. Dnepropetrovsk (1988).
- M. I. Levin, K. G. Lifirenko, M. V. Sakharov and Ye. Ye. Belousova, Thermal treatment of niobium hydroxide in the apparatus of vibro-fluidized bed, *Tsvet. Metallurgiya* No. 4, 71–73 (1989).
- V. S. Lipsmonov, I. V. Kosminskiy and V. S. Ivanov, Study of the wave characteristics of film in descending liquid and gas flows in tubes, *Khim. Tekhnol. (Kiev)* No. 1, 73–75 (1989).
- N. F. Lisitskiy, Laminar film condensation of quiescent vapour on the layer of a solid dispersed substance, *Izv. VUZov, Energetika* No. 6, 94–96 (1989).
- S. D. Lyubarskiy and A. S. Ivanov, The motion of a compressed two-phase medium of bulk density on sudden expansion, *Fiz. Gor. Vzryva* **25**(3), 78–81 (1989).
- P. G. Markov, Propagation of pressure waves in liquid involving different size gas bubbles, *Izv. SO AN SSSR, Ser. Tekh. Nauk* No. 2, 62–66 (1989).
- Yu. L. Mironov, V. M. Kozlov, A. A. Kiryushin and S. Ye. Shcheklein, Experimental study of mass transfer in a curvilinear channel under the conditions of disperse-film flow of phases. In *The Improvement of the Operating Regimes of Atomic Power Stations*, pp. 295–303. Moscow (1989).
- S. Yu. Morozenko and N. N. Yasko, A numerical method for calculating the motion of a gas-bubble near the free liquid surface. In *Heat and Mass Transfer Processes in Single- and Two-phase Systems*, pp. 55–58. Dnepropetrovsk (1988).
- A. I. Moshinskiy, Some problems of the theory of heat and mass transfer in dispersed media, *Inzh.-fiz. Zh.* **58**(3), 461–470 (1990).
- Yu. V. Muranov, S. I. Morozova, Yu. S. Yuriyev and V. M. Kashcheyev, Analysis and empirical description of the concentration fields of a liquid phase in tubes in the mist-annular flow regime, *Prepr. No. 1990 of the Institute of Physics and Power Engineering*, Obninsk (1989).
- F. B. Nagiyev, The structure of stationary shock waves in boiling binary solutions, *Izv. AN SSSR, Mekh. Zhidk. Gaza* No. 1, 81–87 (1989).
- V. A. Nemtsev and A. M. Cherkashin, Dynamics of a vapour bubble in a chemically reacting N_2O_4 -NO solution—III. Bubble condensation. Numerical investigation, *Vesti AN BSSR, Ser. Fiz.-Energ. Nauk* No. 1, 52–58 (1989).
- A. P. Nesenchuk, A. S. Nelepko, D. I. Shklovchik and Ye. N. Antonishina, Modelling of heat and mass transfer processes in the systems with a thermo-fluidized bed of dispersed material, *Izv. VUZov, Energetika* No. 2, 107–109 (1989).
- S. M. Ostroumov, Analysis of porous sublimation heat and mass transfer, *Prepr. No. 13 of the Physico-Technical Institute for Low Temperatures of the U.S.S.R. Academy of Sciences* (1989).
- V. I. Petukhov, The effect of the light phase velocity on the entrainment factor. In *Thermohydrodynamic Processes in the Elements of Power Equipment of Electric Power Stations*, pp. 52–57. Moscow (1988).
- V. I. Plyutinskiy, P. A. Leppik and M. Fuks, Specific features of unsteady-state steam-water flows at small Froude numbers, *Teplotenergetika* No. 5, 63–66 (1989).
- A. M. Podvysotskiy and V. V. Dubrovskiy, Experimental study of mass transfer of drops interacting with solid spherical and composite particles. In *Heat and Mass Transfer in Technological Processes*, pp. 117–120. Kiev (1988).
- V. V. Pokryshkin, Hydrodynamics and heat transfer in a boiling two-phase flow under the conditions of channel filling with liquid. In *Heat and Mass Transfer Processes in Single- and Two-phase Systems*, pp. 92–95. Dnepropetrovsk (1988).
- V. Ye. Poznyak, V. F. Prikhodko and G. S. Gavrilenko, Study of natural circulation in horizontal tubular evaporators, *Khim. Neft. Mashinostr.* No. 1, 15–17 (1989).
- A. F. Redko and V. N. Pul, Heat transfer between a boiling layer and a finned cylinder under the conditions of vibration, *Izv. VUZov, Energetika* No. 3, 98–101 (1989).
- V. B. Rodionov, Concerning the velocity of large gas formations in a two-phase flow, *Sborn. Nauch. Trudov Gidroproekta* No. 132, 61–70 (1988).
- S. S. Sermanizov, Calculation of mass transfer coefficients in gaseous and liquid phases of apparatus with moving packing according by the structural-element approach. In *Present-day Apparatus for Treating Heterogeneous Media*, pp. 140–145. Leningrad (1988).
- K. N. Shamshev, A. M. Lapidus, V. N. Kulikov and G. G. Tivanov, The structure of a shock wave propagating in a two-phase medium, *Fiz. Gor. Vzryva* **25**(3), 115–117 (1989).
- S. I. Shchekhonskiy and A. I. Kuzin, Experimental study of certain hydrodynamics characteristics of a blown liquid layer, *Sborn. Nauch. Trudov Mosk. Energ. Inst.* No. 176, 75–78 (1988).
- Ye. A. Shevchuk and L. V. Chernyavskaya, Membrane processes in variable temperature regimes, *Vestnik Lvov. Politekh. Inst.* No. 232, 136–138 (1989).
- V. P. Shorin, O. A. Zhuravlev, L. I. Medinskaya and V. V. Tokarev, Interaction of a gas flow with a sprayed liquid downstream of the stabilizer, *Teplotenergetika* No. 6, 45–47 (1989).
- A. A. Shraiber and V. P. Yatsenko, Fluctuational equations of motion and heat transfer of particles in turbulent gas suspension flows. In *Heat and Mass Transfer in Technological Processes*, pp. 103–108. Kiev (1988).
- V. I. Skalozubov, Thermohydraulic calculation of non-equilibrium boiling flows in heated channels and heat releasing assemblies. In *Heat and Mass Transfer Processes in Single- and Two-phase Systems*, pp. 104–107. Dnepropetrovsk (1988).
- G. G. Smirnov, O. N. Petrukhina and Ye. A. Mandrykina, Intensification of capillary impregnation of dispersed materials in production of feed and medicinal preparations. In *Mass Transfer in Chemical Technology*, pp. 37–42. Riga (1988).
- A. P. Solodov, A. K. Ustinov and K. N. Proskuryakov, The study of unsteady-state jet condensation processes by the methods of laser diagnostics, *Sborn. Nauch. Trudov Mosk. Energ. Inst.* No. 191, 39–53 (1988).

Yu. S. Teplitskiy, Combined heat exchange of a single horizontal tube with a developed fluidized bed, *Vestsi AN BSSR. Ser. Fiz.-Energ. Navuk* No. 3, 59-63 (1989).

V. N. Vilyunov, A. B. Vorozhtsov and Yu. V. Feshchenko, Modelling of two-phase gas mixture flow with burning metal particles in a semi-closed duct, *Fiz. Gor. Vzryva* **25**(3), 39-43 (1989).

P. K. Volkov and Ye. A. Chinnov, Stationary rise of a single bubble in an infinite liquid volume, *Zh. Prikl. Mekh. Tekh. Fiz.* No. 1, 94-99 (1989).

A. V. Voronetskiy, D. G. Pavlov, A. V. Sukhov and D. A. Yagodnikov, The statistical model of a two-phase reacting turbulent flow, *Fiz. Gor. Vzryva* **25**(3), 53-59 (1989).

Yu. M. Yermishin and A. O. Zvyagintsev, The study of the effect of the conjugated heat and mass transfer on the dynamics of temperature-concentration field of capillary-porous materials. In *Thermo-technical Problems of Energy Saving Technologies in Textile and Light Industry*, pp. 83-87. Moscow (1989).

E. A. Zakharova, V. I. Milashenko, N. I. Trubkin, V. V. Petukhov and Zh. S. Strunevskaya, Experimental study of liquid distribution in the mist-annular mode of flow in a heated channel. In *Thermodynamic Processes in the Elements of Power Equipment of Electric Power Stations*, pp. 71-78. Moscow (1988).

S. V. Zhubrin and Yu. I. Bogachev, Theoretical model of convective gravitational bubbling heat transfer, *Sborn. Nauch. Trudov Mosk. Energ. Inst.* No. 177, 72-77 (1988).

HIGH-TEMPERATURE THERMOPHYSICS

V. V. Aleksandrov, Yu. A. Kovalenko and N. P. Poddubnyi, Combustion heat transfer coefficients of gasless composition in channels with constant wall temperature, *Fiz. Gor. Vzryva* **25**(6), 79-81 (1989).

I. G. Dik and A. G. Knyazeva, The ignition of condensed substance screened by a semi-transparent heat-conducting plate, *Fiz. Gor. Vzryva* **25**(3), 9-16 (1989).

I. G. Dik, A. B. Zurer and A. G. Knyazeva, Concerning the ignition of condensed substance by an impulsive heat flux through a non-transparent screen of high thermal conductivity, *Fiz. Gor. Vzryva* **25**(6), 3-9 (1989).

K. V. Dobrego and S. A. Zhdanok, Zonal ignition of a radiating optically transparent gas, *Fiz. Gor. Vzryva* **25**(3), 16-21 (1989).

A. M. Golovin and V. R. Pesochin, On diffusion combustion regime of a coal particle in a high-temperature medium, *Fiz. Gor. Vzryva* **25**(6), 29-36 (1989).

S. A. Gubin and V. A. Shargatov, The parameters of air shock waves in transition from combustion to detonation, *Fiz. Gor. Vzryva* **25**(5), 111-115 (1989).

B. L. Kopeliovich and A. K. Nesterov, Ignition and combustion of a gas-free mixture in a heat dissipating cylindrical shell, *Fiz. Gor. Vzryva* **25**(5), 5-8 (1989).

L. N. Panasenko, Heat losses in a plasmotron channel, *Inzh.-fiz. Zh.* **58**(3), 505-512 (1990).

S. S. Rybanin and S. L. Sobolev, The rate and limits of combustion of a thermally thin layer of condensed substance in the course of heat exchange with an inert medium, *Fiz. Gor. Vzryva* **25**(5), 8-16 (1989).

S. V. Tarakanov, T. D. Khoruzhnikova and S. A. Chivilikhin, Excitation of acoustic gas oscillations during laminar combustion of mixture in a duct, *Fiz. Gor. Vzryva* **25**(5), 8-16 (1989).

A. N. Tikhonov, V. D. Kalner, I. N. Shklyarov, V. B. Glasko, N. I. Kulik and V. V. Akimenko, On the effects of high-temperature heating of bimetallic steel blanks, *Inzh.-fiz. Zh.* **58**(3), 392-402 (1990).

LOW-TEMPERATURE PHYSICS

N. I. Zverev, N. N. Smirnov, L. A. Dekhtyarenko, N. A. Shchepotyev and D. M. Yakubovich, Nonstationary evap-

oration of liquid oxygen into the atmosphere, *Fiz. Gor. Vzryva* **25**(3), 73-78 (1989).

HEAT AND MASS TRANSFER IN PHEOLOGICALLY COMPLEX FLUIDS

A. I. Borodin and S. V. Peigin, Investigation of heat transfer trends in a three-dimensional viscous shock layer near blunt bodies at the attack and slip angles, *Inzh.-fiz. Zh.* **58**(2), 200-207 (1990).

HEAT AND MASS TRANSFER IN TECHNOLOGICAL PROCESSES

A. A. Uglov, M. B. Ignatyev, V. I. Titov and A. P. Stepanov, Study of heat and mass transfer in the process of laser alloying of iron from preliminarily deposited coatings of refractory metals, *Inzh.-fiz. Zh.* **58**(3), 380-385 (1990).

HEAT AND MASS TRANSFER IN BUILDINGS

K. M. Cheremisev, Predicted resistance to heat transfer of the shielding constructions of buildings, *Mezhvuz. Sborn. Nauch. Trudov Mosk. Inst. Inzh.-Zh.-dorozh. Transp.* No. 803, 93-99 (1988).

B. M. Krasnovskiy, Thermally stressed state of early unsheathed ferroconcrete constructions. In *Conditions and Techniques of Early Unsheathing of Ferroconcrete Products*, pp. 44-53. Frunze (1988).

V. D. Lyudvig, Regimes of the thermal treatment of concrete in molds with allowance for thermal inertia. In *Conditions and Techniques of Early Unsheathing of Ferroconcrete Products*, pp. 22-28. Frunze (1988).

N. I. Podgornov and A. Ye. Shkurko, Effect of translucent enclosure on the temperature regime in a hardening concrete, *Geliotekhnika* No. 1, 38-42 (1989).

I. B. Zasedatelev and S. A. Shifrin, Specific features of the processes of heat and mass transfer in concrete and its critical strength in work pieces when early unsheathed. In *Conditions and Techniques of Early Unsheathing of Ferroconcrete Products*, pp. 3-13. Frunze (1988).

HEAT AND MASS TRANSFER IN THE ENVIRONMENT

V. I. Babenkov, Heat transfer at the boundary of the ground massif. In *Heat Transfer Problems in Buildings*, pp. 26-31. Rostov-on-Don (1989).

I. A. Bareyev and V. V. Gordiyenko, Determination of the heat transfer coefficient on the earth surface, *Dokl. AN Ukr. SSR* No. 4, 3-5 (1989).

G. S. Bashkirov and N. V. Kucherenko, About the possibility of steady stratification of the surface microlayer and its effect on the regulation of heat and mass transfer in the ocean-atmosphere system, *Meteorol. Klimat. Gidrol. (Kiev, Odessa)* No. 24, 62-66 (1989).

V. T. Belikov, About the basic equations of fluid filtration in a deformable crumbling-porous medium, *Geol. Geofiz.* No. 5, 59-64 (1989).

A. S. Benusovich, Evaluation of the effect of unsteadiness in calculation of the seasonal heat transfer of underground pipe-lines. In *Heat Transfer Problems in Buildings*, pp. 6-11. Rostov-on-Don (1989).

I. I. Bogdanov, V. M. Yentov and L. A. Chudov, Dynamics of the origination, propagation and relaxation of a thermal hearth in a layer, *Prepr. No. 375 of the Institute for the Problems of Mechanics of the U.S.S.R. Academy of Sciences*. Moscow (1989).

E. A. Bondarev and D. I. Mambetova, Ice formation during the flow of salt solution in a round tube, *Dokl. AN Uz. SSR* No. 12, 21-22 (1988).

V. P. Chernyak and A. N. Shcherban, Concerning the cal-

- culation of heat and mass transfer in flooded minings, *Dokl. AN Ukr.SSR A* No. 2, 82–84 (1989).
 Yu. N. Dobryanskiy, V. M. Kapitonov and A. N. Shcherban, Thermal calculation of an extensive impass mining with a leaky air-line, *Prom. Teplotekh.* 11(2), 11–15 (1989).
 A. F. Furman and Yu. S. Petrov, Heat transfer of a pipeline in inhomogeneous seasonal-frozen soils, *Izv. VUZov, Neft Gaz* No. 6, 73–77 (1989).
 V. G. Galperin and Ya. I. Yukhimov, Regulation of thermal regime of mine atmosphere in working out deep beds, *Gorn. Zh.* No. 8, 58–60 (1989).
 Z. A. Kabilov and V. P. Tsoi, Heat transfer in the flat helio-receiver channel with unilateral heating, *Geliotekhnika* No. 1, 64–66 (1989).
 P. P. Khramtsov, Optical characteristics of turbulent jet flows. In *Heat and Mass Transfer in Power Plants*, pp. 77–81. Minsk (1989).
 A. G. Kirdyashkin, V. N. Sharapov and A. G. Lobov, Mass exchange between a crack and enclosing rocks with a forced flow of fluids, *Geol. Geofiz.* No. 4, 86–94 (1989).
 V. A. Kissin, Procedure for estimating heat and mass transfer in shallow reservoir-coolers, *Sborn. Nauch. Trudov Hidroproekta* No. 132, 113–125 (1988).
 G. M. Makhviladze, O. I. Melikhov and S. Ye. Yakush, The lift of a turbulent axisymmetric thermic in an inhomogeneous compressible atmosphere, *Zh. Prikl. Mekh. Tekh. Fiz.* No. 1, 62–68 (1989).
 A. S. Polubinskiy and V. P. Chernyak, A problem of temperature field in rock massif with heat releasing around the mining, *Dokl. AN Ukr.SSR A* No. 2, 76–78 (1989).
 A. S. Polubinskiy and V. P. Chernyak, Temperature field of the rock massif with internal sources, *Prom. Teplotekh.* 11(2), 15–20 (1989).
 V. M. Stepaniyan and V. V. Kuleba, Study of convective heat transfer in solar energy accumulating translucent shielding, *Izv. AN TSSR, Ser. Fiz.-Tekh. Khim. Geol. Nauk* No. 2, 49–52 (1989).
 A. B. Vardiashvili, N. A. Rubtsov, A. L. Sorokin, V. A. Lebedev and V. D. Kim, Numerical simulation of radiative-convective heat transfer in helio-greenhouses with regard for the configuration of the construction, *Geliotekhnika* No. 1, 50–56 (1989).