

Heat and mass transfer bibliography— CIS works

O. G. MARTYNENKO

Heat and Mass Transfer Institute, Minsk, 220072, Belarus

(Received 12 June 1991)

BOOKS

- Ye. I. Andreyev, *The Mechanism of Heat and Mass Exchange of a Gas with a Liquid*. Energoatomizdat, Leningrad (1990).
S. S. Filimonov, B. A. Khrustalyov and I. Mazilin, *Heat Transfer in Multilayered and Porous Heat Insulations*. Energoatomizdat, Moscow (1990).
V. L. Ganzha, G. M. Zhuravskiy and E. M. Simkin, *Heat and Mass Transfer in Multi-phase Systems* (Edited by O. G. Martynenko). Izd. Nauka i Tekhnika, Minsk (1990).
N. S. Ivanov (Editor), *The Thermodynamics and Heat Transfer of Complex Systems (Collected Papers)*. Izd. Yakutsk. Inst., Yakutsk (1990).
V. V. Ivanov (Editor), *Problems of Heat Transfer in Construction (Collected Papers)*. Izd. RISI, Rostov-on-the-Don (1990).
V. V. Ivanov, Yu. V. Vidin and V. A. Kolesnik, *The Processes of Heating Multilayer Bodies by Radiant-convective Heat*. Izd. Univ., Rostov-on-the-Don (1990).
E. K. Kalinin, G. A. Dreitser and S. A. Yarkho, *Heat Transfer Enhancement in Channels*, 3rd revised and augmented edition. Izd. Mashinostroyeniye, Moscow (1990).
V. R. Kulichenko, *Handbook on Heat Exchange Calculations*. Izd. Tekhnika, Kiev (1990).
S. S. Lappo, S. K. Gulev and A. Ye. Rozhdestvenskiy, *Large-scale Thermal Coupling in the Ocean-Atmosphere System and the Energy-active Regions of the World Ocean*. Gidrometeoizdat, Leningrad (1990).
V. Ye. Nakoryakov, B. G. Pokusayev and I. R. Shreiber, *The Wave Dynamics of Gas- and Vapour-Liquid Media*. Energoatomizdat, Moscow (1990).
V. I. Nedostup, Ye. P. Galkevich and Ye. S. Kaminskii, *Thermodynamic Properties of Gases at High Temperatures and Pressures*. Izd. Naukova Dumka, Kiev (1990).
V. G. Polevoy, *Heat Transfer by Fluctuational Electromagnetic Field*. Izd. Nauka, Moscow (1990).
S. V. Rusakov, *Difference Spline-Schemes for Heat and Mass Transfer Problems*. Izd. Univ., Irkutsk (1990).
P. S. Tsygankov (Editor), *Heat and Mass Transfer Processes in Food Industry (Collected Papers)*. Izd. Kiev. Tekhn. Inst. Pischch. Prom., Kiev (1990).

PAPERS—GENERAL

- V. I. Kashinskiy, A. S. Kopylov and V. V. Mikhailov, Specific features of the heat transfer crisis in manufacturing small-size cylindrical steam generators intended for the increase of petroleum extraction from strata, *Prepr. No. 297 of the Institute for High Temperatures*, Moscow (1990).
B. M. Khusid and B. B. Klima, Analysis of heat and mass transfer problems and of structural macrokinetics in promising technological processes underlying the production of massive high-temperature super-conducting items with a high critical current density, *Prepr. No. 9 of the Heat and Mass Transfer Institute*, Minsk (1990).
A. A. Kochubei and L. G. Tatarko, An algorithm of numeri-

- cal study of the hydrodynamics and heat transfer in a twisted complex-section channel based on the finite-element method, *J. Engng Phys.* **60**(3), 487-494 (1991).
V. V. Morilov, Temperature wave method used for measuring thermophysical properties of materials, *J. Engng Phys.* **60**(2), 324-327 (1991).
V. I. Skalozubov, Concerning the effect of near-wall bubbles on the agitation of thermoacoustic vibrations in boiling flows, *J. Engng Phys.* **59**(5), 758-764 (1990).
A. A. Uglov, I. Yu. Smurov and L. V. Karaseva, Modelling of the thermal processes in laser synthesis of high-melting metal nitrides, *J. Engng Phys.* **60**(3), 357-363 (1991).

HEAT CONDUCTION

- A. A. Aleksashenko, Errors of the neglect of multi-dimensionality in the solution of some direct and inverse heat conduction problems, *Izv. AN SSSR, Energ. Transp.* No. 3, 161-164 (1990).
S. A. Aliyev, F. F. Aliyev and Z. S. Gasanov, Thermal conductivity of silver selenide at low temperatures, *Izv. AN SSSR, Neorgan. Mater.* **26**(8), 1767-1768 (1990).
Yu. V. Babushkin, G. Ye. Shevelev and V. V. Sinyavskiy, Investigation of the frequency characteristics of thermo-emissive electric energy generating assemblies, *Izv. AN SSSR, Energ. Transp.* No. 2, 88-95 (1990).
R. A. Bakhanova, R. V. Oleinik and A. V. Fesenko, Heat and mass transfer of a liquid nitrogen in porous materials, *Tr. Ukr. Nauch.-Issled. Gidrometeorol. Inst.* No. 237, 8-12 (1990).
V. P. Belousov, Simulation of non-stationary heat conduction in a disk at an intensive local temperature jump. In *System Analysis, Simulation and Optimization of Applied Problems*, pp. 72-77. Moscow (1990).
Ye. A. Belov, G. Ya. Sokolov, A. G. Dmitriev and V. P. Zotov, An automatic meter of the thermal conductivity of heat insulation materials, *Prom. Teplotekh.* **12**(5), 76-80 (1990).
Ye. A. Belov, G. Ya. Sokolov, A. S. Starkov and V. P. Zotov, Determination of the constants of heat transfer of an orthotropic layer, *J. Engng Phys.* **60**(3), 474-478 (1991).
V. K. Bityukov and V. N. Kolodezhnov, Specific features of the dynamics of contact melting of bodies in the presence of heat exchange with the surrounding medium, *Teplofiz. Vysok. Temp.* **28**(3), 506-507 (1990).
V. D. Borisevich and Ye. P. Potanin, Influence of the Hall effect on the flow and heat transfer in a conducting gas stream near a rotating disk, *J. Engng Phys.* **59**(1), 76-80 (1990).
E. T. Brook-Levinson, G. I. Rudin, Z. Pllokocki and A. Delos, A thermal lense in a solid substance exposed to a light pulse, *Vestsi AN BSSR, Ser. Fiz.-Energ. Navuk* No. 2, 52-56 (1990).
A. I. Cheprasov, About the use of difference grids with irregular boundary nodes for numerical solution of boundary-value heat conduction problems. In *Physical Gas*

- Dynamics of Reacting Media*, pp. 170–175. Novosibirsk (1990).
- V. V. Danichev, Concerning a certain economical method for calculating a stationary temperature field, *Vopr. Atomn. Nauki Tekh., Ser. Materialoved. Nov. Mater.* No. 1, 79–84 (1990).
- V. G. Dolgolaptev, A certain stationary heat conduction problem. In *Mathematical Simulation and Digital Processing of Information*, pp. 41–43. Moscow (1990).
- A. A. Druzhinin, T. N. Chepak, Ya. Ya. Shlangen and R. A. Yanbitskiy, Concerning the analog-digital simulation of the non-linear problem of cryogenic thermal conductivity. In *Computational Technique and Boundary-value Problems. Specialized Processes of Parallel Action*, pp. 10–20. Riga (1990).
- Ye. A. Duntseva and I. P. Ryazantseva, Solution of the inverse heat conduction problem by the quasi-reversal method. In *Vibrations and Waves in Liquids and Gases: Analytical and Numerical Methods*, pp. 144–151. Gorky (1990).
- Ye. P. Dyban, V. N. Klimenko and S. M. Chepaskina, Some results of the investigation and design of the systems of small-channel cooling. *Energ. Mashinostr.* No. 49, 34–42 (1990).
- V. S. Fedotovskiy, Thermomechanical analogy. *Prepr. No. 2107 of the Institute for Physics and Power Engineering*. Obninsk (1990).
- V. M. Fokin and K. A. Churbanov, Determination of the thermophysical properties of metals in the form of a rod of finite length. In *Problems of Heat Transfer in Construction*, pp. 69–78. Izd. RISI, Rostov-on-the-Don (1990).
- V. F. Formalev and A. A. Moskalenko, Analytical solution of a three-dimensional heat conduction problem with the thermal conductivity tensor. *Diff. Uravn.* **26**(7), 1277–1279 (1990).
- V. I. Fushchich, A. S. Galitsyn and A. S. Polubinskiy, Concerning a new mathematic model of heat conduction processes. *Ukr. Mat. Zh.* **42**(2), 237–245 (1990).
- R. V. Gladyshev, I. Ye. Kainkiy, O. G. Matyukhina and N. Ye. Gazda, Effect of variable thermophysical characteristics on the temperature field in a ceramic plate. *Mat. Metody i Fiz.-Mekh. Polya* (Kiev) No. 31, 99–103 (1990).
- A. S. Golosov, V. I. Zhuk, A. A. Lopashev and O. N. Chubarov, Determination of a complex of thermophysical material characteristics from the data of unsteady-state measurements for heating by a local heat source. *J. Engng Phys.* **60**(2), 327–336 (1991).
- Ya. B. Gorelik and I. M. Dzik, Thermal interaction of a group of extractive wells with permafrost ground. *Izv. AN SSSR, Energ. Transp.* No. 3, 143–152 (1990).
- D. G. Grak, V. I. Lebedevich, N. Ye. Shchedrova and K. A. Yaryshkin, Investigation of the thermal state of a ball cock for a wide range of the working medium temperature. *Khim. Neft. Mashinostr.* No. 8, 4–6 (1990).
- Ye. G. Gritsko and L. M. Zhuravchak, A numerical-analytical technique for solving a non-linear heat conduction problem for a straight prism. *Mat. Metody i Fiz.-Mekh. Polya* (Kiev) No. 31, 95–99 (1990).
- L. V. Gurianov, Effect of the diameter of a plane thermo-transformer on its temperature. *Prom. Teplotekh.* **12**(5), 71–76 (1990).
- M. D. Kats, S. A. Karausch and I. V. Bugayev, The effect of heat losses from a two-layer specimen surface on the measurement of thermophysical characteristics by the pulse method. *J. Engng Phys.* **60**(1), 127–130 (1991).
- M. D. Kats, S. A. Karausch, Yu. A. Zagromov and I. V. Bugayev, Consideration of heat transfer with the specimen surface in measuring the thermophysical characteristics of coatings by the pulse method. In *Problem of Heat Transfer in Construction*, pp. 136–141. Izd. RISI, Rostov-on-the-Don (1990).
- G. D. Khanzhova, Thermoelasticity of the transversally isotropic semispace with a heat source and mixed temperature conditions. *Mekh. Deform. Sred* No. 10, 102–107 (1990).
- G. M. Khutoretskiy, G. M. Fedorenko, A. G. Vartanyan and A. G. Krushinskiy, Heating of the stator winding rod of a powerful turbogenerator with direct cooling. *Tekh. Elektrodinam.* No. 4, 55–62 (1990).
- S. S. Klementyev, M. A. Kuzmitskiy, Yu. A. Bozhenov and Ye. A. Duzhaikina, Calculation of the temperature of heating electric engines with account for chance factors. *Izv. VUZov, Elektromekh.* No. 6, 42–46 (1990).
- V. I. Kovalevskiy, Thermal conductivity of a hollow two-layer infinitely long cylinder. In *Problems of Heat Transfer in Construction*, pp. 49–58. Izd. RISI, Rostov-on-the-Don (1990).
- M. G. Krivtsun and O. P. Sushko, A coupled thermo-elasticity problem for a plane with a rectilinear crack. *Mat. Metody i Fiz.-Mekh. Polya* (Kiev) No. 31, 54–58 (1990).
- D. V. Kushch and D. A. Rapoport, Solution of the inverse unsteady-state heat conduction problems in thermal non-destructive control. *Defektoskopiya* No. 11, 76–81 (1990).
- Yu. A. Levchenko, V. G. Lisiyenko and B. A. Fetisov, A search for the rational schemes of charges for mechanized setting of earthenware on furnace trolleys with the use of mathematical heat transfer models. *Ogneupory* No. 5, 44–47 (1990).
- A. S. Makarenko, Mathematical simulation of the heat propagation processes based on the generalized heat conduction equation. *Vychisl. Prikl. Matem.* No. 70, 54–60 (1990).
- Yu. M. Matsevityi and A. V. Multanovskiy, Solution of many-parameter inverse heat conduction problems. *J. Engng Phys.* **60**(1), 136–145 (1991).
- S. Ye. Mikhailov, Axisymmetric fundamental solutions of heat conduction equations for a cylindrically anisotropic medium. *Zh. Prikl. Mekh., Tekh. Fiz.* No. 4, 64–68 (1990).
- R. A. Mustafayev, S. I. Tagiyev and T. A. Stepanova, Experimental study of the thermal conductivity of maleinates at high temperatures and pressures. *Teplofiz. Vysok. Temp.* **28**(3), 604–606 (1990).
- G. A. Nesenenko, Concerning the method of singular perturbations in the problems of non-linear unsteady-state heat conduction. In *Problems of Heat Transfer in Construction*, pp. 23–38. Izd. RISI, Rostov-on-the-Don (1990).
- N. I. Nikitenko, S. Yu. Danilevich and A. G. Gritsay, Determination of the thermophysical characteristics by solving the inverse heat conduction problem. *Prom. Teplotekh.* **12**(6), 80–84 (1990).
- A. Ye. Onyshko, Concerning the quantitative description of multi-component solid body deformation under the conditions of heat and mass transfer and recrystallization. *Mat. Metody i Fiz.-Mekh. Polya* (Kiev) No. 31, 37–41 (1990).
- O. V. Poberezhnyi, A stationary thermoelasticity problem for a plate with a heated cut. *Mat. Metody i Fiz.-Mekh. Polya* (Kiev) No. 31, 50–54 (1990).
- V. S. Popovich, Simulation of thermal fields in thin thermosensitive plates. In *Simulation and Optimization of Complex Mechanical Systems*, pp. 70–75. Kiev (1990).
- V. F. Reztsov and A. L. Khadzhinov, Concerning the effect of thermal conductivity on the superheating instability of non-linearly conducting media with inhomogeneities. *Teplofiz. Vysok. Temp.* **28**(3), 609–610 (1990).
- M. V. Sagarda, About the calculation of contribution made by diffusional thermoeffect into the thermal conductivity coefficient of chemically active gas mixtures and low-temperature plasma. *Vesti AN BSSR, Ser. Fiz.-Energ. Navuk* No. 2, 79–82 (1990).
- A. A. Seregin and V. N. Kukhar, Application of the method of finite elements for describing a temperature field in an axisymmetric apparatus. In *Heat and Mass Transfer Processes in Food Industry*, pp. 12–18. Izd. Kiev. Tekhn. Inst. Pishch. Prom., Kiev (1990).
- O. N. Shablovskiy, On thermal hysteresis in non-linear media. *J. Engng Phys.* **59**(1), 149–156 (1990).
- O. V. Sharonova and G. P. Boikov, Concerning the determination of the thermal diffusivity of building lining and

- heat insulating materials. In *Problems of Heat Transfer in Construction*, pp. 100–109. Izd. RISI, Rostov-on-the-Don (1990).
- M. P. Shevchenko, Effect of the separating lubrication layer on heat transfer between an ingot and a tool, *Stal* No. 8, 64–65 (1990).
- I. V. Stolov, A non-correct heat conduction problem. In *Mathematical Simulation and Digital Processing of Information*, pp. 134–137. Moscow (1990).
- G. A. Surkov and Yu. I. Lanin, An engineering method for determining a heat flux from the temperature measurement data, *Vestsi AN BSSR, Ser. Fiz.-Energ. Nauk* No. 2, 97–101 (1990).
- V. I. Subbotin, V. I. Deyev, B. A. Vakhnenko, I. G. Merinov and V. S. Kharitonov, Variation of the temperature field in the dipole magnetic of an accelerating-accumulating complex in the process of cooling, *Izv. AN SSSR, Energ. Transp.* No. 3, 153–157 (1990).
- A. I. Tarasov and V. I. Chelak, About the construction of finite-element grids for complex shape objects, *Energ. Mashinostr.* No. 50, 45–49 (1990).
- O. V. Telkovskaya, Limiting properties of self-similar solutions of the quasi-linear heat conduction equation with a power source, *Prepr. No. 5037/1 of the Institute of Atomic Energy*, Moscow (1990).
- A. L. Tikhomirov, V. V. Ivanov and Ye. G. Nesterova, Temperature distribution in the ground around pipelines. In *Problems of Heat Transfer in Construction*, pp. 16–19. Izd. RISI, Rostov-on-the-Don (1990).
- B. L. Timan and V. M. Fesenko, Distribution of thermoelastic stresses in a limited cylinder exposed to a concentrated energy flux, *Fiz. Khim. Obrab. Mater.* No. 3, 39–42 (1990).
- A. I. Titko and O. V. Gorda, The problem of optimal control of turbogenerator loadings on the basis of the predicted thermal state, *Energ. Elektrofiz.* No. 3, 20–22 (1990).
- V. A. Tovstonog, Evaluation of the thermal conductivity coefficient of decomposing materials at high temperatures, *Teplofiz. Vysok. Temp.* **28**(3), 494–500 (1990).
- A. I. Tuzhikov, Calculation of optimal powers of three parallel moving energy sources. In *Problems of Heat Transfer in Construction*, pp. 118–125. Izd. RISI, Rostov-on-the-Don (1990).
- L. A. Uvarova and V. K. Fedyanin, Mathematical model of heat transfer in essentially non-linear conjugated media, *Matem. Modelir.* **2**(6), 40–54 (1990).
- I. S. Vasilkivskiy, Ya. T. Rogotskiy and Ya. P. Yusyk, Analysis of the sensitivity of thermal conductivity control devices based on thermal measuring schemes, *Control-Measuring Technique* No. 47, 69–74 (1990).
- I. S. Vasilkivskiy, Ya. T. Rogotskiy and Ya. P. Yusyk, Elimination of the effect of heat escapes in the thermocouple electrodes on the accuracy of thermal conductivity measurements, *Vestnik Lvov. PI* No. 248, 22–25 (1990).
- B. V. Vlasov, S. G. Taluts, V. Ye. Zinovyev, V. M. Manzhuyev and D. M. Taguirov, Thermal diffusivity and thermal conductivity of monocrystalline rhenium at high temperatures in solid and liquid states, *Fiz. Metal. Metalloved.* No. 8, 195–198 (1990).
- A. S. Yaskin and D. L. Timrot, The determination of a set of thermophysical properties of ceramics at high temperatures. Allowance for lateral losses from a specimen, *J. Engng Phys.* **59**(2), 261–266 (1990).
- A. N. Yemelyanov, Thermal diffusivity of non-stoichiometric titanium carbide in the order-disorder phase transition region, *Teplofiz. Vysok. Temp.* **28**(2), 269–276 (1990).
- A. N. Yemelyanov and V. I. Tumanov, Thermal conductivity and diffusivity of tungsten monocarbide, *Teplofiz. Vysok. Temp.* **28**(3), 607–608 (1990).
- A. D. Zhurbenko, M. A. Meos and I. A. Guryev, Determination of the thermal conductivity of building materials on an experimental set-up. In *Physical and Chemical Foundations of the Treatment and Application of Mineral Raw Materials*, pp. 71–75. Apatity (1990).
- I. Ye. Zino and A. B. Sulin, On the accuracy of one-dimensional approximations in local heating of plane elements, *Vestsi AN BSSR, Ser. Fiz.-Energ. Nauk* No. 1, 115–118 (1991).
- Yu. G. Zotkin and M. S. Metsik, Thermal conductivity of micas. In *Problems of Heat Transfer in Construction*, pp. 3–10. Izd. RISI, Rostov-on-the-Don (1990).

THERMODYNAMIC PROPERTIES

- Ye. V. Ametistov, V. U. Sidyanov and P. M. Kupchikhin, Analysis of thermodynamic cycles of superfluid helium (He-II) refrigerators with the aid of a T,q -diagram, *Teploenergetika* No. 10, 21–25 (1990).
- V. Ye. Firstov, Concerning a certain approximate relationship between the thermodynamic quantities of liquid at saturation, *J. Engng Phys.* **59**(4), 659–662 (1990).
- A. A. Gukhman and A. A. Zaitsev, On some specific features of the generalized analysis as applied to thermodynamics, *J. Engng Phys.* **59**(3), 365–373 (1990).
- P. M. Kesselman, A. Yu. Bykov and S. S. Inshakov, Thermodynamic properties of liquid metals and melts, *J. Engng Phys.* **59**(5), 832–840 (1990).
- V. N. Klimenko, Possibilities of small-channel systems of internal convective cooling of gas turbine blades, *Prom. Teplotekhn.* **12**(4), 93–99 (1990).
- A. F. Lisovskiy and T. Ye. Gracheva, Migration thermodynamics of metal alloys in three-phase sintered composites, *J. Engng Phys.* **59**(2), 243–248 (1990).
- V. V. Morilov, A. D. Ilyiyev and A. N. Pozdeyev, A flat specimen in the periodic heating method. Heat capacity measurements, *J. Engng Phys.* **59**(2), 266–269 (1990).
- V. R. Nikulshin and M. V. Kozlova, A method for electronic computation of energy losses and thermodynamic perfection of the elements of thermal power engineering systems, *Teploenergetika* No. 2, 43–46 (1990).
- S. B. Rutkevich, Thermodynamics of the blast furnace walls and phase transition in the d -dimensional single-component ϕ -model, *Fiz. Nizk. Temp.* **16**(7), 928–934 (1990).
- V. P. Skripov, On the behaviour of thermodynamic stability of superheated and supercooled liquids, *J. Engng Phys.* **59**(3), 431–437 (1990).
- N. B. Vargaftik, A. N. Nikitin, V. G. Stepanov and A. I. Abakumov, Thermal properties of superheated potassium vapour at temperature up to 2150 K and pressures up to 10 MPa. 2. Development of the tables of thermodynamic functions, *J. Engng Phys.* **60**(3), 467–474 (1991).

HEAT AND MASS TRANSFER BETWEEN A SOLID BODY AND A FLUID

- G. I. Abramov and K. A. Ivanov, Effect of the wall thermophysical properties on turbulent natural convection heat transfer. I. Experimental study, *J. Engng Phys.* **60**(3), 379–386 (1990).
- P. G. Alekseyev, B. A. Arutyunov and P. I. Povarnin, Thermophysical properties and heat exchanging characteristics of organosilicone fluids, *Collected Papers of the All-Union Scientific and Design Institute of Petroleum Refining and Petroleum Chemical Industry* No. 61, 75–86 (1990).
- R. Allanurov, M. A. Gurbanyazov, Yu. I. Machuyev and M. Khandurdyev, Convective heat transfer of the reflective surface of the main radiotelescope mirror RT-70, *Izv. AN TSSR, Ser. Fiz.-Tekh. Khim. Geol. Nauk* No. 2, 99–101 (1990).
- S. K. Aslanov and A. P. Tsarenko, Axisymmetric problems of the stability of heat and mass transfer processes with a physical and chemical kinetics. In *Boundary-value Problems of Mathematical Physics*, pp. 74–81. Kiev (1990).
- L. V. Averin, Yu. A. Kondrashkov and V. P. Tomilin, Effect of the transverse sweeping flow on the turbulent jet characteristics, *J. Engng Phys.* **59**(2), 188–191 (1990).
- A. V. Baranenko, V. M. Zyukanov and A. L. Shevchenko,

- Increase of the efficiency of heat transfer in the absorber of a bromide-lithium cooling machine, *Khim. Nefi. Mashinostr.* No. 9, 16-18 (1990).
- V. G. Bashlovoy, M. S. Krakov and Ye. M. Tait, Heat transfer enhancement and resistance reduction in flows in magnetic-fluid-coated channels. 2. Sinusoidal coating, *J. Engng Phys.* **59**(3), 403-409 (1990).
- V. P. Belousov, Concerning the determination of the heat carrier mean-integral temperature in the case of unsteady-state convective heat transfer, *Izv. Sib. Otd. AN SSSR. Ser. Tekh. Nauk* No. 5, 3-5 (1990).
- V. P. Belousov, Analysis of the effect of the convective heat transfer model on the heat carried mean-integral temperature. In *System Analysis, Simulation and Optimization of Applied Problems*, pp. 110-116. Moscow (1990).
- R. V. Birikh and R. N. Rudakov, Convective instability of a horizontal liquid layer with a penetrable partition and arbitrary thermal conductivity of boundaries, *J. Engng Phys.* **60**(3), 410-414 (1991).
- T. N. Boichenko and L. A. Kozdoba, A computational experiment for solving optimization problems in pulsed heating regimes, *J. Engng Phys.* **59**(4), 308-314 (1990).
- V. I. Chebotaryov, N. N. Grishchenko, G. M. Kravchenko and Yu. V. Pavlov, Investigation of the continuous iron furnace chamber of a gas air heater. In *Problems of Heat Transfer in Construction*, pp. 19-23. Izd. RISI, Rostov-on-the-Don (1990).
- V. P. Chepurnenko, V. M. Belchenko, A. A. Voitko and S. V. Kholod, An algorithm of the program simulating an optimal construction of the heat exchanging section of a fast-freezing apparatus, *Kholod. Tekhnol.* No. 50, 38-41 (1990).
- Yu. K. Chernykh, A numerical method for solving nonlinear equations for motions and heating of spherical powder particles in a gas flow, *Izv. VUZov, Energetika* No. 10, 104-109 (1990).
- S. A. Danilov, Augmentation of heat transfer in compact heat exchangers, *Izv. VUZov, Mashinostr.* No. 4, 54-58 (1990).
- B. A. Dityatkin and A. I. Kalyutik, Heat transfer of a falling viscous electrically-conducting thin liquid layer in a magnetic field, *Izv. VUZov, Energetika* No. 6, 99-102 (1990).
- S. G. Diyakonov, V. I. Yelizarov and A. G. Laptev, Liquid phase mass transfer model with axial and twisted turbulent motion of liquid and gas films in short channels, *J. Engng Phys.* **60**(3), 372-379 (1991).
- A. A. Dolinskii, A. Sh. Dorfman and B. V. Davydenko, Analysis of the quasi-stationary approach to the study of heat and mass transfer in the processes of convective drying, *Prom. Teplotekh.* **12**(4), 25-30 (1990).
- G. A. Dreitser, The state-of-the-art in the studies of convective heat transfer in channels and its reflection in textbooks, *Izv. VUZov, Energetika* No. 7, 120-124 (1990).
- B. A. Eizner, Concerning the problem of mass transfer in vacuum electric-arc deposition of multi-component coatings, *Elektron. Obrab. Mater.* No. 3, 22-23 (1990).
- N. F. Filippovskiy, S. L. Syskov and A. P. Baskakov, Calculation of heat transfer in rotating inclined tubes, *Izv. VUZov, Energetika* No. 9, 108-110 (1990).
- G. I. Gimbutis, Calculation of heat transfer of a plane wall with countercurrent mixed convection air flows, *Teploenergetika* No. 9, 60-64 (1990).
- L. M. Gorban, R. S. Pometko and O. A. Khryashchev, Modelling of heat transfer of water by means of freon at a supercritical pressure, *Prepr. No. 2110 of the Institute for Physics and Power Engineering*, Obninsk (1990).
- M. M. Grigoriev, V. V. Kuzmin and A. V. Fafurin, Classification of pulsing turbulent flows, *J. Engng Phys.* **59**(5), 725-735 (1990).
- G. V. Gromov, E. I. Nazarenko, O. A. Pankova and I. D. Shelaputin, An acoustic meter of the gas flow velocity, *Pribory Sistemy Uprav.* No. 11, 35-36 (1990).
- L. G. Gulyanskiy, The specific features of unsteady-state periodic contact heat transfer, *J. Engng Phys.* **60**(1), 151-162 (1991).
- S. Ye. Gusev and G. G. Shklover, Controlling temperatures for free convection of a high-viscous fluid, *J. Engng Phys.* **60**(3), 386-391 (1991).
- V. A. Ioselevich and S. L. Mashkov, An integral method for calculating polymer admixture diffusion in a turbulent flow at a permeable wall, *J. Engng Phys.* **60**(2), 186-191 (1991).
- M. Ismailov and M. M. Ismailov, Investigation of the effect of a special pulsing flow on the process of heat and mass transfer. In *Hydrodynamics of Multi-phase Media and its Application*, pp. 209-210. Tashkent (1990).
- G. I. Kebaliyev and L. V. Nosenko, Heat transfer enhancement in the case of variable surface roughness, *J. Engng Phys.* **59**(2), 191-196 (1990).
- Yu. A. Khokholov, Mathematical simulation of the heat transfer processes in the regenerative system of mine air conditioning. In *The Thermodynamics and Heat Transfer of Complex Systems*, pp. 46-52. Yakutsk (1990).
- L. V. Kim, Determination of heat transfer coefficient in porous media, *J. Engng Phys.* **59**(5), 796-801 (1990).
- V. Kh. Kirillov, T. V. Titarenko and A. V. Doroshenko, Specific features of the effect of regular roughness in film counter-current heat- and mass-exchangers, *Kholod. Tekhnol.* No. 50, 49-52 (1990).
- V. V. Kobarov and A. D. Shnyrev, Modelling of adsorption layers in the case of rarefied gas flow interaction with a high-cooled optical surface, *J. Engng Phys.* **60**(2), 321-324 (1991).
- V. G. Kompel and A. P. Yakushev, A mathematical model of the loop with natural circulation and outer cooling loop, *Vestsi AN BSSR. Ser. Fiz.-Energ. Nauk* No. 2, 102-106 (1990).
- G. V. Konyukhov and A. I. Petrov, Concerning the determination of the efficiency of heat exchanging surfaces under the conditions of convective heat transfer, *Izv. AN SSSR. Energ. Transp.* No. 3, 168-171 (1990).
- Yu. K. Koptelov, V. V. Davydov and M. P. Kalinina, Probes of a thermal boundary layer for controlling moving rouleau materials, *Collected Papers of the Moscow Power Engineering Institute* No. 234, 118-122 (1990).
- A. V. Korolkov, The interaction of thermal gravitational and thermocapillary convective in a partially filled vessel in a variable gravitation, *Vestsi AN BSSR. Ser. Fiz.-Energ. Nauk* No. 1, 82-87 (1991).
- I. B. Krasnyuk, T. T. Riskiyev and T. P. Salikhov, Turbulent-type solutions in heat transfer problems with quite integrable boundary-value conditions, *Prepr. No. 119 of the Physical Engineering Institute*, Tashkent (1990).
- K. D. Kreiman and S. D. Golosov, Concerning the parametrization of heat transfer through the water-bottom interface surface, *Vodn. Resursy* No. 5, 38-41 (1990).
- V. B. Kuntysh and A. E. Piir, Heat transfer and energy efficiency of staggered bundles of air coolers made of finned tubes of different geometric parameters, *Izv. VUZov, Energetika* No. 7, 71-75 (1990).
- A. A. Kuznetsova and N. N. Popov, Experimental investigations of microconvection on the water-air interface, *Vodn. Resursy* No. 5, 33-37 (1990).
- A. A. Lubsanov, Thermal calculation of a d.c. electric motor with liquid filling, *Izv. AN SSSR. Energ. Transp.* No. 3, 97-103 (1990).
- V. I. Naidenov, Non-isothermal instability of viscoelastic liquid motion in tubes, *Teplofiz. Vysok. Temp.* **28**(3), 512-517 (1990).
- A. A. Nepomnyashchiy and I. B. Simanovskiy, Convection origination with heating from above and heat release at the interface, *Izv. AN SSSR. Mekh. Zhidk. Gaza* No. 3, 16-20 (1990).
- Ye. V. Nomofilov and S. I. Morozova, Numerical solution of the natural convection heat transfer problem, *Prepr. No. 2073 of the Institute for Physics and Power Engineering*, Obninsk (1990).
- B. G. Podolskiy, V. M. Kalganov, A. F. Malets, I. A. Titova

- and S. B. Fishman. Convective cooling of the band of a broaching furnace, *Stal* No. 3, 99–102 (1990).
- V. S. Popovich, Simulation of thermal fields in thin thermo-sensitive plates. In *Simulation and Optimization of Complex Mechanical Systems*, pp. 70–75. Kiev (1990).
- V. V. Ris and A. Ye. Khodak, A thermal starting length in a rotating square channel with a laminar flow, *Teplofiz. Vysok. Temp.* **28**(5), 940–947 (1990).
- M. R. Romanovskiy. Mathematical simulation of the single-phase non-stationary state of a superfluid helium in a channel, *Khim. Nefi. Mashinostr.* No. 11, 21–24 (1990).
- A. A. Ryadno, A. A. Kochubey and O. V. Nitsenko. Concerning the effect of a centrifugal force on hydrodynamics and heat transfer in a rotating closed cavity, *Izr. VUZov, Energetika* No. 9, 110–112 (1990).
- N. N. Savkin, M. N. Burdinin, A. S. Komendantov and Yu. A. Kuzma-Kichta, Investigation of heat transfer augmentation in the post-critical region of a steam generating pipe, *Teploenergetika* No. 9, 67–71 (1990).
- S. A. Sergeyev, Effect of streamwise thermal conductivity of a wall on the thermal efficiency of a counter-current heat exchanger, *Prom. Teplotekh.* **12**(15), 31–35 (1990).
- A. K. Shipay and N. I. Lipnitskaya, Specific features of ceramics surface heating by concentrated sources, *J. Engng Phys.* **59**(1), 65–70 (1990).
- Yu. A. Sokovishin and A. V. Soldatkin, Effect of the Archimedean forces in a jet of heterogeneous mixture of reagents, *Vestsi AN BSSR, Ser. Fiz.-Energ. Navuk* No. 2, 88–93 (1990).
- A. P. Solodov, Computational models of contact condensation heat transfer, *Teploenergetika* No. 10, 12–16 (1990).
- R. I. Soziyev, Heat transfer in heat carrier turbulent flow, *Teploenergetika* No. 8, 56–57 (1990).
- A. A. Sotnikov and A. A. Masterova, Geometric parameters of the heat transfer surfaces of matrix apparatus without inserts, *Kholod. Tekh. Tekhnol.* No. 50, 41–45 (1990).
- N. N. Stenin, V. B. Kuntyshev, V. I. Melekhov and L. F. Krasnoshchikov, Thermo-aerodynamic characteristics of aluminium spirally knurled tubes of ventilating air heaters. In *Industrial Systems of Ventilation and Air Conditioning*, pp. 119–126. Leningrad (1990).
- O. B. Strelnichuk, Yu. V. Sokolov, B. Yu. Furchin and Ye. G. Manusov, Evaluation of the thermal efficiency of heat transfer surfaces with orientated channels of small diameters. In *Ventilation and Air Conditioning*, pp. 99–104. Riga (1990).
- R. A. Tkachuk, V. F. Nikolayenko and A. A. Antonov, A system for cooling a fermenter. In *Heat and Mass Transfer Processes in Food Industry*, pp. 49–55. Izd. Kiev. Tekhn. Inst. Pishch. Prom., Kiev (1990).
- S. M. Vasilenko, V. I. Dovgopol and I. V. Shutskiy, Turbulent heat transfer in plane liquid jets of steam-contact heat exchangers. In *Heat and Mass Transfer Processes in Food Industry*, pp. 18–24. Izd. Kiev. Tekhn. Inst. Pishch. Prom., Kiev (1990).
- F. V. Vasiliyev, V. T. Buglayev and O. V. Soroka, Resistance of tubular-plate-type collectively finned heat transfer surfaces, *Izv. VUZov, Mashinostr.* No. 4, 58–63 (1990).
- I. A. Vatutin, O. G. Martynenko, P. P. Khrantsov and I. A. Shikh, Distribution of the intensity of light scattered in the turbulent jet flow, *J. Engng Phys.* **60**(1), 95–98 (1991).
- I. A. Vatutin, A. V. Vlasov, N. I. Lemesh, P. P. Khrantsov and I. A. Shikh, Specific aerodynamic characteristics of asymmetric jet flows, *J. Engng Phys.* **59**(2), 186–188 (1990).
- L. S. Yanovskiy and B. Ya. Kamenetskiy, Forced flow heat transfer of hydrocarbon supercritical-pressure fuels in heated tubes, *J. Engng Phys.* **60**(1), 46–51 (1990).
- V. P. Yelchinov, A. I. Smorodin and V. A. Kirpikov, Enhancement of convective heat transfer in tubes with a moving droplet liquid of increased viscosity, *Teploenergetika* No. 6, 34–37 (1990).
- A. V. Zatovskiy, V. Yu. Klishko and Ye. Z. Kolisichenko, Thermal agitations of an incompressible droplet in a solution, *Fiz. Zhidk. Sostoyaniya* No. 18, 19–25 (1990).
- S. V. Zhukov and G. A. Tirskiy, Effect of vibrational-dissociative interaction on heat transfer and resistance in hypersonic flow past bodies, *Izr. AN SSSR, Mekh. Zhidk. Gaza* No. 3, 141–151 (1990).
- V. G. Zubkov, Experimental study of heat transfer under turbulent flow laminarization conditions, *J. Engng Phys.* **60**(2), 181–186 (1991).
- V. G. Zubkov, Concerning the changes in the turbulent flow structure under the effect of flow acceleration, *J. Engng Phys.* **59**(2), 196–203 (1990).

RADIATIVE HEAT TRANSFER

- K. Abdurakhmanov, Motion of turbulent jets of reacting gases in a plane channel with account for thermal radiation. In *Hydrodynamics of Multi-phase Media and its Application*, pp. 201–208. Tashkent (1990).
- S. P. Andryus, I. I. Dolgikh and L. A. Nazarenko, Effect of non-uniform irradiance on the spectral sensitivity of radiation receivers, *Izmerit. Tekh.* No. 8, 47–48 (1990).
- S. P. Detkov, Radiative heat transfer in a furnace with two volume zones, *J. Engng Phys.* **59**(1), 141–146 (1990).
- V. L. Dragun, M. N. Dolgikh and S. A. Filatov, Application of a multiprocessor system for processing of IR images, *Vestsi AN BSSR, Ser. Fiz.-Energ. Navuk* No. 1, 73–77 (1991).
- S. V. Fyodorov and A. V. Chernyotkin, Effect of thermal radiation on heat transfer of high-temperature organic heat carriers. In *Collected Papers of the All-Union Scientific and Design Institute of Petroleum Refining and Petroleum Chemical Industry* No. 61, pp. 87–92 (1990).
- A. Ya. Karvatskiy, V. I. Deshko and S. G. Kalenichenko, Modelling of crystallization in a cylinder with radiative-conductive heat transfer, *Prom. Teplotekh.* **12**(5), 61–65 (1990).
- V. B. Kovalevskiy, O. Yu. Sedyako and V. I. Panasyuk, An algorithm for solving the problem of heating bodies with radiative heat transfer, *J. Engng Phys.* **59**(5), 849–853 (1990).
- V. I. Polevoy, L. A. Nazarenko and V. M. Guzey, Optimization of the procedure of electric substitution for cavity radiometers with radiative and convective-radiative heat transfer, *J. Engng Phys.* **60**(2), 310–318 (1991).
- I. G. Yakovleva, Power efficiency of radiant heaters of various shapes for local heating, *Shorn. Nauch. Tr. Mosk. Energ. Inst.* No. 235, 103–106 (1990).

HEAT AND MASS TRANSFER IN PHASE AND CHEMICAL CONVERSIONS

- F. Abud, V. V. Klimenko, Yu. A. Fomichyov and Yu. Ye. Shvaykovskiy, Investigation of burnout heat transfer in an ascending flow of a two-phase nitrogen stream in a vertical channel, *Teploenergetika* No. 8, 65–68 (1990).
- A. N. Alabovskiy, A. Ya. Korolevich and A. V. Bordovskiy, Procedure of thermal calculation of a vapour-gas mixture bubbling condenser, *Prom. Teplotekh.* **12**(5), 21–25 (1990).
- A. D. Alyokhin, The work of the formation of the critical new phase nucleus near the critical point, *Fiz. Zhidk. Sostoyaniya* No. 18, 114–117 (1990).
- V. P. Andrushchenko and A. N. Kashurin, Heat and mass transfer in the processes of vaporization of sugar-containing products. In *Heat and Mass Transfer Processes in Food Industry*, pp. 75–181. Izd. Kiev. Tekhn. Inst. Pishch. Prom., Kiev (1990).
- V. A. Antonenko, Boiling heat transfer augmentation under the conditions of liquid volume pulsation (Review), *Teploenergetika* No. 6, 46–50 (1990).
- V. V. Baranets, Yu. A. Kirichenko, S. M. Kozlov, S. V. Nozdrin, K. V. Rusanov and Ye. G. Tyurina, Experimental investigation of heat transfer in cooling the surface of the superconducting ceramics $\text{YBa}_2\text{Cu}_3\text{O}_7$ by liquid nitrogen, *J. Engng Phys.* **59**(4), 549–554 (1990).
- V. M. Bilyushov, Flow of a freezing water and water solu-

- tions of salts through tubes, *J. Engng Phys.* **59**(5), 779–786 (1990).
- V. N. Bobrov, Application of the method of an explicit determination of phase changes for solidification problems in the two-dimensional case. In *Processes of Heat and Mass Transfer in Power Plants*, pp. 114–116. Minsk (1990).
- M. K. Bologa, S. I. Chuchkalov, S. M. Klimov and A. B. Didkovskiy, Effect of an electric field on heat transfer and hydraulic resistance in the case of steam flow condensation in a narrow vertical channel, *Izr. Sib. Otd. AN SSSR, Ser. Tekh. Nauk* No. 2, 126–130 (1990).
- V. M. Budov and V. A. Kiryanov, Concerning the calculation of steam condensation heat transfer inside a vertical tube, *Izr. AN SSSR, Energ. Transp.* No. 3, 117–121 (1990).
- O. G. Burdo, R. A. Domanskii and N. S. Peretyaka, Heat transfer in the condensers of channel heat pipes, *Prom. Teplotekh.* **12**(6), 93–96 (1990).
- A. K. Chagarov, A. P. Ladanyuk and V. N. Filonenko, Simulation of the dynamics of heat and mass transfer processes in one-pass evaporators as objects of control. In *Heat and Mass Transfer Processes in Food Industry*, pp. 24–29. Izd. Kiev. Tekhn. Inst. Pishch. Prom., Kiev (1990).
- A. A. Dolinskii, I. L. Pioro and S. A. Tikhonovskiy, Correlation of experimental data on the limiting heat and mass transfer in two-phase thermosyphons with boiling antifreezes, *Prom. Teplotekh.* **12**(6), 9–16 (1990).
- Ye. R. Georgalina and V. Kh. Kirillov, Kinetics of the ice layer thickness growth in the liquid film flowing along a cooled vertical surface, *Kholod. Tekhn. Tekhnol.* No. 50, 79–82 (1990).
- V. A. Gerliga, V. I. Skalozubov and V. Ya. Lesin, Effect of the subcooled boiling flow non-uniformity on the conditions of onset of thermoacoustic vibrations, *Vestsi AN BSSR, Ser. Fiz.-Energ. Navuk* No. 2, 57–62 (1990).
- V. A. Gerner, S. O. Filin and G. L. Serebryanyi, Dynamics of thermal processes in low-capacity ice generators with different cooling systems, *Kholod. Tekhn. Tekhnol.* No. 50, 74–79 (1990).
- I. I. Gogonin and N. I. Grigoryeva, Effect of the wetting density on condensation heat transfer of a quiescent vapour on packets of horizontal tubes, *Teploenergetika* No. 6, 31–34 (1990).
- S. V. Golovin, I. Kh. Khairullin, T. N. Shigabiye and L. S. Yanovskiy, Concerning certain specific features of pool boiling heat transfer of hydrocarbon fuels, *J. Engng Phys.* **59**(4), 583–586 (1990).
- L. A. Gorbunov and Yu. D. Lyumkis, Specific features of the effect of thermoelectromagnetic convection on the hydrodynamics of melt in the process of the production of monocrystals by Czochralski technique in a magnetic field, *Magnit. Gidrodin.* No. 2, 75–82 (1990).
- A. V. Grechko, Heat transfer between liquid phases in the melt bath of various melting plants, *Izr. AN SSSR, Metalurg.* No. 3, 5–13 (1990).
- A. V. Gress, I. A. Pavlyuchenkov, Ye. V. Salo and A. G. Chernyatevich, Numerical simulation of the diffusion scrap with combined blowing of a converter bath, *Izr. VUZov. Energetika* No. 7, 96–99 (1990).
- O. A. Gurbanyazov and Ya. E. Bugrayev, Numerical investigation of simultaneous heat and mass transfer from the solution film surface in the course of moisture evaporation, *Izr. AN TSSR, Ser. Fiz.-Tekh. Khim. Geolog. Nauk* No. 1, 39–43 (1990).
- O. Iliyev, Numerical investigation of laminar mixed convection of melt at the entrance into a vertical cooled tube, *Teor. Prikl. Mekh.* **21**(1), 36–43 (1990).
- E. K. Kalinin, Crises of boiling heat transfer as a specific case of smooth replacement of bubble and film boiling regimes, *J. Engng Phys.* **59**(3), 437–445 (1990).
- V. M. Kapinos, L. A. Gura and O. Yu. Chernousenko, Specific features of moist vapour flow heat transfer in a cylindrical cavity, *Vestsi AN BSSR, Ser. Fiz.-Energ. Navuk* No. 2, 102–107 (1990).
- S. V. Konev and Assad Alselman, Experimental investigation of thermosyphons with a small vapour channel cross-section. In *Heat Pipes and Heat Exchangers: From Science to Practice*, pp. 112–127. Izd. ITMO, Minsk (1990).
- V. V. Kornev, Concerning the possibility for determining water condensation coefficient from the experiments on laser vaporization, *Teplofiz. Vysok. Temp.* **28**(3), 536–539 (1990).
- V. Yu. Kravets, Yu. V. Fridrikhson and O. V. Bosaya, Heat transfer crisis in fluid boiling on microsurfaces, *J. Engng Phys.* **60**(2), 226–270 (1991).
- N. A. Kudryashov and A. A. Tulnov, Mathematical simulation of vapour admixture condensation in the case of spherically-symmetric expansion of a gas cloud, *Mat. Modelirov.* **2**(8), 42–50 (1990).
- L. L. Levitan and I. A. Orlova, A computational model of the dry-out crisis in circular tubes, *Teploenergetika* No. 6, 37–42 (1990).
- M. F. Malezhik and L. N. Melnik, Mathematical simulation of the process of rectification of multi-component systems of alcohol production. In *Heat and Mass Transfer Processes in Food Industry*, pp. 123–131. Izd. Kiev. Tekhn. Inst. Pishch. Prom., Kiev (1990).
- V. S. Malovichko, V. V. Frolov and M. V. Bunin, Vaporization of the kvass wort. In *Heat and Mass Transfer Process in Food Industry*, pp. 69–76. Izd. Kiev. Tekhn. Inst. Pishch. Prom., Kiev (1990).
- V. S. Malovichko, V. M. Tkachenko and A. V. Murza, Measurement of flow velocity in boiling pipes when studying scale formation and heat/mass transfer processes of vapour splitting. In *Heat and Mass Transfer Processes in Food Industry*, pp. 56–63. Izd. Kiev. Tekhn. Inst. Pishch. Prom., Kiev (1990).
- S. P. Malyshenko and A. B. Andrianov, Non-equilibrium phase transitions in boiling on surfaces with porous coatings, *Prepr. No. 293 of the Institute for High Temperatures, Moscow* (1990).
- A. S. Martsenyuk and R. N. Guseinov, Enhancement of mass transfer process in regularly packed towers. In *Heat and Mass Transfer Processes in Food Industry*, pp. 151–161. Izd. Kiev. Tekhn. Inst. Pishch. Prom., Kiev (1990).
- V. K. Mazuyuk and P. S. Anchevskiy, Increase of the transportability of powder capillary structures of heat pipes. In *Heat Pipes and Heat Exchangers: From Science to Practice*, pp. 138–141. Izd. ITMO, Minsk (1990).
- V. P. Morozov, A. P. Cherepanov and N. D. Zakharov, Investigation of condensation heat transfer of binary cryo-agents, *Khimi. Neft. Mashinostr.* No. 6, 11–12 (1990).
- V. A. Munts, A. P. Baskakov, Yu. N. Fedorenko and Yu. G. Kozlov, Multiplicity of circulation in furnaces with a circulating fluidized bed, *Teploenergetika* No. 4, 30–34 (1990).
- A. M. Nizamov, N. Kh. Akhunov and A. A. Sagdeyev, Emissivity of propane, *Teplofiz. Vysok. Temp.* **28**(3), 473–479 (1990).
- S. G. Obukhov and V. N. Drulis, Unsteady-state heat transfer on stepwise supply of heat loads above critical ones, *Izr. VUZov. Energetika* No. 7, 94–96 (1990).
- A. A. Palagin, L. I. Zevin and A. S. Babakina, Modelling of local heat loads in the condensers of turbine plants, *Problemy Mashinostr. (Kiev)* No. 34, 85–89 (1990).
- A. N. Pavlenko, An unsteady-state critical heat flux in a liquid at different given laws of heat release, *Izr. Sib. Otd. AN SSSR, Ser. Tekh. Nauk* No. 2, 131–137 (1990).
- A. N. Pavlenko and V. Yu. Chekhovich, A critical heat flux in unsteady-state heat release, *Izr. Sib. Otd. AN SSSR, Ser. Tekh. Nauk* No. 2, 3–9 (1990).
- Yu. V. Polezhanov and S. A. Kovalyov, Concerning the modelling of boiling heat transfer on porous structures, *Teploenergetika* No. 12, 5–9 (1990).
- N. A. Pryadko, Ya. I. Zasyadko and O. A. Kaidun, Computer simulation and analysis of thermohydrodynamic processes in vaporizing channels. In *Heat and Mass Transfer Processes in Food Industry*, pp. 192–197. Izd. Kiev. Tekhn. Inst. Pishch. Prom., Kiev (1990).

- I. R. Rubanenko and V. N. Serebryakov, Concerning the expediency of the combined drying of earthenware items in the SHF field. In *The Increase of the Efficient Use of the Power Resources of the Volga Region*, pp. 140–145. Izd. Saratov. Politekhn. Inst., Saratov (1990).
- O. A. Rudenko-Gritsyuk and N. A. Zakharchenko, A mathematical model of the process of drying rye rusks. In *Heat and Mass Transfer Processes in Food Industry*, pp. 116–122. Izd. Kiev. Tekhn. Inst. Pishch. Prom., Kiev (1990).
- I. K. Savin, V. I. Korovkin and M. K. Bologa, Augmentation of condensation heat transfer by means of deforming the vapour-liquid interface, *Elektron. Obrabot. Mater.* No. 5, 61–65 (1990).
- V. V. Sergeyev, A. I. Gonin and O. V. Remizov, Post-critical heat transfer in channels with positioning elements, *Atomn. Energiya* **68**(6), 445–447 (1990).
- A. A. Seryogin, S. A. Balakan and S. V. Rogalskiy, Heat transfer process augmentation in a scalding. In *Heat and Mass Transfer Processes in Food Industry*, pp. 85–95. Izd. Kiev. Tekhn. Inst. Pishch. Prom., Kiev (1990).
- A. B. Shigapov, Errors in calculation of the radiant properties of the polydisperse system of particles, *Teplofiz. Vysok. Temp.* **28**(3), 553–557 (1990).
- P. L. Shlyan, P. S. Tsygankov and Yu. V. Buliy, Determination of the surface tension coefficients on the liquid-saturated vapour interface. In *Heat and Mass Transfer Processes in Food Industry*, pp. 104–109. Izd. Kiev. Tekhn. Inst. Pishch. Prom., Kiev (1990).
- V. U. Sidyanov and Ye. V. Ametistov, Replacement of boiling regimes on thick heating surfaces, *J. Engng. Phys.* **59**(4), 576–583 (1990).
- V. V. Sobolev, Assessment of the effect of the properties and thermal state of melt on the intensity of electromagnetic radiation in the course of crystallization, *J. Engng. Phys.* **59**(5), 863–867 (1990).
- A. P. Solodov, Computational models of contact condensation heat transfer, *Teploenergetika* No. 10, 12–16 (1990).
- I. V. Sheiko, G. A. Vysotskiy, Yu. V. Latash, Yu. D. Yavor-skii and A. A. Kochetov, Some specific features of heat transfer in induction melting in a selective crystallizer, *Probl. Spets. Electrometallurg.* No. 3, 88–93 (1990).
- A. L. Shvarts, V. A. Lokshin, G. G. Gorlanov and V. N. Grebenников, Temperature regime of the heat conducting surface of vapour–gas heat exchangers in cooling and condensation of the heating vapour and in heating of a moist vapour, *Teploenergetika* No. 6, 53–58 (1990).
- Ya. Kh. Tekhver, Hysteresis phenomena in boiling on porous coatings, *Teploenergetika* No. 12, 12–14 (1990).
- A. A. Tereshchenko, I. A. Yemeliyanova and M. V. Sidor, Toward the choice of the optimal scheme for evaporation of kvass wort. In *Heat and Mass Transfer Processes in Food Industry*, pp. 64–69. Izd. Kiev. Tekhn. Inst. Pishch. Prom., Kiev (1990).
- S. A. Tevl'in and V. G. Yuryev, Computational investigation of mass transfer in the near-wall layer in transition from bubble to film boiling under forced water flow conditions, *Collected Papers of the Moscow Power Engineering Institute* No. 220, 61–65 (1990).
- L. L. Vasiliyev, V. M. Khaustov and A. L. Korseko, Thermal regimes of a flexible heat pipe. In *Heat Pipes and Heat Exchangers: From Science to Practice*, pp. 88–95. Izd. ITMO, Minsk (1990).
- L. L. Vasiliyev and V. V. Khrolenok, Heat transfer in rotating heat pipes. In *Heat Pipes and Heat Exchangers: From Science to Practice*, pp. 44–58. Izd. ITMO, Minsk (1990).
- L. L. Vasiliyev, S. V. Konev, L. S. Domorod, L. Ye. Kanon-chik and A. S. Zhuravlyov, Specific features of heat transfer in cryogenic heat pipes. In *Heat Pipes and Heat Exchangers: From Science to Practice*, pp. 3–13. Izd. ITMO, Minsk (1990).
- Yu. V. Vidin, V. V. Kolosov and A. K. Fedyukovich, Determination of the rate of deposit formation in the steam con-denser pipes. In *Problems of Heat Transfer in Construction*, pp. 132–135. Izd. RISI, Rostov-on-the-Don (1990).
- A. Ye. Vostrotin, I. G. Zaltsman, Yu. K. Malikov and V. K. Shikov, Modelling of radiant fluxes in the initial sections of the channels of high-temperature devices, *Teplofiz. Vysok. Temp.* **28**(3), 558–564 (1990).
- Ye. V. Voyevodenco and V. V. Shtenin, Mathematical model of heat transfer under the conditions of crystallization process. In *Mathematical Models and Algorithms of the Systems for Controlling Processes and Productions*, pp. 85–88. Kiev (1990).
- T. Ye. Zapadayeva, S. S. Moiseyev, V. A. Petrov and A. N. Sinev, Temperature dependence of the absorption coefficient of calcium and lithium fluorides in the semi-transparent region, *Teplofiz. Vysok. Temp.* **28**(3), 487–493 (1990).
- ## HEAT AND MASS TRANSFER IN DISPERSE AND TWO-PHASE SYSTEMS
- A. A. Avdeyev, Growth, condensation and solution of vapour and gas bubbles in turbulent flows at moderate Reynolds numbers, *Teplofiz. Vysok. Temp.* **28**(3), 540–546 (1990).
- I. E. Azizov and V. M. Yentov, On the origination of the two-phase zone during vapour formation in porous media, *J. Engng. Phys.* **59**(4), 568–576 (1990).
- R. B. Bayramov, A. Khanov and S. V. Barkhudarova, Study of the effect of relative surrounding air humidity on the operation regime of an open solar absorbent regenerator, *Izv. AN TSSR. Ser. Fiz.-Tekh. Khim. Geol. Nauk* No. 1, 30–34 (1990).
- M. K. Bologa and F. M. Sazhin, Electric convection and heat transfer in gas–liquid disperse systems, *J. Engng. Phys.* **59**(3), 419–431 (1990).
- E. A. Boltenko and Yu. A. Smirnov, Investigation of liquid distribution between the flow core and wall film in steam-generating channels by the method of adiabatic section, *Prepr. No. 2133 of the Institute for Physics and Power Engineering*, Obninsk (1990).
- Yu. S. Borchevkin and V. V. Zapov, A numerical model of the development of unsteady-state processes in steam-generating channels in the case of discharge reverse, *Izv. SO AN SSSR. Ser. Tekh. Nauk* No. 5, 114–121 (1990).
- V. M. Bulavatskiy, Numerical and analytical solutions of some two- and three-dimensional boundary-value problems of the mechanics of packed media. In *Boundary-value Problems of Mathematical Physics*, pp. 120–126 (1990).
- V. G. Buryakov and V. A. Anistratenko, Creation of the liquid–vapour phase equilibrium model of multicomponent systems. In *Heat and Mass Transfer Processes in Food Industry*, pp. 96–104. Izd. Kiev. Tekhn. Inst. Pishch. Prom., Kiev (1990).
- Yu. A. Buyevich and S. V. Sizaya, Effect of adsorption on the properties of dispersions in incompletely associated solutions, *J. Engng. Phys.* **59**(5), 792–796 (1990).
- Yu. A. Buyevich and V. A. Ustinov, Non-stationary transfer and dispersion effects in heterogeneous media, *J. Engng. Phys.* **59**(5), 807–817 (1990).
- B. S. Bylinkin and P. A. Gorshenin, Specific features of the hydrodynamics of a gas flow in a rotating bubbling heat exchanger. In *System Analysis, Simulation and Optimization of Applied Problems*, pp. 105–110. Moscow (1990).
- S. V. Chernousov, A method for determining the thermal properties of plate-finned surfaces, *Vestsi AN BSSR. Ser. Fiz.-Energ. Navuk* No. 1, 95–98 (1991).
- Yu. A. Chyornyi and V. A. Anistratenko, Concerning the problem of laminated trays. In *Heat and Mass Transfer Processes in Food Industry*, pp. 161–167. Izd. Kiev. Tekhn. Inst. Pishch. Prom., Kiev (1990).
- I. V. Derevich and V. M. Yeroshenko, Modelling of non-local mass transfer of a disperse admixture in turbulent gas-suspension flows, *J. Engng. Phys.* **59**(3), 454–466 (1990).

- I. S. Dubrovskiy, The transient zone of a two-phase flow with a free level, *Teploenergetika* No. 6, 52–47 (1990).
- S. F. Fedorov, A. I. Bobryshev and A. V. Vasiliyev, Concerning the effect of coherent structures on heat and mass transfer in a drop-laden flow. In *Heat and Mass Transfer Processes in Food Industry*, pp. 7–12. Izd. Kiev. Tekhn. Inst. Pishch. Prom., Kiev (1990).
- A. S. Galperin and G. G. Kuleshov, Determination of the first-kind phase transition parameter of dielectric media in alternating electric field, *Vestsi AN BSSR, Ser. Fiz.-Energ. Navuk* No. 1, 68–73 (1991).
- N. I. Gamayunov, R. A. Isipryan and A. V. Klinger, Heat transfer between a reversing gas flow and a fixed dispersed solid phase, *J. Engng Phys.* **60**(3), 439–442 (1991).
- B. G. Gordon and S. G. Shlesberg, On the limits of the existence of disperse flows at small mass velocities, *Teploenergetika* No. 9, 64–67 (1990).
- V. I. Ivanovskaya and V. V. Guguchkin, Evaluation of the change in the dispersity of droplets during two-phase stream flow through an agitator, *Izr. VUZov. Energetika* No. 11, 82–87 (1990).
- Ye. Ya. Kenig and L. P. Kholpanov, Two-phase multi-component mass transfer with a downward phase stream, *J. Engng Phys.* **59**(1), 99–109 (1990).
- A. N. Khomutskiy, M. Ye. Deich, A. P. Shcherbakov and A. A. Tishchenko, Supersonic moist steam flow past outlet edges of the grid, *Teploenergetika* No. 8, 63–65 (1990).
- V. A. Kirakosyan, A. P. Baskakov, Ye. Yu. Lavrovskaya and Yu. A. Popov, An approximate method for calculating the intensity of heat transfer from a swirled disperse flow to the cyclone chamber wall, *J. Engng Phys.* **59**(4), 614–621 (1990).
- A. A. Kokhan, About the optimal control of intense heat transfer in a disperse layer, *Adapt. Sistemy Avtomat. Upr.* No. 18, 40–48 (1990).
- V. M. Koshelnik, T. F. Rodionova and A. V. Nesterenko, Numerical simulation of thermosorptive processes in a metallohydride module, *Energ. Mashinostr.* No. 50, 52–57 (1990).
- V. V. Levdanskiy and V. G. Leitsina, Toward the calculation of radiation flux escaping from a high-disperse layer, *J. Engng Phys.* **59**(4), 586–593 (1990).
- T. Kh. Margulova, N. G. Rassokhin, V. I. Gorbuров and V. M. Zorin, The hydrodynamics of a two-phase boiling flow on a submerged heat transfer surface, *Sborn. Nauch. Tr. MEI* No. 220, 34–41 (1990).
- A. G. Mazurenko, D. P. Kolomietz, Yu. F. Snezhkin and L. G. Kuznetsova, A thermometric investigation of the process of drying apples. In *Heat and Mass Transfer Processes in Food Industry*, pp. 42–48. Izd. Kiev. Tekhn. Inst. Pishch. Prom., Kiev (1990).
- A. I. Moshinskiy, Concerning the non-linear equation of heat and mass transfer in disperse media, *J. Engng Phys.* **59**(5), 817–824 (1990).
- V. I. Nazarov, Toward the calculation of the change in the efficiency of the condenser power unit on the injection of water into the heater, *Vestsi AN BSSR, Ser. Fiz.-Energ. Navuk* No. 2, 111–115 (1990).
- V. S. Novikov, Homogenization and dispersion in the modern engineering, *Prom Teplotekh.* **12**(5), 40–59 (1990).
- V. V. Novomilinskiy, Mathematical simulation of non-isothermal turbulent single- and two-phase swirled flows, *J. Engng Phys.* **60**(2), 191–197 (1991).
- V. P. Petrenko, N. A. Pryadko, A. Ye. Melnik and A. V. Forsyuk, Hydrodynamics of the ascending liquid films and heat transfer in the mode of evaporation from a free surface. In *Heat and Mass Transfer Processes in Food Industry*, pp. 181–192. Izd. Kiev. Tekhn. Inst. Pishch. Prom., Kiev (1990).
- A. I. Podbereskiy, Heat transfer in a fluidized-bed air cooler, *Kholod. Tekh.* No. 8, 35–38 (1990).
- R. R. Sagitov and N. S. Khabeyev, Diffusive effects in vibrations of bubbles in an acoustic field. In *Wave Problems of the Mechanics of Deformed Media*, Pt. 2, pp. 78–83. Moscow (1990).
- S. Yu. Saltanov, Experimental study of the processes of mass transfer in a porous medium, *Izr. Sib. Otd. AN SSSR, Ser. Tekhn. Nauk* No. 2, 138–141 (1990).
- A. A. Shraiber, B. B. Rokhman and V. B. Redkin, On the influence of various factors on the process of coke combustion in an ascending high-concentration polydisperse flow, *J. Engng Phys.* **60**(2), 225–231 (1991).
- A. Ye. Shulmeister, M. A. Shararov and L. A. Zainullin, Establishment of laws governing heat transfer to refine the technology of melt granulation. In *Thermal Engineering of Metallurgical Processes and Assemblies*, pp. 24–28. Moscow (1990).
- Yu. I. Shvets, V. F. Vishnyak, V. P. Voitsekhovskiy and V. N. Panchenko, Effects of water cooling of annular channels, *Prom. Teplotekh.* **12**(5), 25–30 (1990).
- V. I. Skalozubov, The mechanisms underlying the excitation of thermoacoustic self-oscillations in bubble two-phase flows, *Vestsi AN BSSR, Ser. Fiz.-Energ. Navuk* No. 2, 62–69 (1990).
- V. N. Slesarenko, G. A. Zakharov, A. Ye. Rudakova and B. I. Mukaseyev, Two-phase heat transfer of a tubular bundle under vacuum, *Izr. VUZov. Energetika* No. 11, 88–94 (1990).
- V. G. Rifert, N. N. Gol'yad and A. A. Muzhilko, Motion of a thin liquid layer over the surface of a fixed disk, *Prom. Teplotekh.* **12**(5), 35–39 (1990).
- A. F. Ryzhkov, I. E. Kipnis and A. P. Baskakov, Mechanism of mass transfer in chemically interacting dispersions during their vibrofluidization, *J. Engng Phys.* **60**(2), 209–217 (1991).
- Yu. M. Tsirkunov and N. V. Tarasova, Concerning the stratification of a polydisperse admixture in the boundary layer on a heated surface near the critical point, *Modelir. v Mekh.* **4**(2), 141–148 (1990).
- V. V. Yagov and G. I. Samokhin, Mechanism of transient boiling heat transfer of liquids, *Teploenergetika* No. 10, 16–21 (1990).
- I. K. Yermolayev, G. V. Nabatov and L. Z. Asnovich, Investigation of heat and mass transfer in drying electrically insulating materials, *Elektrotekhnika* No. 3, 26–28 (1990).
- V. L. Zaviyalov and P. P. Loboda, Investigation of mass transfer characteristics of a vibratory extractor used for treating the vegetable raw material and its wastes. In *Heat and Mass Transfer Processes in Food Industry*, pp. 138–146. Izd. Kiev. Tekhn. Inst. Pishch. Prom., Kiev (1990).
- Yu. A. Zayats and V. D. Martynuk, Increase in the efficiency of thermal treatment of beet chips. In *Heat and Mass Transfer Processes in Food Industry*, pp. 76–85. Izd. Kiev. Tekhn. Inst. Pishch. Prom., Kiev (1990).

HIGH-TEMPERATURE THERMOPHYSICS

- S. Yu. Afanasiyev, B. S. Seplyarskiy and A. P. Amosov, Calculation of the critical ignition conditions for a system of warming-up cells, *Fiz. Gor. Vzryva* **26**(6), 16–20 (1990).
- N. D. Ageyev, Ya. I. Vovchuk, S. V. Goroshin, A. N. Zolotko and N. I. Poletaev, Stationary combustion of the gas suspensions of solid fuels. Laminar diffusion two-phase flame, *Fiz. Gor. Vzryva* **26**(6), 54–63 (1990).
- L. Yu. Artyukh, V. P. Kashkarov and Sh. O. Kozhakhmetova, Investigation of the stability of heterogeneous combustion in the vicinity of the frontal point, *Vestsi AN BSSR, Ser. Fiz.-Energ. Navuk* No. 2, 115–122 (1990).
- V. Ya. Basevich, V. P. Volodin and N. I. Peregovodov, Determination of the temperature probability density function by calculating turbulent flame from instantaneous parameters, *Fiz. Gor. Vzryva* **26**(6), 22–27 (1990).
- Yu. V. Belyayev, A. I. Bril, O. B. Zhdanovich and Yu. V. Khodyko, On the verification of model probability distributions in turbulent heated jets, *Fiz. Gor. Vzryva* **26**(6), 92–98 (1990).
- Ye. V. Chernenko and A. L. Pivtsov, Combustion propagation over the titanium powder surfaces, *Fiz. Gor. Vzryva* **26**(6), 68–74 (1990).
- I. G. Dik and O. V. Matviyenko, Heat transfer and com-

- bustion of a swirled flow in a reactor of ideal displacements, *J. Engng Phys.* **60**(2), 217–225 (1991).
- G. I. Fomichev and M. S. Fomichev, Heat transfer agent pressure fluctuation in a channel reactor, *Teploenergetika* No. 9, 50–53 (1990).
- V. M. Gremyachkin and L. M. Roshchina, A diffusion-heat model of carbon particle combustion, *Fiz. Gor. Vzryva* **26**(6), 63–68 (1990).
- S. Z. Kopelev and A. F. Slitenko, Effect of the number of nozzle blades on the efficiency of the cooled stage of a gas turbine, *Teploenergetika* No. 3, 28–30 (1990).
- O. P. Korniyenko, Mean heat transfer of a cylinder in a lateral air flow, *J. Engng Phys.* **59**(4), 648–649 (1990).
- A. G. Merzhanov, A. S. Rogachev, A. S. Mukasyan, B. M. Khusid, I. P. Borovinskaya and B. B. Khina, On the role of gas phase transfer in the combustion of a tantalum–carbon system, *J. Engng Phys.* **59**(1), 5–13 (1990).
- V. P. Mitin, Z. P. Shulman, O. R. Dornjak and S. P. Levitskiy, Simulation of the explosive dispersion of molten metal on interaction with the condensed phase inclusion, *Vestsi AN BSSR, Ser. Fiz.-Energ. Nauk* No. 2, 69–75 (1990).
- B. I. Palamarchuk and A. T. Malakhov, Shock wave attenuation in a foam on explosion of condensed explosives, *Fiz. Gor. Vzryva* **26**(6), 135–143 (1990).
- N. N. Panchenko, Interaction of pressure oscillations with the process of combustion, *Fiz. Gor. Vzryva* **26**(6), 83–85 (1990).
- A. A. Shatil and Ye. K. Chavchanidze, Computational evaluation of the flame combustion stability of solid fuels in boiler furnaces, *Teploenergetika* No. 4, 2–6 (1990).
- G. S. Taranov, The non-linear model-based computational analysis of the thermohydraulic stability of natural circulation, *Teploenergetika* No. 6, 43–46 (1990).
- V. Ye. Zarko, Ignition stability of condensed substances, *Fiz. Gor. Vzryva* **26**(3), 3–16 (1990).
- A. V. Zhukov, Dissipation of energy in stress waves on phase transitions, *Fiz. Gor. Vzryva* **26**(6), 124–127 (1990).
- P. Baumann and D. Steiner, The effect of the tube diameter and duct cross-section shape on heat transfer in flow boiling of cryogenic fluids. Part 2. Nucleate boiling region, *Fiz. Nizk. Temp.* **16**(5), 529–532 (1990).
- N. G. Berezyak and A. A. Sheinina, Melting diagrams for binary systems based on hydrogen isotopes, *Fiz. Nizk. Temp.* **16**(3), 227–233 (1990).
- V. V. Budrik and A. A. Yeliseyev, Heat transfer model for developed bubble boiling, *Fiz. Nizk. Temp.* **16**(4), 433–438 (1990).
- V. A. Buntar and O. I. Kirichek, Temperature dependence of the liquid helium charged surface instability, *Fiz. Nizk. Temp.* **17**(1), 33–38 (1991).
- P. I. Bystrov, A. I. Ivlyutin, V. N. Kharchenko and A. N. Shults, On the physical mechanisms of heat, mass and momentum transfer in a short low-temperature heat pipe. I. Hydrodynamics of a vapour flow, *J. Engng Phys.* **60**(1), 5–12 (1991).
- P. I. Bystrov, A. I. Ivlyutin and A. N. Shults, On the physical mechanisms of heat, mass and momentum transfer in a short low-temperature heat pipe. II. Vapour flow structure, *J. Engng Phys.* **60**(2), 258–266 (1991).
- P. S. Chernyakov and Yu. A. Kirichenko, Vapour bubble dynamics, temperature distribution, boiling onset and heat transfer coefficients during nuclear pool boiling of cryogens in the fields of mass forces, *Fiz. Nizk. Temp.* **16**(4), 413–416 (1990).
- B. V. Dzyubenko, A. V. Kalyatka, V. I. Rozanov and M. D. Segal, Unsteady-state heat and mass transfer in the case of the azimuthal non-equilibrium state of heat supply in the bundles of cooled tubes, *J. Engng Phys.* **59**(4), 641–648 (1990).
- R. V. Gavrilov, I. M. Hlasnik, V. I. Saveliyev and L. I. Chubrayeva, Problems of cooling a fully superconducting generator stator, *Fiz. Nizk. Temp.* **16**(4), 419–421 (1990).
- V. S. Gorobchenko, V. V. Yeremenko and L. A. Ogurtsova, Radiation of an admixture crystal with structural changes under the conditions of pulsing heating of a specimen, *Fiz. Nizk. Temp.* **16**(8), 1051–1058 (1990).
- L. Ye. Kanonchik and P. I. Sergeyev, Complex study of the starting-up regimes of a frozen heat pipe, *J. Engng Phys.* **59**(5), 786–792 (1990).
- V. M. Kharin, V. I. Ryazhskikh and R. M. Zvadskikh, Cryogenic fluid stratification in a circulation-cooled vessel, *J. Engng Phys.* **60**(3), 425–428 (1991).
- Yu. A. Khmelev and Ye. V. Shevel, Theoretical analysis of a condensation process in a rotating heat pipe at low angular rotation velocities, *J. Engng Phys.* **60**(1), 19–24 (1991).
- I. A. Klyuchnikov and V. U. Sidyanov, Film boiling regime distribution in He II, *Fiz. Nizk. Temp.* **16**(4), 464–465 (1990).
- D. A. Labuntsov and P. A. Mirzoyan, Thermal hydraulic flux instability analysis of low-temperature helium in a heated channel, *Fiz. Nizk. Temp.* **16**(4), 439–442 (1990).
- M. O. Lutset, Problems of superconductor coolant heat transfer, *Fiz. Nizk. Temp.* **16**(4), 487–489 (1990).
- M. O. Lutset, Transient heat transfer problem for the transition state of superconductors cooled by a superfluid helium, *Fiz. Nizk. Temp.* **16**(4), 508–510 (1990).
- S. B. Milman and M. G. Velikanova, Study of contact conductivity of the cryogenic thermal insulation materials, *J. Engng Phys.* **60**(1), 121–127 (1991).
- S. K. Nemirovskiy, A. Ya. Baltsevich and L. P. Kondaurova, Heat transfer of He II in the case of slow variation of heat load, *Fiz. Nizk. Temp.* **16**(4), 462–464 (1990).
- S. M. Ostroumov, A mathematical model of heat and mass transfer on porous-sубlimation cooling of cryogenic devices, *Fiz. Nizk. Temp.* **16**(4), 492–495 (1990).
- U. M. Pavlov and I. V. Yakovlev, Unsteady-state heat transfer in boiling helium, *Fiz. Nizk. Temp.* **16**(4), 442–445 (1990).
- V. Ye. Poznyak and V. N. Saveliyev, An experience in application of capillary-porous coatings in cryogenic systems and plants, *Teploenergetika* No. 12, 9–12 (1990).
- V. I. Sobolev, V. E. Sivokon, L. A. Pogorelov, V. N. Repin and V. V. Dotsenko, Condensation pumping heat transfer

LOW-TEMPERATURE THERMOPHYSICS

- V. V. Andrianov, V. P. Bayev, Yu. P. Ipatov, S. P. Malyshenko, R. G. Muchnik, A. V. Rychagov, V. E. Sytnikov and N. Ya. Tomenko, Composite superconductors coated with Cu oxide to intensify heat transfer, *Fiz. Nizk. Temp.* **16**(4), 504–508 (1990).
- V. A. Antonenko and G. R. Kudritskiy, The results of investigation of the vaporization mechanism as applied to the wicks of low-temperature heat pipes, *J. Engng Phys.* **60**(1), 12–19 (1991).
- V. A. Babenko, Calculation of transpiration cooling of a cylindrical porous wall, *Fiz. Nizk. Temp.* **16**(4), 497–501 (1990).
- V. I. Babitch, Yu. M. Pavlov and V. V. Churbanov, Numerical modelling of thermally induced flows in the cooling channel of cryogenic systems, *Fiz. Nizk. Temp.* **16**(4), 489–492 (1990).
- Ye. V. Balashov, A. V. Klimenko and A. K. Svonaryov, Nitrogen and argon boiling crisis in channel circulation, *Fiz. Nizk. Temp.* **16**(4), 518–521 (1990).
- T. V. Bandos, A. G. Batrak, V. Yu. Benko, I. N. Nechiporenko and E. V. Tikhenco, Stability of the high-temperature superconductors cooled by liquid nitrogen, *Fiz. Nizk. Temp.* **16**(4), 484–487 (1990).
- V. V. Baranets, Yu. A. Kirichenko, S. M. Kozlov, S. V. Nozdrin, K. V. Rusanov and Ye. G. Tyurina, Experimental investigation of heat transfer in liquid nitrogen cooling of the surface of superconducting ceramics $\text{YBa}_2\text{Cu}_3\text{O}_7$. 2. Bubble boiling burn-out heat transfer, *J. Engng Phys.* **59**(5), 772–776 (1990).
- P. Baumann and D. Steiner, The effect of the tube diameter and duct cross-section shape on heat transfer in flow boiling of cryogenic fluids. Part 1. Forced convection boiling region, *Fiz. Nizk. Temp.* **16**(5), 525–529 (1990).

- of ^3He in dilution refrigerators, *Fiz. Nizk. Temp.* **16**(5), 565–568 (1990).
- V. I. Subbotin, V. I. Deyev, V. K. Andreyev, A. N. Savin and K. V. Kutsenko, Transient heat transfer in pool boiling of liquid helium and nitrogen, *Fiz. Nizk. Temp.* **16**(4), 438–439 (1990).
- V. I. Subbotin, V. I. Deyev, V. V. Arkhipov, S. V. Kvasnyuk and V. V. Solodovnikov, Critical heat flux and post-CHF heat transfer for two-phase flow of helium in a non-uniformly heated tube, *Fiz. Nizk. Temp.* **16**(4), 451–452 (1990).
- V. I. Subbotin, V. I. Deyev, V. N. Novikov and V. V. Arkhipov, Experimental study and correlations of pressure drop and heat transfer to boiling nitrogen in a channel, *Fiz. Nizk. Temp.* **16**(4), 426–428 (1990).
- Zh. A. Suprunova, Effect of thermodynamic factors on heat transfer in liquid cryogens during storage without vent, *Fiz. Nizk. Temp.* **16**(4), 501–504 (1990).
- Ye. P. Valuyeva and V. N. Popov, Heat transfer and turbulent flow in a helium tube in the supercritical region, *Fiz. Nizk. Temp.* **16**(4), 445–448 (1990).
- L. N. Yakub, Volumetric dependence of the thermal pressure of solidified inert gases, *Fiz. Nizk. Temp.* **17**(1), 106–110 (1991).
- V. M. Zhukov and S. E. Morozov, Investigation of the microcharacteristics of a two-phase helium flow in a radial rotating channel, *Fiz. Nizk. Temp.* **16**(4), 458–462 (1990).
- V. M. Zhukov and Yu. G. Slavinskiy, The effect of centrifugal field on heat transfer crisis in rotating channels with boiling nitrogen, *Fiz. Nizk. Temp.* **16**(4), 512–513 (1990).
- V. M. Zhukov and I. L. Yarmak, Forced helium flow transient heat transfer in channels under heat pulse conditions, *Fiz. Nizk. Temp.* **16**(4), 456–458 (1990).

HEAT AND MASS TRANSFER IN RHEOLOGICALLY COMPLEX FLUIDS

- O. Ye. Alexandrov, S. P. Obraz, V. D. Selezniov, B. T. Porodnov and A. G. Flyagin, Effect of heat release in a gas flow at the junction of channels with the surfaces of different roughness, *J. Engng Phys.* **59**(3), 466–470 (1990).
- Khr. Boyadzhiev and Ye. Toshev, Non-linear mass transfer between a gas and a falling liquid film. 2. An asymptotic analysis, *J. Engng Phys.* **59**(2), 277–286 (1990).
- V. I. Breus and I. I. Belyakov, Heat transfer in screw coils at a supercritical pressure, *Teploenergetika* No. 4, 49–52 (1990).
- V. I. Ganchar, Parameters of heat transfer in the process of anode electrolyte heating, *J. Engng Phys.* **60**(1), 92–95 (1991).
- I. N. Gusev, Ye. I. Guseva and L. I. Zaichik, Deposition of particles on the channel walls in a turbulent flow, *J. Engng Phys.* **59**(5), 735–742 (1990).
- E. M. Kartashov and I. V. Stomakhin, Thermal response of viscoelastic bodies to a thermal impact on the basis of the new equation of dynamic thermoviscoelasticity, *J. Engng Phys.* **59**(3), 409–419 (1990).
- F. N. Lisin, A. G. Shuklin and V. K. Maskayev, Eddy diffusion of a passive admixture in a gas suspension at high Reynolds numbers, *J. Engng Phys.* **59**(4), 631–635 (1990).
- S. B. Milman and M. G. Velikanova, Experimental study of heat transfer in nitrogen-free helium vessels with a multi-screen heat-insulating system, *J. Engng Phys.* **59**(2), 216–221 (1990).
- N. V. Pavlyukevich, On radiation slip in a layer of high-porous material, *J. Engng Phys.* **59**(4), 602–609 (1990).
- M. Ye. Rudyak, The specificity of the disintegration of low-viscosity fluid jets in a subsonic stalling gas flow, *J. Engng Phys.* **60**(1), 24–32 (1991).
- Z. P. Shulman, B. M. Khusid, E. V. Ivashkevich, V. B. Erenburg and N. O. Vlasenko, Rheodynamics and heat transfer in polymerizable fluid flow in a cylindrical channel, *J. Engng Phys.* **60**(3), 401–410 (1991).
- Z. P. Shulman, B. M. Khusid, Ye. V. Ivashkevich, V. A. Mansurov and N. O. Vlasenko, The kinetics, hardening mechanism and heat transfer of epoxy composites, *J. Engng Phys.* **59**(3), 387–395 (1990).
- Z. P. Shulman, B. M. Khusid, V. B. Erenburg, E. V. Ivashkevich, I. L. Ryklina and N. O. Vlasenko, Heat and mass transfer of polymerizing fluids in a cylindrical reservoir, *J. Engng Phys.* **60**(1), 51–60 (1991).
- A. Yu. Tarasova, N. S. Khomich and B. M. Khusid, Rheodynamics of magnetic abrasive material in a gap between parallel planes, *Vestsi AN BSSR. Ser. Fiz.-Energ. Navuk* No. 1, 100–107 (1991).
- A. A. Uglov, A. A. Volkov and O. G. Sagdedinov, Concerning the heating of materials by a concentrated energy flux with volumetric absorption, *J. Engng Phys.* **59**(5), 846–849 (1990).
- A. A. Vinberg, L. I. Zaichik and V. A. Pershukov, Diffusion-migrational description of the propagation of fine-dispersed admixture in a turbulent jet, *J. Engng Phys.* **59**(4), 609–614 (1990).

HEAT AND MASS TRANSFER IN TECHNOLOGICAL PROCESSES

- A. M. Abdullin and D. B. Vafin, Numerical simulation of local heat transfer in the furnaces of tubular chambers using differential approximations for radiative heat transfer, *J. Engng Phys.* **60**(2), 291–297 (1991).
- V. A. Antonenko, Yu. G. Chistyakov and G. R. Kudritskiy, Specific features of boiling heat transfer under the conditions of liquid exposure to vibration, *Prom. Teplotekh.* **12**(4), 61–65 (1990).
- V. A. Antonenko, G. R. Kudritskiy and Yu. N. Ostrovskiy, Cooling of arc gas-filled bulbs by a boiling liquid film, *Prom. Teplotekh.* **12**(6), 50–54 (1990).
- L. V. Arseniyev, Yu. G. Korsov, Ye. A. Khodak and G. A. Romakhova, A highly effective combined plant with steam cooling of the gas turbine, *Teploenergetika* No. 3, 19–23 (1990).
- V. A. Babenko, Hydrodynamic and thermal calculation of a collector heat exchanger with variable coolant properties, *J. Engng Phys.* **59**(1), 131–141 (1990).
- B. Ye. Baigaliyev and R. M. Salakhutdinov, A mathematical model of a plastic tube-type heat exchanger, *J. Engng Phys.* **60**(2), 297–303 (1991).
- I. M. Blinchevskiy and S. P. Yermolayev, Thermal resistance of the evaporation zone of a heat pipe having a threaded capillary system, *J. Engng Phys.* **60**(3), 363–368 (1991).
- V. A. Bogachev, V. M. Yeroshenko and Ye. B. Melamed, Experimental study of the effect of temperature and stresses on the magnetization of boiler tubes, *J. Engng Phys.* **60**(2), 270–277 (1991).
- L. M. Boikov, Estimation of the drying efficiency in the case of different means of energy supply, *J. Engng Phys.* **60**(3), 442–449 (1991).
- M. A. Brich, V. T. Borukhov, M. A. Geller and M. S. Zheludkevich, Heat transfer of a water-air flow with the metal surface, *Prom. Teplotekh.* **12**(6), 58–62 (1990).
- A. F. Bulyandra and A. S. Bessarab, The governing drying properties of food stuffs and their classification, *Prom. Teplotekh.* **12**(6), 54–58 (1990).
- A. A. Dolinskiy, I. L. Pioro and S. A. Tikhonovskiy, Correlation of experimental data on the limiting heat and mass transfer in two-phase thermosyphons with boiling antifreezes, *Prom. Teplotekh.* **12**(6), 9–17 (1990).
- O. A. Dolinskiy and V. G. Rifert, Laminar film steam condensation inside of a horizontal tube, *Prom. Teplotekh.* **12**(6), 42–50 (1990).
- Ye. P. Dyban and E. A. Fridman, Determination of the relaxation scales in the turbulent and quasi-turbulent boundary layers of a plate, *Prom. Teplotekh.* **12**(6), 17–24 (1990).
- V. A. Dyundin, G. N. Danilova, Yu. A. Volnykh and N. V. Tovaras, Intense heat transfer surfaces for shell-and-tube evaporators, *Teploenergetika* No. 12, 18–22 (1990).
- O. N. Favorskiy, G. G. Olkhovskiy, A. I. Mekhanikov and

- V. I. Goncharov and D. V. Goncharov, Toward the problem of reducing SO_2 discharge by thermal power engineering plants, *Teploenergetika* No. 6, 26–28 (1990).
- A. A. Kalashnikov, V. V. Lysko and V. V. Moskalenko, Expert estimation of the technical level of power engineering equipment, *Teploenergetika* No. 12, 54–57 (1990).
- V. Ye. Karyakin, Yu. Ye. Karyakin and A. Ya. Nesterov, Calculation of viscous fluid swirled flows in axisymmetric channels of arbitrary shape, *Vesti AN BSSR, Ser. Fiz.-Energ. Navuk* No. 2, 82–89 (1990).
- A. B. Katrich and V. V. Kamyshan, Determination of the distribution functions for heat and mass transfer characteristics using bolometric converters, *J. Engng Phys.* **59**(2), 208–211 (1990).
- A. A. Khalatov, A. A. Kashchenko and S. A. Khalatov, Heat transfer and hydrodynamics on the end face surface of curvilinear channels and nozzle apparatus of turbines, *Prom. Teplotekh.* **12**(4), 30–38 (1990).
- A. A. Khalatov, I. V. Shevchuk and M. M. Mitrakhovich, Numerical simulation of dynamic and thermal boundary layers on a convex surface, *Prom. Teplotekh.* **12**(6), 28–34 (1990).
- V. A. Kirakosyan, Ye. Yu. Lavrovskaya and A. P. Baskakov, On gas motion in a cyclone heat exchanger, *J. Engng Phys.* **60**(2), 277–284 (1991).
- V. L. Kolpashchikov, Yu. I. Lanin, O. G. Martynenko and A. I. Shnip, On possible expansion of the region of fiber drawing stability, *J. Engng Phys.* **59**(1), 26–34 (1990).
- A. S. Komendantov, Yu. A. Kuzma-Kichta, V. V. Panin and M. N. Burdinin, Investigation of heat transfer in the transient and post-critical regions of a coil, *Teploenergetika* No. 10, 25–29 (1990).
- Yu. G. Korsov, The ways of development of gas-turbine plants for the power engineering of the USSR, *Teploenergetika* No. 3, 9–14 (1990).
- G. V. Kovalenko and Ye. Yu. Seleznova, Use of the gas pulsed heating energy for organizing flow in the gas-discharge chamber closed loop, *Prom. Teplotekh.* **12**(6), 34–39 (1990).
- Yu. M. Matsevityi, A. V. Multanovskiy and I. A. Nemirovskiy, Optimization of thermal engineering processes using the control and identification methods, *J. Engng Phys.* **59**(2), 298–308 (1990).
- Yu. N. Marr, Correlation of data on heat transfer in plate-fin heat exchangers with short displaced fins, *Teploenergetika* No. 5, 54–58 (1990).
- A. A. Mikhalevich, V. I. Nikolayev and V. K. Fedosova, The method of finite elements as applied to calculation of flow and heat transfer in the elements of tubular heat exchangers, *J. Engng Phys.* **59**(5), 747–758 (1990).
- V. A. Petrov and M. I. Kulagina, Determination of the computational minimal temperature of the tube wall metal of air heaters, *Teploenergetika* No. 5, 63–65 (1990).
- Ye. N. Pismennyi, Means for perfecting heat exchangers made of laterally finned tubes (Review), *Prom. Teplotekh.* **12**(4), 3–9 (1990).
- G. I. Plisskin, A method for technical diagnostics of the formation of deposits on the heat transfer surface of boilers and turbine condensers, *Teploenergetika* No. 2, 34–36 (1990).
- O. A. Povarov, G. V. Tomarov and V. N. Zharov, Erosion-corrosion of the elements of saturated-steam turbine plants, *Teploenergetika* No. 12, 27–32 (1990).
- V. P. Protsenko, A. A. Zaitsev and V. N. Starshinin, Heat pumping plants with the postcritical parameters of the working body, *Teploenergetika* No. 6, 50–53 (1990).
- V. Ya. Rotach, A system approach to the development of the automatic control of technological processes, *Teploenergetika* No. 10, 61–64 (1990).
- M. G. Semena, Yu. A. Khmelev and Ye. V. Shevel, The laws governing liquid motion in smooth-wall rotating heat pipes with a displaced axis of rotation, *J. Engng Phys.* **60**(3), 368–372 (1991).
- A. L. Shvarts, V. A. Lokshin, G. G. Gorlanov and V. N. Grebennikov, Temperature regime of the heat transfer surface of vapour-vapour heat exchangers in the course of cooling and condensation of the heating vapour and heating of moist vapour, *Teploenergetika* No. 6, 53–58 (1990).
- N. Yu. Teryayeva, V. I. Lutsenko and V. F. Prisnyakov, An approximate method for calculating the deposition of particles on a cylinder in a cross-flow with gas screening, *Prom. Teplotekh.* **12**(6), 24–28 (1990).
- P. V. Tsoi, Toward the theory underlying the developments of hybrid analytical methods for calculating heat and mass transfer processes, *J. Engng Phys.* **59**(3), 395–403 (1990).
- L. L. Vasiliev, Use of the energy of the Earth with the aid of heat pipes, *J. Engng Phys.* **59**(3), 488–492 (1990).
- V. I. Yeliseyev and Yu. P. Sovit, Hydrodynamics and heat transfer of a moving fibre bundle in a plane channel of a heating furnace, *Vesti AN BSSR, Ser. Fiz.-Energ. Navuk* No. 1, 87–95 (1991).
- V. A. Zinchenko and A. Ye. Yerinov, Heat transfer in a cylindrical chamber with incomplete premixing burners, *Prom. Teplotekh.* **12**(4), 104–108 (1990).

HEAT AND MASS TRANSFER IN BUILDINGS

Ye. K. Jordanishvili, The use of the Peltier effect reversibility to reduce heat dissipating surfaces in refrigerator batteries, *J. Engng Phys.* **60**(3), 453–458 (1991).

HEAT AND MASS TRANSFER IN THE ENVIRONMENT

- F. G. Agayev, N. L. Ogorodnik, V. A. Kucheryavyi, V. A. Skordinskii and I. I. Sogor, Deterministic approaches to mathematical simulation of heat and mass exchange processes in the municipal ecosystems, *Prepr. No. 94 of the Scientific-Industrial Association for Space Studies* (1990).
- G. V. Averin and A. K. Yakovenko, Concerning the determination of the eddy diffusion and heat conduction coefficients in open pit mining, *Fiz.-Tekh. Probl. Razrab. Polez. Iskop.* No. 5, 90–92 (1990).
- N. A. Bozhkov, V. K. Zantsev and S. N. Obruch, Computational-experimental studies of combined heat transfer in high-porous composites, *J. Engng Phys.* **59**(4), 554–562 (1990).
- A. V. Dzyuba, A. G. Osipov and G. N. Panin, The trends in the temporal and spatial variability of hydrometeorological characteristics determining heat and moisture exchange between the Caspian Sea and the atmosphere, *Vodn. Resursy* No. 5, 17–32 (1990).
- Yu. F. Goryshov, I. N. Nadyrov, S. R. Ashikhmin and A. P. Kunevich, Heat transfer of a single-phase boiling-up coolant flowing in a channel with a porous insert, *J. Engng Phys.* **60**(2), 252–258 (1991).
- Ya. L. Gotlib, A. I. Khudyakova and S. N. Nazarenko, Specific features of the thermal regime of the Siberian deep water reservoirs, *Tr. Gos. Gidrol. Inst.* No. 8, 275–282 (1990).
- Yu. A. Iljin, G. N. Panin, N. N. Popov, I. A. Skorokhvatov, F. O. Tserevitinov, O. N. Chernyshev, V. I. Shevchenko and V. T. Grigoriev, The results of laboratory and field investigations of the thermal regime of the near-surface layer of water. In *Proc. of the 5th All-Union Hydrologic Congress: Lakes and Water Reservoirs*, Vol. 8, pp. 283–289. Leningrad (1990).
- V. V. Ivanov, V. I. Babenkov, I. L. Dunin and K. V. Prushkovskiy, Determination of heat losses in the underground channels of heat conductors, *Izv. VUZov, Stroit. Arkhit.* No. 8, 89–93 (1991).
- A. A. Kislytsyn and R. I. Nigmatulin, Numerical simulation of the process of heating a petroleum bed by a high-frequency electromagnetic radiation, *Zh. Prikl. Mekh. Tekh. Fiz.* No. 4, 59–64 (1990).
- V. A. Kissin, A. M. Prudovskiy, S. I. Yegorshin and N. V.

- Ovinova, Heat and mass transfer in shallow water pools with prevailing forced convection. In *Proc. of the 5th All-Union Hydrologic Congress: Lakes and Water Reservoirs*, Vol. 8, pp. 336–349. Leningrad (1990).
- Yu. N. Kolchik and V. P. Chernyak, Temperature field in the system 'mining-massif' in the course of ice formation. *Prom. Teplotekhn.* 12(4), 47–51 (1990).
- Ya. A. Kovlyanskiy and A. O. Los, Some ways for improving and increasing the reliability of the pipes of heat supply systems. *Teploenergetika* No. 9, 19–22 (1990).
- P. G. Krasnomovets, N. V. Svyatetskiy, N. I. Navoyeva and N. I. Ostrovskiy, Heat and mass transfer processes in the air-cooled chambers for storing frozen meat. *Kholod. Tekhnol.* No. 50, 88–94 (1990).
- A. D. Krivoshein, Concerning the problem of the effect of air filtration on the thermal stability of the enclosing constructions of buildings. *Izv. VUZov, Stroit. Arkhit.* No. 8, 85–88 (1990).
- A. A. Kurbanov, The laws governing the distribution of the geothermal conditions in the deep-seated zone of the Dagestan. In *Geothermy*, Vol. 4, pp. 58–69. Makhachkala (1989).
- A. S. Litvinov, The structure and variability of temperature field in water reservoirs. In *Proc. of the 5th All-Union Hydrologic Congress: Lakes and Water Reservoirs*, Vol. 8, pp. 289–294. Leningrad (1990).
- F. V. Negoda and A. P. Dadanyuk, Simulation and optimization of the heat and mass transfer processes in inclined diffusion apparatus. In *Heat and Mass Transfer Processes in Food Industry*, pp. 198–203. Izd Kiev. Tekhn. Inst. Pishch. Prom., Kiev (1990).
- A. P. Netyukhailo and E. D. Telezhkin, Formation of thermal stratification in slightly heated water reservoirs. In *Proc. of the 5th All-Union Hydrologic Congress: Lakes and Water Reservoirs*, Vol. 8, pp. 262–268. Leningrad (1990).
- I. K. Nikitin, A. G. Kostin and V. N. Domanov, Heat transfer to the atmosphere and calculations of evaporation from the surfaces of natural and heated reservoirs. In *Proc. of the 5th All-Union Hydrologic Congress: Lakes and Water Reservoirs*, Vol. 8, pp. 307–312. Leningrad (1990).
- O. I. Martynova, A. S. Sedlov and B. S. Fedoseyev, Problems and some ways of the ecological improvement of water supply at thermal power stations. *Teploenergetika* No. 6, 2–8 (1990).
- V. N. Pakhomov, Heat and mass transfer in the insulation of refrigerators. In *Heat and Mass Transfer Processes in Food Industry*, pp. 29–34. Izd. Kiev. Tekhn. Inst. Pishch. Prom., Kiev (1990).
- A. G. Perekhozhentsev, Calculation of the moist regime of the inhomogeneous regions over the external enclosing constructions of buildings on the basis of the moisture potential. In *Problems of Heat Transfer in Construction*, pp. 38–48. Izd. RISI, Rostov-on-the-Don (1990).
- I. I. Rokhlin, Development and investigation of thermal three-layered wall panels for the rural civil engineering. *Planir. Zastr. Blagoustr. Syol Ukr. SSR* (Kiev) No. 13, 83–86 (1990).
- L. N. Sadofiyeva, Effect of the air heating system on the temperature regime of enclosing constructions. In *The Problems of Engineering Instrumentation in the Civil Engineering of the Northern Region*, pp. 5–13. Leningrad (1989).
- V. I. Shevchenko, Effect of high-temperature heating on the destructive viscosity and durability of concrete. In *Problems of Heat Transfer in Construction*, pp. 87–99. Izd. RISI, Rostov-on-the-Don (1990).
- M. N. Shimarayev, The thermal regime of deep lakes (on the example of the Baikal lake). In *Proc. of the 5th All-Union Hydrologic Congress: Lakes and Water Reservoirs*, Vol. 8, pp. 294–307. Leningrad (1990).
- V. G. Sobolev and Ye. M. Tsykunova, Thawing of perennially frozen ground under the heat pipeline systems after the damage of pipelines. In *Scientific-Engineering Problems of the Development of Heat Supply in the USSR*, pp. 184–189. Moscow (1989).
- O. V. Stratiyenko, A mathematical model of the extraction process. In *Heat and Mass Transfer Processes in Food Industry*, pp. 131–137. Izd. Kiev. Tekhn. Inst. Pishch. Prom., Kiev (1990).
- V. V. Tolstykh, V. A. Dzhun, V. V. Fot, V. A. Yashin and A. Yu. Shevchenko, The procedure for calculating the systems of producing the thermal comfort for the operator in the cabins of transport facilities. *Kholod. Tekhnol.* No. 50, 68–74 (1990).
- P. A. Yanitskiy, Thermal interaction of pipelines in banks with frozen base. *Izv. AN SSSR, Energ. Transp.* No. 3, 136–142 (1990).
- V. Z. Zhadan, I. S. Svyatnaya and S. N. Zharova, Storage of apples in a modified gas medium with vermiculite. *Kholod. Tekhnol.* No. 50, 110–114 (1990).
- L. B. Zimin, Calculation of heat and mass transfer between a ventilating jet and a moist mining surface. *Razrab. Mestorozhhd. Polezn. Iskop.* No. 86, 43–46 (1990).