

CONTENTS LISTS

JOURNAL OF ENGINEERING PHYSICS

(Published in the U.S.S.R. in Russian with English abstracts)

Volume VIII, No. 4

April, 1965

	Page
I. N. SADIKOV: Laminar heat transfer in the entrance of a rectangular passage	423
A. V. PANYUSHKIN and L. S. KOTOUsov: Thermal diffusion of binary mixtures H ₂ -CCL ₂ F: and H ₂ -CHClF ₂	430
L. N. KHITRIN and A. L. MOSSE: Concentration of solids in suspension flow	432
G. S. KHODAKOV and A. I. VILSHANSKY: Some problems of destruction of solids by jets	439
M. I. VIVDENKO and K. N. SHABALIN: On the mechanism of jet disruption into large drops	445
I. S. MARKOV and B. G. KHUDENKO: Mixing of intersecting turbulent jets	447
Z. I. FUR: Dependence of combustion rate on pressure in the relaxation theory of combustion propagation	451
Z. T. GALLIULIN, B. L. KRIVOSHEIN and V. I. CHERNIKIN: Thermal interference of parallel gas lines with non-adiabatic real gas flow	456
G. T. SERGEEV: Temperature field of a porous body with transpiration cooling	463
N. A. PAVLOV: Temperature fields in steel slabs under high-rate induction heating	467
G. A. SURKOV: Solution of unsteady-state heat-conduction problems for hollow spheres with movable internal boundary	473
V. I. KVALVASSER and YA. F. RUTNER: Green functions for boundary-value problems of the heat-conduction equation for regions with uniformly moving boundaries	479
YU. P. OSMININ: Density of liquid alkali metals	485
L. P. KHOLPANOV: Wave flow of thin liquid layers on a vertical surface	488
V. A. NAER: Transient regimes of thermal electrical cooling and heating units	493
V. A. MIZYUMSKY: Rheological properties of some clay soils	499
V. K. SHCHUKIN: Application of the method of a thick wall to heat transfer of a tube in a transverse flow	504
L. F. YANKELEV and V. S. ROIFE: Quick measurement of a heat-conduction coefficient by heating or cooling a thermocouple	511
F. A. MAKHLIS and A. KH. BREGER: Investigation of γ -radiation propagation in a substance by the similarity theory methods	516

Letters to the Editor

YU. I. OREKHOV and I. I. SIDOROVA: Comments on the paper "Analogue computation of heat exchangers as controlled objects with distributed parameters" by D. A. Andriyanov and I. M. Maslennikov (<i>J. Engng Phys.</i> VII, No. 4, 1964)	523
G. N. ALEKSEEV: Gas control of nuclear reactors	525
B. M. BERKOVSKY: Precise numerical solutions of boundary-layer equations of pseudoplastic liquids	528

Discussion

A. E. ZARYANKIN: Calculation of losses in diffuser elements	531
A. SH. DORFMAN, M. M. NAZARCHUK, N. I. POLSKY and M. I. SAIKOVSKY: On calculation of losses in diffusers	536
A. S. GINEVSKY: Calculation of hydraulic resistance of channels with separated flow and flow without separation	540

Reader's Guide

<i>International Journal of Heat and Mass Transfer</i> , Vol. 8, No. 1 (January 1965)	546
Heat and Mass Transfer Bibliography	549

JOURNAL OF ENGINEERING PHYSICS

(Published in the U.S.S.R. in Russian with English abstracts)

Volume VIII, No. 5

May, 1965

	Page
I. A. KOMAROV: Heat transfer accompanied by vapor condensation from a superheated vapour-gas mixture	563
E. V. VLASOV: The study of turbulence involving determination of jet acoustic characteristics	568
B. A. BALANIN: Apparent mass of a supersonic jet with uncalculated outflow regimes	574
L. P. KHOLPANOV: A contribution to the theory of two-phase film mass transfer with no injection or blowing on a horizontal surface	579
K. E. DZHAUGASHTIN: Propagation of a plane electrically conducting liquid jet	586
V. S. PETROVSKY: Unsteady heating for removing ice from a solid non-metallic blade of a fan	593
YU. E. FRAIMAN and G. A. SURKOV: The effect of axial heat fluxes on the temperature field of a hollow cylinder	597
V. F. MIRONOV: Solution of differential heat- and mass-transfer equations for a laminar boundary layer of a binary gas mixture round a plane slab	602
V. T. ALEKSANDROV: Determination of angle radiation coefficients for a system of two coaxial cylindrical bodies	609
A. S. NEVSKY: On possibility of a single approach to various cases of radiant heat transfer	613
A. M. GRISHEN: Linearization of the thermal explosion equation and stability of its solutions with boundary conditions of the third kind	620
I. A. Burovoi and G. I. SVETOZAROVA: Determination of a mixing coefficient in a fluidized-bed reactor	627
R. S. KUZNETSKY: Enthalpy and liquid boiling site in a heated pipe	632
I. E. IDELCHIK: A method of calculation of the flow distribution along contact, filtering and other cylindrical apparatuses	635
L. S. AMARYAN, E. T. BAZIN and N. V. CHURAEV: Moisture transfer in porous bodies under strain	639
V. KH. NI: A two-dimensional mixed boundary-value problem of heat and mass transfer with multiple roots of the characteristic equation	644
YU. L. ROZENSHTOK and A. M. GLOBUS: On a measure of inertness for simultaneous heat- and mass-transfer process	653
SH. N. PLYAT and L. B. SAPOZHNIKOV: Evaluation of integrals of the type	
$I_{(2i+1)/2}(b, -c^2, \tau) = c_i \int_0^\tau \frac{[\exp b(\theta - \tau) - c^2/\theta]}{\theta^{(2i+1)/2}} d\theta \quad (i = 0, 1, \dots)$	656
V. I. KAIDANOV and I. S. LISKER: Estimation of galvano- and thermo-magnetic effects in semiconductors	661
L. A. KOZDOBA, L. V. KHYAZEV and I. D. KONOPLYEV: Asymmetric R- and R-C networks for solution of a non-linear unsteady heat-conduction equation	667
F. A. MAKHLIS, L. A. SUGAK, N. N. GALKINA and S. A. RUMYANTSEV: Calculation of absorbed energy of gamma-radiation	675
<i>Letters to the Editor</i>	
V. I. TOKMAKOV: The relation between heat flux and sound pressure of noise of boiling liquid	680
D. A. PEREVERZEV: A particular two-dimensional problem of steady state heat conduction	682
N. D. KOVALENKO: Perturbations of a supersonic flow due to discrete or continuously distributed heat and mass sources	684
YU. A. SAMOILOVICH: On thermal stresses in a long prism of a rectangular cross-section	687
<i>Discussions</i>	
T. S. ALEKSEEV: On the paper "On the nature of Ranque's effect", (J. Engng Phys. VII, No. 4, 1964	692
<i>Reader's Guide</i>	
International Journal of Heat and Mass Transfer: Vol. 8, No. 2 (February 1965)	697

JOURNAL OF ENGINEERING PHYSICS*(Published in the U.S.S.R. in Russian with English abstracts)**Volume VIII, No. 6**June, 1965*

	<i>Page</i>
E. P. VOLCHKOV and V. YA. LEVCHENKO: Thermal turbulent boundary layer on a flat plate with an unheated section	703
YU. L. ROZENSHTOK: Application of a boundary-layer theory method to solution of combined heat and mass transfer problems	707
YU. I. BORISOV and L. Z. KHODAK: The mechanism of loose material flow through the outlet	712
M. M. NAZARCHUK: On the validity of methods employing the Reynolds analogy for gas flow in tubes	720
D. A. PEREVERZEV: Some steady-state temperature fields in a semi-infinite body with cylindrical heat sources	725
A. S. SHTERNBERG, R. Z. TSEITLINA and I. D. SOKOLOV: Drying of peat insulating slabs by the pressure relief method	730
B. A. ARKADIEV, V. M. GANNITSA and N. B. POLTORATSKAYA: A problem on heating a flange joint	735
A. S. GINZBURG, V. V. KRASNICKOV and N. G. SELYUKOV: Optical properties of materials treated by thermal radiation	742
YU. A. SAMOILOVICH: Solution of heat-conduction problems with variable thermal coefficients by the network method	747
G. A. VARSHAVSKY, E. M. GERMEIER and D. V. FEDOSEEV: Particular plane heat-conduction problems with mixed boundary conditions	754
E. I. KIM, V. T. OMELCHENKO and S. N. KHARIN: Application of the solution of the heat-conduction equation with discontinuous coefficients to the problem of electrical contacts	761
I. YA. EMELIANOV, P. A. GAVRILOV and B. N. SELIVERSTOV: Study of dynamic properties of heat exchangers by the correlation analysis	768
A. L. BURKA and N. A. RUBTSOV: Transient radiative heat transfer of two opaque solids	773
G. HORVAY: Modified Stefan problem	779
YU. A. BUEVICH: A particular class of solutions of the first Stefan boundary-value problem in an infinite space in cases of plane axial and spherical symmetry	801
D. P. OSANOV: Temperature distribution in a gamma-ray shielding	807
A. P. CHERNOV: Aerodynamic study of spherical chambers	815
<i>Letters to the Editor</i>	
D. A. LABUNSTOV: On calculation of a condensation coefficient	820
N. N. KOCHUROVA: Calculation of a condensation coefficient	822
<i>Prominent Soviet Scientists</i>	
LEV NIKOLAEVICH KHITRIN	824
<i>Reader's Guide</i>	
<i>International Journal of Heat and Mass Transfer</i> : Vol. 8, No. 3 (March 1965)	826
Heat and Mass Transfer Bibliography	829

JOURNAL OF ENGINEERING PHYSICS*(Published in the U.S.S.R. in Russian with English abstracts)**Volume IX, No. 1**July, 1965*

	<i>Page</i>
B. P. MIRONOV: Turbulent boundary layer in a supersonic diffusor	3
A. I. LEONTIEV and A. G. KIRDYASHKIN: Free-convection heat transfer in horizontal slots and over a horizontal surface of a large volume	9
B. A. ARKADIEV: On free heat convection in turbine cavities	15
G. I. BOBROVA and G. D. RABINOVICH: Calculation of thermal-diffusion periodic columns with perforated baffles	20
V. S. LERNER: Determination of optimum operating conditions of converters	25
G. I. SVETOZAROVA and I. A. BUROV: Mathematical models of drying in a fluidized bed	34
O. B. TSVETKOV: Application of the regular thermal regime methods to investigation of thermal conductivity of liquid freon	42
A. G. KHARLAMOV: Thermal conductivity of packing of ceramic pellets	48
V. F. DUNSKY and N. V. NIKITIN: Spraying of liquid by a rotating disk and "secondary" atomization of drops	54
O. I. YASKO: On the heat-transfer mechanism in an arc with transverse blowing	61
V. M. SHEVELYEV and B. L. MARKOV: Measurement of radiant properties of flame by a radiometer without condensing agents	64
A. A. BUZNIKOV and B. P. KOZYREV: Absorption of a slightly heated black-body radiation by atmosphere	70
P. K. KONAKOV: On the absorption coefficient of a grey medium	77
V. V. IVANOV and V. V. SALOMATOV: On temperature field calculation in solids with a variable heat-transfer coefficient	83
D. P. KOLODNY: General definition of adiabatic exponent	86
O. P. ANASHKIN: Estimation of evaporation losses in helium Dewar flasks without nitrogen cooling	91
E. A. KAZOVSKY and V. P. KARTSEV: The problem of heat fluxes in super-conducting devices	96
P. A. NORDEN: The quenching distance for flames of CO ₂ -air mixtures	102
L. E. BELOUSOVA, V. P. KIRSANOV and I. S. MARSHAK: Limiting heat fluxes of pulse tubes	105
I. E. NAKHUTIN and D. V. OCHKIN: Sorption of radioactive substance in a chromatographic column	112
G. D. RABINOVICH: Calculation of recuperators with variable thermal properties of heat-transfer fluids	117
<i>Reader's Guide</i>	
<i>International Journal of Heat and Mass Transfer</i> , Vol. 7, No. 4 (April 1965)	126
<i>Heat Transfer Bibliography</i>	129