

HEAT TRANSFER BIBLIOGRAPHY

E. R. G. ECKERT, E. M. SPARROW, W. E. IBELE and R. J. GOLDSTEIN

Heat Transfer Laboratory, Department of Mechanical Engineering,
University of Minnesota, Minneapolis, Minnesota

(Received 17 September 1963)

APPLICATIONS

- Y. N. ALEKSENKO and V. A. KHRAMCHENKOV, Thermal stability of the organic heat-transfer agent monoisopropylbiphenyl, *Soviet J. Atomic Energy* 13, No. 1, 635 (1963).
- Y. E. BAGDASAROV and O. D. KAZACHKOVSKII, Calculating the transient temperature field in a reactor tube and the thermoelastic stresses in the fuel element cladding, *Soviet J. Atomic Energy* 13, No. 3, 842 (1963).
- E. BLUE and J. H. INGOLD, Optimization of a radiation-cooled thermionic converter, *AIAA J.* 1, No. 5, 1155 (1963).
- T. R. BUMP, Average temperatures in simple heat exchanges, *J. Heat Transfer* C85, No. 2, 182 (1963).
- J. E. BUSH, Heat transfer in a reciprocating hollow piston partially filled with a liquid. Dept. of Mechanical Engineering, Stanford University, Stanford, Calif., Technical Report No. 56 (1963).
- K. C. CHAO, Reradiation to furnace tubes. Effect of tube-to-wall clearance, *J. Amer. Inst. Chem. Engrs* 9, No. 4, 555 (1963).
- M. H. COBBLE, Heat exchangers for solar concentrators, *Solar Energy* 7, No. 1, 18 (1963).
- M. H. COBBLE, Temperature fields of solids heated by solar concentrators, *Solar Energy* 7, No. 2, 134 (1963).
- M. H. COBBLE, Analysis of a conical solar concentrator, *Solar Energy* 7, No. 2, 75 (1963).
- F. R. S. DRESSLER, Surface temperatures due to localized removal of a high-emittance coating on the thin-plate sections of a re-entry vehicle, *AIAA J.* 1, No. 6, 1416 (1963).
- W. H. EMERSON, Shell-side pressure drop and heat transfer with turbulent flow in segmentally baffled shell-and-tube heat exchangers, *Int. J. Heat Mass Transfer* 6, No. 8, 649 (1963).
- E. A. FARBER, W. A. SMITH, C. W. PENNINGTON and J. C. REED, Theoretical analysis of solar heat gain through insulating glass with inside shading, *ASHRAE J.* 5, No. 8, 79 (1963).
- E. A. GRENS II and R. A. McKEAN, Temperature maxima in countercurrent heat exchangers with internal heat generation, *Chem. Engng Sci.* 18, No. 5, 291 (1963).
- M. IDNURM and K. LANDECKER, Experiments with Peltier junctions with high transient currents, *J. Appl. Phys.* 34, No. 6, 1806 (1963).
- V. L. IVANOV, A. G. ZISIMOV and I. M. STANISHEVSKIY, Producing cooling channels in gas turbine blades, *Energomashinostroyeniye*, No. 4, 31 (1963).
- C. E. JONES, A method for predicting the mean thermal conductivity of insulating materials at other than experimental conditions, *J. Heat Transfer* C85, No. 2, 185 (1963).
- H. C. KAO, A theory of self-acting, gas-lubricated bearings with heat transfer through surfaces, *J. Basic Engng* 85D, No. 2, 324 (1963).
- N. KATTCHEE and W. V. MACKEWICZ, Effects of boundary-layer turbulence promoters on the local film coefficients of ML-1 fuel elements, *Nucl. Sci. Engng* 16, No. 1, 31 (1963).
- B. Y. H. LIU and R. C. JORDAN, The long term average performance of flat-plate solar energy collectors, *Solar Energy* 7, No. 2, 53 (1963).
- R. E. LEE, Heat transfer to the throat region of a solid propellant rocket nozzle. U.S. Naval Ordnance Laboratory, White Oak, Maryland, NOLR TR 62-72 (1963).
- G. O. G. LÖF and J. A. DUFFIE, Optimization of focussing solar-collector design, *J. Engng Power* 85A, No. 3, 221 (1963).
- K. I. PAREZEWSKI and P. N. RENZI, Scale model studies of temperature distributions in internally heated enclosures, *ASHRAE J.* 5, No. 7, 60 (1963).
- W. C. REYNOLDS, A design-oriented optimization of simple tapered radiating fins, *J. Heat Transfer* C85, No. 3, 193 (1963).
- J. G. Z. ROTEM and A. SOLAN, Transient temperature response to a test room filled with well-mixed fluid of finite heat capacity, *Bull. Res. Coun. Israel* 11C, No. 3, 275 (1962).
- O. VUORELAINEN, A practical method for calculation of the heat losses into the ground from buildings erected immediately on the ground. The State Institute for Technical Research, Julkaisu 76 Publication, Helsinki, Finland (1963).
- D. A. WILLIAMS, T. A. LAPPIN and J. A. DUFFIE, Selective radiation properties of particular coatings, *J. Engng Power* 85A, No. 3, 213 (1963).

BOOKS

- Flow Measurement in Closed Conduits.* Department of Scientific and Industrial Research, Her Majesty's Stationery Office, Edinburgh, Scotland (1963).
- Proceedings of the 1962 Heat Transfer and Fluid Mechanics Institute.* Stanford University Press, California (1962).

BOUNDARY-LAYER FLOW

- W. B. COTTINGHAM and R. J. GROSH, Surface recombination and heat transfer in a dissociated diatomic gas—Part I, *J. Heat Transfer* **C85**, No. 2, 101 (1963).
- W. B. COTTINGHAM and R. J. GROSH, Surface recombination and heat transfer in a dissociated diatomic Gas—Part 2, *J. Heat Transfer* **C85**, No. 2, 107 (1963).
- J. A. FAY and N. H. KEMP, Theory of stagnation-point heat transfer in a partially ionized diatomic gas. AVCO-Everett Research Laboratory, Research Report 144, BSD-TDR-62-347 (1963).
- S. I. FREEDMAN and J. KAYE, Simultaneous heat and mass transfer in the compressible laminar boundary layer of a dissociating gas, *Int. J. Heat Mass Transfer* **6**, No. 6, 425 (1963).
- J. J. GINOUS, An exact solution to the compressible laminar boundary-layer equation for the flat plate with constant heat flux. Training Center for Experimental Aerodynamics, Rhode-Saint-Genese, Belgium, TCEA TN 11 (1963).
- B. J. GRIFFITH and C. H. LEWIS, A study of laminar heat transfer to spherically blunted cones and hemisphere-cylinders at hypersonic conditions. Arnold Engineering Development Center, Air Force Systems Command, USAF, AEDC-TDR-62-102 (1963).
- R. A. HARTUNIAN and S. W. LIU, Slow flow of a dissociated gas about a catalytic probe, *Phys. Fluids* **6**, No. 3, 349 (1963).
- C. C. HORSTMAN, Pressure and heat transfer measurements over a circular cylinder at angles of attack up to 15° at $M = 11$. Aeronautical Research Laboratories, Office of Aerospace Research, USAF ARL 63-81 (1963).
- G. C. HUANG, Investigations of heat-transfer coefficients for air flow through round jets impinging normal to a heat-transfer surface, *J. Heat Transfer* **C85**, No. 3, 237 (1963).
- A. L. KISTLER and W. S. CHEN, A fluctuating pressure field in a supersonic turbulent boundary layer, *J. Fluid Mech.* **16**, Part 1, 41 (1963).
- E. L. KNUTH, Forced-convection heat transfers with time-dependent surface temperatures, *AIAA J.* **1**, No. 5, 1227 (1963).
- E. A. KOLDENHOF, Laminar boundary layers on continuous flat and cylindrical surfaces, *J. Amer. Inst. Chem. Engrs* **9**, No. 3, 411 (1963).
- R. L. KOSSON, Approximate solution for laminar boundary layer flow, *AIAA J.* **1**, No. 5, 1088 (1963).
- L. I. KUDRYASHEV and V. A. DZEVUL'SKIY, Demonstrating the existence of heat regularity in a boundary layer in internal problem conditions. Aerospace Information Division, Library of Congress, AID Report T-63-70 (1963).
- S. C. LING, Heat transfer from a small isothermal spanwise strip on an insulated boundary, *J. Heat Transfer* **C85**, No. 3, 230 (1963).
- R. J. MONAGHAN, Boundary layer development under pressure gradients, with particular reference to heat transfer, *Theory and Fundamental Research in Heat Transfer*. Pergamon Press (1963).
- R. M. MARK, Shear flow past flat plates, *J. Fluid Mech.* **14**, Part 3, 452 (1962).
- G. E. MYERS, J. J. SCHAUER and R. H. EUSTIS, Heat transfer to plane turbulent wall heat, *J. Heat Transfer* **C85**, No. 3, 209 (1963).
- L. PASIUK, S. M. HASTINGS and R. CHATHAM, Reynolds-analogy factor for a compressible turbulent boundary layer with a pressure gradient, *AIAA J.* **1**, No. 5, 1201 (1963).
- T. L. PEREL'MAN, Heat exchange in the laminar boundary layer during flow around a thin plate with internal sources. Aerospace Information Division, Library of Congress, AID Report T-63-74 (1963).
- P. H. ROSE and J. O. STANKEVICS, Stagnation point heat transfer measurements in partially ionized air. AVCO-Everett Research Laboratory, Research Report 143, BSD-TDR-62-348 (1963).
- D. E. ROSNER, The apparent chemical kinetics of surface reactions in external flow systems: Diffusional falsification of activation energy and reaction order, *J. Amer. Inst. Chem. Engrs* **9**, No. 3, 321 (1963).
- J. A. SCHETZ, On the approximate solution of viscous-flow problems, *J. Appl. Mech.* **30E**, No. 2, 263 (1963).
- D. B. SPALDING, Contribution to the theory of heat transfer from an isothermal flat plate to a turbulent fluid stream, *J. Engng Phys.* **6**, No. 3, 21 (1963).
- I. STERN, Integrated laminar heat transfer in the windward plane of yawed blunt cones, *AIAA J.* **1**, No. 7, 1668 (1963).
- W. E. STEWART, Forced convection in three-dimensional flows: 1. Asymptotic solutions for fixed interfaces, *J. Amer. Inst. Chem. Engrs* **9**, No. 4, 528 (1963).
- W. SZABLEWSKI, Turbulente Vermischung runder Kaltluftstrahlen mit umgebender ruhender Heissluft, *Int. J. Heat Mass Transfer* **6**, No. 8, 739 (1963).
- H. TONG and W. H. GIEDT, Supersonic stagnation point heat transfer to hemisphere cylinders at low Reynolds numbers. Aeronautical Research Laboratories, Office of Aerospace Research, USAF, ARL 63-25 (1963).
- V. A. VULIS, T. P. LEONTIYEVA, I. B. PALATNIK, Z. B. SAKIPOV and B. P. USTIMENKO, Transfer processes in a free (jet) turbulent boundary layer. Aerospace Information Division, Library of Congress, AID Report T-63-73 (1963).
- J. C. WESTKAEMPER, Step-temperature effects on direct measurements of drag, *AIAA J.* **1**, No. 7, 1708 (1963).

CHANGE OF PHASE

- F. BARTLMÄ, Instationäre Strömungsvorgänge bei Überschreiten der kritischen Warmezufuhr, *Z. Flugw.* **11**, No. 4, 160 (1963).
- E. Q. BASHFORTH, J. B. P. FRASER, H. P. HUTCHINSON and R. M. NEDDERMAN, Two-phase flow in a vertical tube, *Chem. Engng Sci.* **18**, No. 1, 41 (1963).
- A. W. BENNITT, J. G. COLLIER and P. M. C. LACEY, Heat transfer to mixtures of high pressure steam and water in an annulus. Part III. The effect of system pressure on the burn-out heat flux for an internally heated unit. Chemical Engineering Division, Atomic Energy Research Establishment, Harwell, Berkshire, United

- Kingdom Atomic Energy Authority Research Group Report AERE-R 3934 (1963).
- R. S. BRAND, The motion of a plane evaporation front in a superheated liquid. School of Engineering, The University of Connecticut, Storrs, Conn., Technical Report No. 2 (1963).
- Y. P. CHANG, Some possible critical conditions in nucleate boiling, *J. Heat Transfer* C85, No. 2, 89 (1963).
- T. H. K. FREDERKING, Laminar two-phase boundary layers in natural convection film boiling, *ZAMP* 14, No. 3, 207 (1963).
- A. GOUZY and R. SEMERIA, Études cinematographiques de l'ébullition aux hautes pressions. Section des Transferts Thermiques, Commissariat à l'Énergie Atomique, Centre d'Études Nucléaires de Grenoble, Rapport TT No. 27 (1963).
- T. D. HAMIL and S. G. BANKOFF, Growth of a vapour film at a rapidly heated plane surface, *Chem. Engng Sci.* 18, No. 6, 355 (1963).
- G. F. HEWITT and P. C. LOVEGROVE, Comparative film thickness and holdup measurements in vertical annular flow. Chemical Engineering Division, Atomic Energy Research Establishment, Harwell, Berkshire, United Kingdom Atomic Energy Authority Research Group Report AERE-M 1203 (1963).
- D. A. HUBER and J. C. HOEHNE, Pool boiling of benzene, diphenyl, and benzene-diphenyl mixtures under pressure, *J. Heat Transfer* C85, No. 3, 215 (1963).
- H. J. IVEY, Acceleration and the critical heat flux in pool boiling heat transfer, *Proc. Inst. Mech. Engrs* 177, No. 1, 1 (1963).
- S. LEVY, Prediction of two-phase pressure drop and density distribution from mixing length theory, *J. Heat Transfer* C85, No. 2, 137 (1963).
- J. H. LINEARD and V. E. SCHROCK, The effect of pressure, geometry, and the equation of state upon the peak and minimum boiling heat flux, *J. Heat Transfer* C85, No. 3, 261 (1963).
- R. MOISSIS and P. J. BERENSON, On the hydrodynamic transitions in nucleate boiling, *J. Heat Transfer* C85, No. 3, 221 (1963).
- H. MONDIN, L'ébullition et le transfert de chaleur. 7^e Journées de l'Hydraulique de la Société Hydrotechnique de France, Bulles et Gouttes: La Tension Superficie en Hydraulique, Paris (1962).
- J. F. MUIR and R. EICHHORN, Compressible flow of an air-water mixture through a vertical, two-dimensional, converging-diverging nozzle, *Proceedings of the 1963 Heat Transfer and Fluid Mechanics Institute*. Stanford University Press (1963).
- A. NORMAN and P. SPIEGLER, Radiation nucleation of bubbles in water, *Nucl. Sci. Engng* 16, No. 2, 213 (1963).
- S. OSTRACH, A. W. GOLDSTEIN and J. HAMMAN, An analysis of melting boundary layers on decelerating bodies. *NASA TN D-1312* (1962).
- G. C. PINCHERA, Effect of geometry and heater characteristics on the critical heat flux in pool boiling. Comitato Nazionale Energia Nucleare, Servizio P.R.O., D.A.G. e C., Rome (1962).
- E. RUCKENSTEIN, About film boiling heat transfer from a horizontal surface. *Revue de Physique*, Tome VII, No. 3, Académie de la République Populaire Roumaine (1962).
- R. A. RYBIN, Critical thermal loads during the boiling of a saturated liquid in tubes, *Sov. J. Atomic Energy* 13, No. 4, 987 (1963).
- R. SEMERIA, Quelques résultats sur le mécanisme de l'ébullition. 7^e Journées de l'Hydraulique de la Société Hydrotechnique de France, Bulles et Gouttes: La Tension Superficie en Hydraulique, Paris (1962).
- G. E. SIMS, U. AKTÜRK and K. O. EVANS-LUTTERRODT, Simulation of pool boiling heat transfer by gas injection at the interface, *Int. J. Heat Mass Transfer* 6, No. 6, 531 (1963).
- V. N. SMOLIN, V. K. POLYAKOV and V. I. ESIKOV, Heat transfer crisis in steam-generating pipes, *Soviet J. Atomic Energy* 13, No. 4, 968 (1963).
- V. D. SOVERSHENYY and G. A. TIRSKIY, Sublimation of a solid in the environs of a critical point in a plane and axisymmetric gas flow. Aerospace Information Division, Library of Congress, AID Report T-63-68 (1963).
- J. SZEKELY, Mathematical model for heat or mass transfer at the bubble-stirred interface of two immiscible liquids, *Int. J. Heat Mass Transfer*, 6, No. 5, 417 (1963).
- L. TOPPER, A diffusion theory analysis of boiling burn-out in the fog flow regime, *J. Heat Transfer* C85, No. 3, 284 (1963).
- J. W. WESTWATER, Things we don't know about boiling heat transfer, *Theory and Fundamental Research in Heat Transfer*. Pergamon Press (1963).

CHANNEL FLOW

- H. BARROW and Y. LEE, A note on the determination of shearing stress and heat flux around the perimeter of a duct, *J. Roy. Aero. Soc.* 67, No. 631, 448 (1963).
- D. C. BOGUE and A. B. METZNER, Velocity profiles in turbulent pipe flowing Newtonian and non-Newtonian fluids, *IEC Fundamentals* 2, 143 (1963).
- C. BORY, H. CORDIER and H. MOUTON, Convection forcée dans les espaces annulaires. Journées de la Transmission de la Chaleur Institut Français des Combustibles et de l'Energie, Paris (1963).
- M. D. DONNE and F. W. BOWDITCH, Experimental local heat transfer and friction coefficients for sub-sonic laminar transitional and turbulent flow of air or helium in a tube at high temperatures. A.E.E., Winfrith, Dorchester, Dorset, England (1963).
- M. D. DONNE and F. H. BOWDITCH, Local heat transfer and average friction coefficients for subsonic laminar, transitional and turbulent flow of air in a tube at high temperature. A.E.E., Winfrith, Dorchester, Dorset, England. D.P. Report 88 (1962).
- C. C. GROSJEAN, S. PAHOR and J. STRNAD, Heat transfer in laminar flow through a gap, *Appl. Sci. Res.* 11A, No. 3, 292 (1963).
- D. J. GUNN and C. W. W. DARLING, Fluid flow and energy losses in non-circular conduits, *Trans. Instn Chem. Engrs* 41, No. 1, 163 (1963).
- S. C. GUPTA, A least square procedure for the variational

- principle for heat convection in anisotropic medias, *Appl. Sci. Res.* **11A**, No. 3, 311 (1963).
- M. K. JAIN, Heat transfer to laminar flow of visco-elastic liquids through parallel walls, *Appl. Sci. Res.* **11A**, No. 3, 295 (1963).
- W. M. KAYS and E. Y. LEUNG, Heat transfer in annular passages—Hydrodynamically developed turbulent flow with arbitrarily prescribed heat flux, *Int. J. Heat Mass Transfer* **6**, No. 7, 537 (1963).
- R. E. LUNDBERG, P. A. MCCUEN and W. C. REYNOLDS, Heat transfer in annular passages. Hydrodynamically developed laminar flow with arbitrarily prescribed wall temperatures of heat fluxes, *Int. J. Heat Mass Transfer* **6**, No. 6, 495 (1963).
- H. G. MITCHEL, Unified data for the flow of water in pipes, *ASHRAE J.* **5**, No. 8, 93 (1963).
- B. S. PETUKHOV and L. I. ROIZEN, Heat transfer in circular tubes, *J. Engng Phys.* **6**, No. 3, 3 (1963).
- W. C. REYNOLDS, Turbulent heat transfer in a circular tube with variable circumferential heat flux, *Int. J. Heat Mass Transfer* **6**, No. 6, 445 (1963).
- W. C. REYNOLDS, R. E. LUNDBERG and P. A. MCCUEN, Heat transfer in annular passages. General formulation of the problem for arbitrarily prescribed wall temperatures for heat fluxes, *Int. J. Heat Mass Transfer* **6**, No. 6, 483 (1963).
- H. J. SCHMIDT, Berechnungen zum Einfluss des Stoff-transportes bei Wandreaktionen im Ringspalt, *Int. J. Heat Mass Transfer* **6**, No. 8, 719 (1963).
- R. A. SEBAN and E. F. McLAUGHLIN, Heat transfer in tube coils with laminar and turbulent flow, *Int. J. Heat Mass Transfer* **6**, No. 5, 387 (1963).
- R. SIEGEL, Forced convection in a channel with wall capacity and with wall heating variable and axial position and time, *Int. J. Heat Mass Transfer* **6**, No. 7, 607 (1963).
- W. T. SNYDER, An analysis of slug flow heat transfer in an eccentric annulus, *J. Amer. Inst. Chem. Engrs* **9**, No. 4, 503 (1963).
- S. TANIMOTO and T. S. HANRATTY, Fluid temperature fluctuations accompanying turbulent heat transfer in a pipe, *Chem. Engng Sci.* **18**, No. 5, 307 (1963).
- R. A. THOMAS and M. H. COBBLE, Radial flow heat transfer, *J. Heat Transfer* **C85**, No. 2, 189 (1963).
- P. VANSHAW, L. P. REISS and T. J. HANRATTY, Rates of turbulent transfer to a pipe wall in the mass transfer entry region, *J. Amer. Inst. Chem. Engrs* **9**, No. 3, 362 (1963).
- F. S. VORONIN and V. L. LEL'CHUK, Heat transfer in turbulent gas flow through a pipe, *Teploenergetika*, No. 4, 61 (1963).
- D. T. WASAN, C. L. TIEN and C. R. WILKE, Theoretical correlation of velocity and eddy viscosity for flow close to a pipe wall, *J. Amer. Inst. Chem. Engrs* **9**, No. 4, 567 (1963).
- W. E. WILLIAMS, Magnetohydrodynamic flow in a rectangular tube at high Hartmann number, *J. Fluid Mech.* **16**, Part 2, 262 (1963).
- R. A. WOLFFE and C. W. CLUMP, The maximum velocity locus for axial turbulent flow in an eccentric annulus, *J. Amer. Inst. Chem. Engrs* **9**, No. 3, 411 (1963).

CONDUCTION

- H. BUECKNER and G. HORVAY, Heat-transfer coefficient of inviscid fluid freezing onto a moving heat sink, *J. Heat Transfer* **C85**, No. 3, 246 (1963).
- K. S. CHAN, Notes on the solution of thermal conduction problems in solids with variable thermal properties, *J. Mech. Engng Sci.* **5**, No. 2, 172 (1963).
- D. DICKER and M. B. FRIEDMAN, Heat conduction in elliptical cylinders and cylindrical shells, *AIAA J.* **1**, No. 5, 1139 (1963).
- F. ERDOGAN, On the approximate solutions of heat-conduction problems, *J. Heat Transfer* **C85**, No. 3, 203 (1963).
- J. F. HEYDA, Temperature distributions in an orbiting sphere with alternate heating and cooling, *SIAM Rev.* **5**, No. 2, 113 (1963).
- L. L. LYNN and J. E. MEYER, A numerical comparison of the implicit and explicit techniques for the convective boundary condition, *J. Heat Transfer* **C85**, No. 3, 280 (1963).
- A. R. MENDELSON, Transient temperature of a porous-cooled wall, *AIAA J.* **1**, No. 6, 1449 (1963).
- V. K. MIGAI, The effect of heat transfer non-uniformity over the height of the fin on its efficiency, *J. Engng Phys.* **6**, No. 3, 51 (1963).
- N. I. NIKITENKO, Numerical solution of a temperature field problem, *Aviationnaya tekhnika*, No. 1, 26 (1963).
- B. A. PEAVY, Steady state heat conduction in cylinders with multiple continuous line heat sources, *Engng Instr.* **67C**, No. 2, 119 (1963).
- A. W. PRATT and E. F. BALL, Transient cooling of a heated enclosure, *Int. J. Heat Mass Transfer* **6**, No. 8, 703 (1963).
- A. C. RAPIER, T. M. JONES and J. E. McINTOSH, The thermal conductance of uranium dioxide/stainless steel interfaces, *Int. J. Heat Mass Transfer* **6**, No. 5, 397 (1963).
- Y. L. ROZENSHTOK, Temperature field of an infinite plate when temperature of surrounding medium and heat transfer coefficient depends on time, *J. Engng Phys.* **6**, No. 3, 45 (1963).
- O. SVOBODA and J. TUMA, A contribution to the solution of transient heat-transfer problems by means of electric analogy, *J. Heat Transfer* **C85**, No. 2, 132 (1963).
- Y. T. TSUI and F. K. TSOU, Ratio of radial to total heat flow in circular rod, *J. Heat Transfer* **C85**, No. 3, 285 (1963).
- J. H. VANSANI and M. B. LARSON, Heat transfer from a semi-infinite rectangular strip, *J. Heat Transfer* **C85**, No. 2, 191 (1963).

FLOW WITH SEPARATED REGIONS

- D. B. ADARKAR and W. M. KAYS, Heat transfer in wakes, Dept. of Mechanical Engineering, Stanford University, Stanford, California, Technical Report No. 55 (1963).
- M. FAND and P. CHENG, The influence of sound on heat transfer from a cylinder in crossflow, *Int. J. Heat Mass Transfer* **6**, No. 7, 571 (1963).
- L. G. KAUFMAN II and L. MECKLER, Pressure and heat transfer measurements at Mach 5 and 8 for a fin-flat

- plate model (part of an investigation of hypersonic flow separation and control characteristics). Grumman Aircraft Engineering Corporation, Bethpage, New York, Technical Documentary Report No. ASD-TDR-63-235 (1963).
- M. A. GOL'DSHTIK, A mathematical model of separated flows in an incompressible liquid, *Sov. Phys. Dokl.* **7**, No. 12, 1090 (1963).
- H. REICHARDT and R. ERMSHAUS, Impuls- und Wärmeübertragung in Turbulenten Windschatten Hinter Rotationskörpern, *Int. J. Heat Mass Transfer* **5**, 251 (1962).
- P. D. RICHARDSON, On Hilpert's measurements of heat transfer from cylinders transverse to an airstream, *J. Heat Transfer* **C85**, No. 3, 283 (1963).
- P. D. RICHARDSON, Heat and mass transfer in turbulent separated flows, *Chem. Engrg Sci.* **18**, No. 3, 148 (1963).

HEAT AND MASS TRANSFER

- N. IBL, Probleme des Stofftransports in der angewandten Elektrochemie, *Chem.-Ing.-Tech.* **35**, No. 5, 353 (1963).
- B. V. JOHNSON and J. P. HARTNETT, Heat transfer from a cylinder in crossflow with transpiration cooling, *J. Heat Transfer* **C85**, No. 2, 173 (1963).
- V. V. KAFAROV, Analysis of mass transfer processes based on concepts of interphase turbulence. Aerospace Information Division, Library of Congress, AID Report T-63-71 (1963).
- E. L. KNUTH, On two alternative motivations of reference-state expressions for turbulent flows with mass transfers, *AIAA J.* **1**, No. 5, 1206 (1963).
- B. M. LEADON and E. R. BARTLE, On mass transfer effectiveness, *AIAA J.* **1**, No. 5, 1185 (1963).
- T. Y. LI and J. F. GROSS, The effect of pressure gradient in hypersonic flow on interacting shock waves and boundary layer over flat plate with mass transfer at the surface (in Russian), *J. Engng Phys.* **6**, No. 5, 7 (1963).
- A. V. LUJKOV, Heat and mass transfer with transpiration cooling, *Int. J. Heat Mass Transfer* **6**, No. 7, 559 (1963).
- W. M. MANN, JR., Effective displacement thickness for boundary layers with surface mass transfer, *AIAA J.* **1**, No. 5, 1181 (1963).
- P. N. ROMANENKO and V. N. KHARCHENKO, The effect of transverse mass flow on heat transfer and friction drag in a turbulent flow of compressible gas along an arbitrarily shaped surface, *Int. J. Heat Mass Transfer* **6**, No. 8, 727 (1963).
- O. A. RUDENKO-GRITSYUK and A. A. MIKHELEV, Study and mass transfer in capillary bodies under heating, *J. Engng Phys.* **6**, No. 3, 95 (1963).
- M. T. SCHOLTZ and O. TRASS, Mass transfer in the laminar radial wall jet, *J. Amer. Inst. Chem. Engrs* **9**, No. 4, 548 (1963).
- W. W. SHORT and T. A. DANA, Effect of sublimation on stagnation-point heat transfer, *J. Amer. Inst. Chem. Engrs* **9**, No. 4, 509 (1963).
- D. B. SPALDING and S. W. CHI, Mass transfer through laminar boundary layers—4. Class I methods for predicting mass-transfer rates, *Int. J. Heat Mass Transfer* **6**, No. 5, 363 (1963).
- A. N. TIFFORD, Surface mass-transfer correlations, *AIAA J.* **1**, No. 6, 1414 (1963).
- P. V. TSAY, Analytical solutions of a system of heat and mass exchange equations for a semi-limited medium under various boundary conditions. Aerospace Information Division, Library of Congress, AID Report T-63-65 (1963).
- Y. G. YEN and C. TIEN, Laminar heat transfer over a melting plate, modified Leveque problem, *J. Geophys. Res.* **68**, No. 12, 3673 (1963).

LIQUID METALS

- R. W. KELLY, G. M. WOOD and H. V. MARMAN, Development of a high temperature liquid metal turbopump, *J. Engng Power* **85A**, No. 2, 99 (1963).
- R. C. NOYES, An experimental study of sodium-pool boiling heat transfer, *J. Heat Transfer* **C85**, No. 2, 125 (1963).
- A. K. PAPOVYANTS, P. L. KIRILLOV and N. N. IVANOVSKII, A study of heat transfer to molten sodium in tubes, *Sov. J. Atomic Energy* **13**, No. 4, 991 (1963).

LOW DENSITY

- R. CHOW, High speed low density flow near the stagnation point of a blunt body. Aeronautical Research Laboratories, Office of Aerospace Research, USAF, ARL 63-75 (1963).
- R. CHOW, Stagnation point heat transfer of a blunt-nosed body in low-density flow, *AIAA J.* **1**, No. 5, 1220 (1963).
- V. S. GALKIN, Effect of slip in hypersonic flow around bodies, *Inzh. Zh.* **3**, No. 1, 27 (1963).
- S. I. GRIBKOVA and L. C. SHTEMENKO, Experimental investigation of slip and temperature jump in a flow of rarefied air around a solid wall. Aerospace Information Division, Library of Congress, AID Report T-63-64 (1963).
- A. POZZI, Similar solutions in boundary layer slip flow, *AIAA J.* **1**, No. 5, 1219 (1963).
- E. M. SPARROW and V. K. JONSSON, Fluid flow and convective-radiative energy transfer in a parallel-plate channel under free-molecule conditions, *J. Amer. Inst. Chem. Engrs* **9**, No. 4, 509 (1963).
- E. M. SPARROW, V. K. JONSSON and T. S. LUNDGREN, Free-molecule tube flow and adiabatic wall temperatures, *J. Heat Transfer* **C85**, No. 2, 111 (1963).
- K. J. TOURYAN and G. MAISE, Heat transfer to a sphere for the free molecule flow of a nonuniform gas. Mechanical Engineering Department, Princeton University, Princeton, New Jersey, Report HT 5 (1936).

MAGNETOHYDRODYNAMICS

- J. M. CARE and D. W. SWAN, Some transient phenomena in heat transfer resulting from electric stress, *Brit. J. Appl. Sci.* **14**, No. 6, 263 (1963).
- T. V. DAVIES, The magneto-hydrodynamic boundary layer in the two-dimensional steady flow past a semi-infinite flat plate. I. Uniform condition at infinity, *Proc. Roy. Soc. A273*, No. 1355, 496 (1963).

- T. V. DAVIES, The magneto-hydrodynamic boundary layer in the two-dimensional steady flow past a semi-infinite flat plate. III. The influence of an adverse magnetodynamic pressure gradient, *Proc. Roy. Soc. A273*, No. 1355, 518 (1963).
- ELEANOR M. JAMES, The magneto-hydrodynamic boundary layer in the two-dimensional steady flow past a semi-infinite flat plate. II. The Falkner-Skan problem, *Proc. Roy. Soc. A273*, No. 1355, 509 (1963).
- J. J. KAUZLARICH and A. B. CABEL, The momentum integral approximation for compressible magnetogasdynamic boundary-layer flow, *J. Appl. Mech. 30E*, No. 2, 269 (1963).
- M. D. LADYZHENSKII, On the magnetohydrodynamic hypersonic flow past a wedge, *J. Appl. Math. Mech.* **27**, No. 1, 72 (1963).
- A. G. RYABININ and A. I. KHOZHAINOV, Turbulent flow of an electrically conducting liquid in tubes of rectangular cross section under the influence of electrodynamic ponderomotive forces, *Sov. Phys.-Tech. Phys.* **8**, No. 1, 54 (1963).
- U. SURYAPRAKASARAO, The response of laminar skin friction, temperature and heat transfer to fluctuations in the stream velocity in the presence of a transverse magnetic field, *ZAMM* **43**, No. 3, 127 (1963).

MEASUREMENT TECHNIQUES

- S. C. BARNETT, T. W. JACKSON and R. H. WHITSIDES, A high pressure differential manometer, *J. Heat Transfer* **C85**, No. 2, 180 (1963).
- J. V. BECK, Calculation of thermal diffusivity from temperature measurements, *J. Heat Transfer* **C85**, No. 2, 181 (1963).
- R. P. BENEDICT and J. W. MURDOCK, Steady-state thermal analysis of a thermometer well, *J. Engng Power* **85A**, No. 3, 235 (1963).
- G. BOARDMAN and R. L. WHITMORE, The behavior of a Bingham fluid in the cone-and-plate viscometer, *Brit. J. Appl. Sci.* **14**, No. 6, 391 (1963).
- J. A. CAPE and G. W. LEHMAN, Temperature and finite pulse-time effects in the flash method for measuring thermal diffusivity, *J. Appl. Phys.* **34**, No. 7, 1909 (1963).
- M. CERCEO and H. M. CHILDERS, Thermal diffusivity by electron bombardment heating, *J. Appl. Phys.* **34**, No. 5, 1445 (1963).
- J. T. CHAMBERS, R. D. RALL and W. H. GIEDT, Experimental evaluation of a dual-element transducer for high-temperature-gas measurements. Aeronautical Research Laboratories, Office of Aerospace Research, USAF, ARL 63-58 (1963).
- K. D. COOPER, G. F. HEWITT and B. PINCHIN, Photography of two-phase flow. Chemical Engineering Division, Atomic Energy Research Establishment, Harwell, Berkshire, United Kingdom Atomic Energy Authority Research Group Report AERE-R4301 (1963).
- M. CUTLER and G. T. CHENEY, Measurement of thermal conductivity of electrical conductors at high temperatures, *J. Appl. Phys.* **34**, No. 6, 1714 (1963).
- M. CUTLER and G. T. CHENEY, Heat-wave methods for the measurement of thermal diffusivity, *J. Appl. Phys.* **34**, No. 7, 1902 (1963).
- M. D. DONNE, Tests and data concerning platinel, a new high temperature thermocouple. A.E.E., Winfrith, Dorchester, Dorset, England, D.P. Report 167 (1963).
- M. D. DONNE and F. H. BOWDITCH, A nozzle thermocouple for measurements in high temperature gases. A.E.E., Winfrith, Dorchester, Dorset, England, D.P. Report 191 (1963).
- R. EICHHORN, J. A. SCHETZ and R. E. LUNA, Instant interferometer windows, *Int. J. Heat Mass Transfer* **5**, 791 (1962).
- D. R. FLYNN, A radial-flow apparatus for determining the thermal conductivity of loose-fill insulations to high temperatures, *Engng Instr.* **67C**, No. 2, 129 (1963).
- U. GRIGULL, Einige optische Eigenschaften thermischer Grenzschichten, *Int. J. Heat Mass Transfer* **6**, No. 8, 669 (1963).
- V. A. GRISHIN, Heat measurements with the flowing heat compensation method and certain comparative results. Aerospace Information Division, Library of Congress, AID Report T-63-66 (1963).
- F. C. HAAS, An evaporating film calorimetric enthalpy probe. Aeronautical Research Laboratories, Office of Aerospace Research, USAF, ARL 63-47 (1963).
- L. E. MACHATTIE, Temperature measurement of textile fabrics under intense thermal irradiation, *Brit. J. Appl. Sci.* **14**, No. 6, 267 (1963).
- L. G. NEAL and S. G. BANKOFF, A high resolution resistivity probe for determination of local void properties in gas-liquid flow, *J. Amer. Inst. Chem. Engrs* **9**, No. 4, 490 (1963).
- C. J. REMENYIK, The "Orifice Hot-Wire" probe and its application to measurements of pressure fluctuations in a compressible turbulent boundary layer. The Johns Hopkins University, Department of Mechanical Engineering (1962).
- L. R. RYAN, H. J. BABROV and R. H. TOURIN, Infrared spectra and temperature of plasmajets: Spectrometric and spectroradiometric measurements of plasmajet temperature distributions. Aeronautical Research Laboratories, Office of Aerospace Research, USAF, ARL 63-35 (1963).
- J. SCHRÖDER, Apparatus for determining the thermal conductivity of solids in the temperature range from 20 to 200°C, *Rev. Sci. Instrum.* **34**, No. 6, 615 (1963).
- R. VANZETTI, Component failures predicted by infrared. Proceedings, 9th National Symposium on Reliability and Quality Control, Editorial Department of the IRE, 1 East 79th Street, New York (1963).

NATURAL CONVECTION

- A. F. EMERY, The effect of a magnetic field upon the free convection of a conducting fluid, *J. Heat Transfer* **C85**, No. 2, 119 (1963).
- T. FUJII, Theory of the steady laminar natural convection above a horizontal line heat source and a point heat source, *Int. J. Heat Mass Transfer* **6**, No. 7, 597 (1963).

- B. GEBHART, On boundary conditions for natural convection transients, *J. Heat Transfer* **C85**, No. 2, 184 (1963).
- D. JACOBS, Initial development of Bénard cells in natural thermal convection of water, *Chem. Engng Sci.* **18**, No. 1, 49 (1963).
- R. R. JUNE and M. J. BAKER, The effect of sound on free convection heat transfer from a vertical flat plate, *J. Heat Transfer* **C85**, No. 3, 279 (1963).
- P. N. KALONI, Free-convection viscoelastic flow past a porous flat plate, *AIAA J.* **1**, No. 7, 1702 (1963).
- P. K. KHOSLA and M. P. MURGAI, The study of the combined effects of thermal radiative transfer and rotation on the gravitational stability of a hot fluid, *J. Fluid Mech.* **16**, Part 1, 97 (1963).
- Z. KOPAL, Convection in planetary interiors, *Icarus* **1**, No. 5-6, 391 (1963).
- R. LEMLICH, Natural convection to isothermal flat plate with a spatially nonuniform acceleration, *IEC Fundamentals* **2**, No. 2, 157 (1963).
- M. P. MURGAI and P. K. KHOSLA, A study of the combined effects of thermal radiative transfer and a magnetic field on the gravitational convection of an ionized fluid, *J. Fluid Mech.* **14**, Part 3, 433 (1962).
- R. S. NANDA and V. P. SHARMA, Free convection flow with and without heat sources in a circular pipe, *Appl. Sci. Res.* **11A**, No. 3, 279 (1963).
- D. C. T. PEI and W. H. GAUVIN, Natural convection evaporation from spherical particles in high temperature surroundings, *J. Amer. Inst. Chem. Engrs* **9**, No. 3, 375 (1963).
- H. A. SIMON and E. R. G. ECKERT, Laminar free convection in carbon dioxide near its critical point, *Int. J. Heat Mass Transfer* **6**, No. 8, 681 (1963).
- E. I. SLAVNOVA, On free convection in aqueous salt solutions filling vertical circular tubes, *J. Engng Phys.* **6**, No. 3, 106 (1963).
- K. E. STARNER and H. N. McMANUS, JR., An experimental investigation of free-convection heat transfer from rectangular fin arrays, *J. Heat Transfer* **C85**, No. 3, 273 (1963).
- L. N. TAO, On unsteady heat transfer of combined free and forced convection in circular tubes, *J. Appl. Mech.* **30E**, No. 2, 257 (1963).
- D. J. TRITTON, The use of a fibre anemometer in turbulent flows, *J. Fluid Mech.* **16**, Part 2, 269 (1963).
- D. J. TRITTON, Turbulent free convection above a heated plate inclined at a small angle to the horizontal, *J. Fluid Mech.* **16**, Part 2, 282 (1963).
- D. J. TRITTON, Transition to turbulence in the free convection boundary layers on an inclined heated plate, *J. Fluid Mech.* **16**, Part 3, 417 (1963).
- J. S. TURNER, The motion of buoyant elements in turbulent surroundings, *J. Fluid Mech.* **16**, Part 1, 1 (1963).
- R. J. YOUNG and K. T. YANG, Effect of small gross flow and surface-temperature variation on laminar free convection along a vertical plate, *J. Appl. Mech.* **30E**, No. 2, 252 (1963).
- PACKED AND FLUIDIZED BEDS**
- V. A. BORISEVICH, Investigation of heat exchange in the movement of a disperse medium in pipes. Aerospace Information Division, Library of Congress, AID Report T-63-63 (1963).
- Z. F. CHUKHANOV, Heat and mass transfer between gas and granular material, *Int. J. Heat Mass Transfer* **6**, No. 8, 691 (1963).
- C. A. DEPEW and L. FARBAR, Heat transfer to pneumatically conveyed glass particles of fixed size, *J. Heat Transfer* **C85**, No. 2, 164 (1963).
- L. FARBAR and C. A. DEPEW, Heat transfer effects of gas-solids mixtures using solid spherical particles of uniform size, *IEC Fundamentals* **2**, No. 2, 130 (1963).
- G. JEPSON, A. POLL and W. SMITH, Heat transfer from a gas to wall in a gas/solids transport line, *Trans. Instn Chem. Engrs* **41**, No. 5, 207 (1963).
- S. MASAMUNE and J. M. SMITH, Thermal conductivity of beds of spherical particles, *IEC Fundamentals* **2**, No. 2, 136 (1963).
- A. R. MENDELSON, Transient temperature of a porous-cooled wall, *AIAA J.* **1**, No. 6, 1449 (1963).
- P. NORDON and G. B. MCMAHON, The theory of forced convective heat transfer in beds of fine fibres—I, *Int. J. Heat Mass Transfer* **6**, No. 6, 455 (1963).
- P. NORDON and G. B. MCMAHON, The theory of forced convective heat transfer in beds of fine fibres—II, *Int. J. Heat Mass Transfer* **6**, No. 6, 467 (1963).
- R. PRUSCHEK, Der Transport von Wärme und Stoff in der turbulenten Strömung durch Füllkörperrohre. Teil 2: Die Auswirkung des turbulenten Wärmetransports in einem Füllkörperrohr mit wärmeproduzierenden Füllkörpern (Kugelhaufenreaktor), *Forsch. Ing.-Wes.* **29**, No. 2, 57 (1963).
- D. A. ROSE, Water movement in porous material: Part I. Isothermal vapour transfer, *Brit. J. Appl. Sci.* **14**, No. 5, 256 (1963).
- RADIATION**
- V. N. ADRIANOV and G. L. POLYAK, Differential methods for studying radiant heat transfer, *Int. J. Heat Mass Transfer* **6**, No. 5, 335 (1963).
- V. N. ADRIANOV and S. N. SHORIN, Radiant heat transfer in a flowing radiating medium, *AIAA J.* **1**, No. 7, 1729 (1963).
- S. G. AGABABOV and A. KOMAREK, Experimental determination of emissivity of platinum and platinum-rhodium wires, *J. Engng Phys.* **6**, No. 3, 99 (1963).
- D. E. BURCH, W. L. FRANCE and D. WILLIAMS, Total absorptance of water vapor in the near infrared, *Appl. Optics* **2**, No. 6, 585 (1963).
- R. EDSE, K. N. RAO, W. A. STRAUSS and M. E. MICELSON, Emission spectra excited in metal powder-oxygen flames, *J. Opt. Soc. Amer.* **53**, No. 4, 436 (1963).
- K. G. T. HOLLANDS, Directional selectivity, emittance, absorptance properties of Vee corrugated specular surfaces, *Solar Energy* **7**, No. 2, 108 (1963).

- V. E. HOLT, R. J. GROSH and R. GEYNET, Evaluation of the net radiant heat transfer between specularly reflecting plates including computed emissivities, *Int. J. Heat Mass Transfer* **6**, No. 8, 755 (1963).
- H. P. IVEY, Absorption of nonparallel radiation, *J. Opt. Soc. Amer.* **53**, No. 2, 234 (1963).
- R. E. LINDQUIST and A. W. EWALD, Optical constants from reflectance ratios by a geometric construction, *J. Opt. Soc. Amer.* **53**, No. 2, 247 (1963).
- D. E. McCARTHY, The reflection and transmission of infrared material: I. Spectra from 250 microns, *Appl. Optics* **2**, No. 6, 591 (1963).
- I. N. MININ, Diffusion of radiation in a semi-infinite medium in the case of anisotropic scattering—I, *AIAA J.* **1**, No. 6, 1486 (1963).
- D. H. OLSON and D. A. PONTARELLI, Asymmetry of an integrating sphere, *Appl. Optics* **2**, No. 6, 631 (1963).
- L. OSTER, Interaction of radiation and matter in a plasma, Aeronautical Research Laboratories, Office of Aerospace Research, USAF, ARL 63-62 (1963).
- L. OSTER, Note on thermal radio radiation. Aeronautical Research Laboratories, Office of Aerospace Research, USAF, ARL 63-67 (1963).
- M. PERLMUTTER and J. R. HOWELL, A strongly directional emitting absorbing surface, *J. Heat Transfer* **C85**, No. 3, 282 (1963).
- J. H. SHAW, Empirical methods for computing the integrated absorptances of infrared bands of atmospheric gases at nonuniform pressure, *Appl. Optics* **2**, No. 6, 605 (1963).
- E. M. SPARROW, A new and simpler formulation for radiative angle factors, *J. Heat Transfer* **C85**, No. 2, 81 (1963).
- E. M. SPARROW and V. K. JONSSON, Radiant emission characteristics of diffuse conical cavities, *J. Opt. Soc. Amer.* **53**, No. 7, 816 (1963).
- E. M. SPARROW and V. K. JONSSON, Thermal radiation absorption in rectangular-groove cavities, *J. Appl. Mech.* **30E**, No. 2, 237 (1963).
- R. L. TAYLOR, Continuum infrared radiation from high temperature air and nitrogen. AVCO-Everett Research Laboratory, Research Report No. 154 (1963).
- A. E. WECHSLER and P. E. GLASER, Radiation characteristics of metal vapors. Aeronautical Research Laboratories, Office of Aerospace Research, USAF, ARL 63-67 (1963).
- J. A. WIEBELT, Comparison of geometric absorption factors with geometric mean beam lengths, *J. Heat Transfer* **C85**, No. 3, 287 (1963).
- C. R. YOKLEY and J. B. SHUMAKER, Computer for the Abel inversion, *Rev. Sci. Instrum.* **34**, No. 5, 551 (1963).
- V. N. ZHIGULEV, Y. A. ROMISHEVSKII and V. K. VERTUSH-KIN, Role of radiation in modern gasdynamics, *AIAA J.* **1**, No. 6, 1473 (1963).
- A. A. ZHUKAUSKAS, V. I. MAKARYAVICHUS and A. A. SHLANCHYauskas, The problem of heat emission of smooth pipe bundles in crossflow liquids. Aerospace Information Division, Library of Congress, AID Report T-63-69 (1963).

ROTATING SURFACES

- V. M. KAPINOS, Heat transfer of a non-uniformly heated rotating disk, *J. Engng Phys.* **6**, No. 3, 12 (1963).
- F. KREITH, E. DOUGHMAN and H. KOZLOWSKI, Mass and heat transfer from an enclosed rotating disk with and without source flow, *J. Heat Transfer* **C85**, No. 2, 153 (1963).
- J. W. MITCHELL, A study of the fluid dynamics and heat transfer behavior for radially inward flow over a shrouded rotating disc. Dept. of Mechanical Engineering, Stanford University, Stanford, Calif., Technical Report No. 57 (1963).

THERMODYNAMIC AND TRANSPORT PROPERTIES

- R. D. ALLEN, Thermal conductivity of gaseous unsymmetrical dimethylhydrazine, *AIAA J.* **1**, No. 7, 1689 (1963).
- C. H. LEWIS and E. G. BURGESS III, Empirical equations for the thermodynamic properties of air and nitrogen to 15,000°K. Arnold Engineering Development Center, Air Force Systems Command, USAF, AEDC-TDR-63-138 (1963).
- G. C. LOWENTHAL, The specific heat of metals between 1200°K and 2400°K, *Aust. J. Phys.* **10**, No. 1, 47 (1963).
- D. J. PATTERSON and G. J. VAN WYLEN, Empirical heat capacity equations for ideal gases, *J. Heat Transfer* **C85**, No. 3, 281 (1963).
- S. C. SAXENA and R. K. JOSHI, Thermal diffusion factors for krypton and xenon, *Physica* **29**, No. 4, 257 (1963).
- A. A. TARZIMANOV, Heat conductivity of monatomic gases, *AIAA J.* **1**, No. 6, 1497 (1963).
- Thermal diffusivity measurements on metals and ceramics at high temperatures, Part II. AF Materials Laboratory, Aeronautical Systems Division, Air Force Systems Command, Wright-Patterson Air Force Base, Ohio, Technical Documentary Report No. ASD-TDR-62-24 (1963).
- V. F. VYSHENSKAYA and N. D. KOSOV, Investigation of the temperature dependence of the coefficient of diffusion of gases. Aerospace Information Division, Library of Congress, AID Report T-63-67 (1963).
- A. A. WESTENBERG and N. DEHAAS, Gas thermal conductivity studies at high temperatures. II. Results for O_2 and O_2-H_2O mixtures, *Phys. Fluids* **6**, No. 5, 617 (1963).

TRANSFER MECHANISMS

- R. S. BRODKEY, Limitations on a generalized velocity distribution, *J. Amer. Inst. Chem. Engrs* **9**, No. 4, 448 (1963).
- J. E. CERMAK, Lagrangian similarity hypothesis applied to diffusion in turbulent shear flow, *J. Fluid Mech.* **15**, Part 1, 49 (1963).
- K. CLUSIUS, Isotopenrennung durch Ionenwanderung, Destillation und Thermodiffusion, *Chem.-Ing.-Tech.* **35**, No. 6, 422 (1963).
- C. H. GIBSON and W. H. SCHWARZ, The universal equilibrium spectra of turbulent velocity and scalar fields, *J. Fluid Mech.* **16**, Part 3, 265 (1963).

- C. H. GIBSON and W. H. SCHWARZ, Detection of conductivity fluctuations in a turbulent flow field, *J. Fluid Mech.* **16**, Part 3, 357 (1963).
- G. S. GOLITSYN, Computation correlations in a locally isotropic turbulent flow, *J. Appl. Math. Mech.* **27**, No. 1, 80 (1963).
- R. W. HANKS, The laminar-turbulent transition for fluids with a yield stress, *J. Amer. Inst. Chem. Engrs* **9**, No. 3, 306 (1963).
- J. W. MILES, Stability of heterogeneous shear flows, Part 2. *J. Fluid Mech.* **16**, Part 2, 209 (1963).
- T. MIZUSHINA and R. ITO, Thermal diffusion in binary liquid mixtures, *I/EC Fundamentals* **2**, No. 2, 102 (1963).
- Y. OGURA, A consequence of the zero-fourth-cumulant approximation in the decay of isotropic turbulence, *J. Fluid Mech.* **16**, Part 1, 33 (1963).
- J. O. POWERS and G. HEICHE, The stability of selected boundary-layer profiles. U.S. Naval Ordnance Laboratory, White Oak, Md., NOLR TR 62-143 (1963).
- N. RILEY, On the analogy between the transport of vorticity and heat in laminar boundary layers, *J. Fluid Mech.* **14**, Part 3, 399 (1962).
- R. P. WENDT, J. N. MUNDY, S. WEISSMAN and E. A. MASON, Gaseous self-diffusion in a temperature gradient, *Phys. Fluids* **6**, No. 4, 572 (1963).