

BOOK REVIEW — BUCHBESPRECHUNG

Problems of low temperature physics and thermodynamics.
Proceedings of the meeting of Commission 1 of the International Institute of Refrigeration,
Delft (The Netherlands) 1958.
Pergamon Press Ltd., Oxford, London, New York, Paris.

The general subjects chosen for this meeting were: cryogenic apparatus, thermometry, the disturbed crystal lattice, transport phenomena in liquids and gases. The following 46 papers were presented:

Collins, S. C. (USA): The M. I. T. Helium-Hydrogen Liquefier.

Keesom, P. H. and Seidel, G. (USA): A ^3He Cryostat for obtaining Temperatures down to 0.3°K .

Reich, H. A. and Garwin, R. L. (USA): A simple continuous ^3He refrigeration system.

Eder, F. X. (German Fed. Rep.): Indicator for helium expansion engines.

Linde, J. O. and Svensson, K. (Sweden): A heat exchanger combined with a helium-recovery system for producing liquid hydrogen from liquid helium.

Fairbank, W. M., Leitner, J., Block, M. M. and Harth, E. M. (USA): A liquid helium bubble chamber.

Redfield, A. G. (USA): Low temperature nuclear resonance apparatus.

Malkov, M. P. (USSR): Some problems of the liquefaction of hydrogen and the storage of liquid hydrogen and helium.

Rivoira, F. (Italy): Heat transmission of the reversible exchangers in the low temperature distillation plants.

Peshkov, V. P. (USSR): On processes of the transport of masses in the separation of helium isotopes.

Garwin, R. L. and Reich, H. A. (USA): ^3He — ^4He thermal rectifiers.

Olsen, J. L. (Switzerland): Superconducting rectifier and amplifier.

Maxwell, E. and Schmidt, A. F. (USA): Liquid helium cryostat with an integral superconducting resonator.

van Dijk, H. (The Netherlands): On the use of platinum resistance thermometers between 90 and 4°K .

Lowenthal, G. C., Kemp, W. R. G. and Harper, A. F. A. (Australia): A temperature scale down to 20°K using platinum resistance thermometers.

Rothwarf, F. and Steinberg, J. (USA): A variable sensitivity gas thermometer for use at low temperatures.

Powell, R. L. and Bunch, M. D. (USA): The thermal E. M. F. of several thermometric alloys.

de Vroomen, A. R. (The Netherlands): A practical interpolation procedure for carbon thermometry between 1.5 and 30°K .

Sachse, H. B. (USA): Thermistors as sensing elements for low temperatures.

Van Itterbeek, A., Forrez, G., Sluijter, C. G. and Miss Vaes, G. (Belgium): Temperature measurements with an acoustical thermometer.

Crawford, J. H., Jr. and Cohen, A. F. (USA): The effect of fast neutron bombardment on the thermal conductivity of silica glass at low temperature.

Cohen, A. F. (USA): Low temperature thermal conductivity of lithium fluoride crystal upon irradiation by thermal neutrons and 60Co - γ -Rays.

Lomer, N. and Rosenberg, H. M. (England): The measurement of dislocation densities from the lattice heat conductivity of copper-zinc alloys.

Dupre, A. and Van Itterbeek, A. (Belgium): The coercive force of cold-rolled nickel, iron and cobalt strips.

Hull, D., Harwell, A. E. R. E. and Rosenberg, H. M. (England): The deformation of sodium and potassium at low temperatures: tensile and electrical resistivity experiments.

van Beelen, H., Van Itterbeek, A. and Velds C. A. (The Netherlands): The influence of cold rolling on the coercive force of thin iron plates.

Basinski, Z. S. (Canada): The deformation of face-centred cubic metals at low temperatures.

Hoek, W. J. and Blaisse, B. S. (The Netherlands): Stress-Strain Measurements of face centred cubic metals at various temperatures.

Dimitrov, O. and Albert, P. (France): Study of the influence of very small impurities on the variation of the electrical resistivity at low temperatures.

Van Den Berg, C. J. and Vranken, B. (The Netherlands): The measuring of the electrical resistance of gold monocrystals by an alternating current method.

Buckingham, M. J. (USA): Superconducting computer circuitry.

Schalkwijk, W. F. (The Netherlands): A simplified regenerator theory.

Long, H. M. and Di Paolo, F. S. (USA): The condensed-phase diagram of the ternary system oxygen-nitrogen-argon.

Passelecq, J. (Belgium): Change of total enthalpy in laminar motion.

Weil, L. and Petit, P. (France): Solubility of oxygen, nitrogen and argon in liquid hydrogen.

Van, E. H., Van Itterbeek, A. and Beenakker, J. J. M. (The Netherlands): The influence of the density on the thermal diffusion in gas mixtures of gas at low temperatures.

Coremans, J. M. J., Beenakker, J. J. M., Van Itterbeek, A. and Zandbergen, P. (The Netherlands): Viscosity measurements of gases between 20 and 80° K.

Coremans, J. M. J., Beenakker, J. J. M., Van Itterbeek, A. and Zandbergen, P. (The Netherlands): The influence of the density on the viscosity of helium gas at liquid hydrogen temperatures.

Van Itterbeek, A. and Van Dael, W. (Belgium): Measurements on the velocity of sound in liquid oxygen and nitrogen and mixtures of nitrogen and oxygen under high pressures.

Leech, J. W. and MacDonald, D. K. C. (Canada): Some remarks on thermoelectricity.

Hart, H. R., Jr. and Wheatley, J. C. (USA): Thermal contact below 1° K.

Frederking, T. and Grassmann, P. (Switzerland): Film boiling of liquefied gases especially of liquid helium I.

Ružička, J. (Czechoslovakia): Heat transfer to boiling nitrogen.

Cini-Castagnoli, G., Pizzella, G. and Ricci, P. (Italy): Diffusion in simple liquids.

Blaisse, B. S., Van Den Boogaert, A. and Erne, F. (The Netherlands): The electrical breakdown in liquid helium and liquid nitrogen.

Kronig, R. (The Netherlands): Double refraction in solid helium.

L. HALÁSZ