

MODERN DEVELOPMENTS IN HEAT TRANSFER

THE University of Minnesota announces a special summer course in Modern Developments in Heat Transfer to be held on the campus of the University of Minnesota, Duluth from Monday, August 14 through Tuesday, August 22. The course has been organized by the Heat Transfer Laboratory in the Mechanical Engineering Department at the University of Minnesota and will be conducted by the Center for Continuation Study of the General Extension Division. Enquiries should be sent to the Center for Continuation Study, University of Minnesota, Minneapolis 14, U.S.A.

The Course will be Directed by Dr. E. R. G. Eckert, Professor of Mechanical Engineering, Director of the Heat Transfer Laboratory, University of Minnesota.

Outline of the Program

The following outline is preliminary but indicates the scope and philosophy of the program. Final details will be announced at a later date.

- (1) General review and exposition of the current status and problems on heat and mass transfer.
- (2) Interrelations between heat, momentum and mass transfer.
- (3) Radiation.
- (4) Plasma physics.
- (5) Heat transfer with phase change (boiling and condensation).
- (6) Mass transfer cooling.
- (7) High-speed heat transfer.
- (8) Properties for heat transfer calculations.
- (9) Numerical methods in heat transfer.

Lecturers from Abroad Tentatively Include

- Dr. U. Grigull, Lehrstuhl und Institut für Technische Thermodynamik, München, Germany.
 Dr. O. A. Saunders, Professor and Dean, Imperial College, University of London.
 Dr. D. B. Spalding, Professor of Heat Transfer, Imperial College, London.

Eligibility and Fees

It is expected that all registrants will have a Bachelor of Science degree or equivalent. Registrants who may be doubtful of their eligibility may write direct to Dr. E. R. G. Eckert, director of the course.

Since enrollment is restricted, it is suggested that expression of interest or an application for registration be submitted as soon as possible. Registration is personal, non-transferable and must be made for the entire period of the course (alternate or substitute may replace above registrant at any time up to opening day of the course).

Fees for the course are as follows:

Tuition	\$200
Room and Meals (does not include meals on Sunday, August 20)	\$90
Total	\$290

A fee of \$10 should accompany the application form and the balance of \$280 must be paid on or before the course opens.

Accommodations

The University of Minnesota, Duluth campus is located in the northern part of the city of Duluth. This new complex of buildings is located on a large hill which commands a picturesque and sweeping view of Lake Superior. Registrants will be provided with their own dining room, classroom, and will be housed in a section of the recently built "cottage-type" dormitory. The rooms are twin bedded, tastefully decorated and have easy access to recreational activities. Registrants will share the spacious twin bedded rooms and are expected to live on the campus in the facilities provided. They will find them most convenient as well as reasonable in price.

There are excellent rail, plane, and bus connections to Duluth from the Twin Cities and other points of the midwest. On completion of the course, registrants may want to plan a vacation in Minnesota. The scenic North Shore of Lake Superior and the north central lake region are easily accessible from Duluth.

SECOND SYMPOSIUM ON THERMOPHYSICAL PROPERTIES

to be held at PRINCETON UNIVERSITY, 24-26 JANUARY 1962

Sponsored by the American Society of Mechanical Engineers, Committee on Thermophysical Properties

THE Heat Transfer Division of the ASME, through the above named committee, is now organizing its Second Symposium on Thermophysical Properties. The

first symposium was held in February 1959 at Purdue University, where forty-two papers were presented; they were published, prior to the meeting, in a separate volume

"Thermodynamic and Transport Properties of Gases, Liquids and Solids" which is still available from the American Society of Mechanical Engineers.

Though there was already some participation by European authors in 1959, the committee endeavours to obtain a strong participation of foreign research for its second symposium in order to provide for all contributors a desirable forum for presenting the results of their work. For this reason, Princeton University was chosen as the meeting place, which is only one hour distant from New York and offers an attractive academic atmosphere.

The committee is now inviting all colleagues active in the field of thermophysical properties to participate in this symposium by submitting papers on any of the subjects listed below. It is planned to again publish the Proceedings prior to the symposium.

Processing of papers will follow the established procedure of the American Society of Mechanical Engineers, which includes the following provisions:

- (1) Manuscripts must be original papers, written in English.
- (2) Papers previously published in a foreign country must be amended by additional material in order to be acceptable.
- (3) Papers may be re-published after the symposium in a foreign journal, giving credit to the ASME
- (4) All papers are subject to review by the Papers Chairman of the Heat Transfer Div.

Additional information regarding this symposium may be obtained from the undersigned or from committee members. The committee hopes to welcome many of you at its Second Symposium.

The program will include papers of the following nature:

- I. Review papers on current status of theory, experimental techniques, and available data.
- II. Original papers reporting new theoretical work.

- III. Original papers reporting new experimental work.
- IV. Documentation methods.

These papers will cover the following thermal properties:

- I. Thermodynamic properties and equation of state.
 - (1) P, V, T data and compressibility.
 - (2) Specific heats, enthalpy, entropy.
 - (3) Joule-Thompson coefficient.
 - (4) Phase equilibria of single- and multicomponent systems.
 - (5) Ionization equilibrium.
- II. Molecular properties.
 - (1) Spectroscopic data, Debye temperatures.
 - (2) Ionization potentials.
 - (3) Collision cross sections.
 - (4) Intermolecular potentials.
- III. Transport properties.
 - (1) Thermal conductivity and electrical conductivity.
 - (2) Shear viscosity and bulk viscosity.
 - (3) Regular diffusion and thermal diffusion.
 - (4) Heat of transfer.
- IV. Radiation properties (heat and sound).
 - (1) Emissivity and absorptivity.
 - (2) Sound absorption.

These properties will cover the following substances:

- I. Gases, normal and ionized, plasma.
- II. Liquids, Newtonian and non-Newtonian.
- III. Solids, crystalline and amorphous, alloys.
- IV. Plastics, elastomers.

Eric F. Lype, Chairman
Committee on Thermophysical Properties
c/o Thompson Ramo Wooldridge, Inc.
23555 Euclid Avenue, Cleveland 17, Ohio

U.S.S.R. CONFERENCE ON HEAT AND MASS TRANSFER

THE Academy of Science of the Byelorussian S.S.R., the Academy of Civil Engineering and Architecture of the U.S.S.R. and the Ministry of High and Secondary Special Education of the U.S.S.R. organize the Conference on Heat and Mass Transfer at phase and chemical conversions which is to be held in Minsk, B.S.S.R., June 5-9, 1961.

Preliminary Information

One of the major purposes of the Conference is to provide for careful discussion of theoretical and experimental researches on heat and mass transfer at chemical

and phase conversions. A list of some topical areas of interest is given below but the Conference will not be restricted to these:

- (1) Heat and mass transfer with phase conversion including boiling, melting and evaporation.
- (2) Heat and mass transfer with chemical reactions.
- (3) Heat and mass transfer in vacuum.
- (4) High temperature heat and mass transfer.
- (5) Heat conduction problems and methods of solution.

Broad discussion is to be held on heat and mass