

AMERICAN INSTITUTE OF
CHEMICAL ENGINEERS

A.I.Ch.E. MEETING - October 8, 1958

CHICAGO SECTION

TIME: 6:30 P.M.

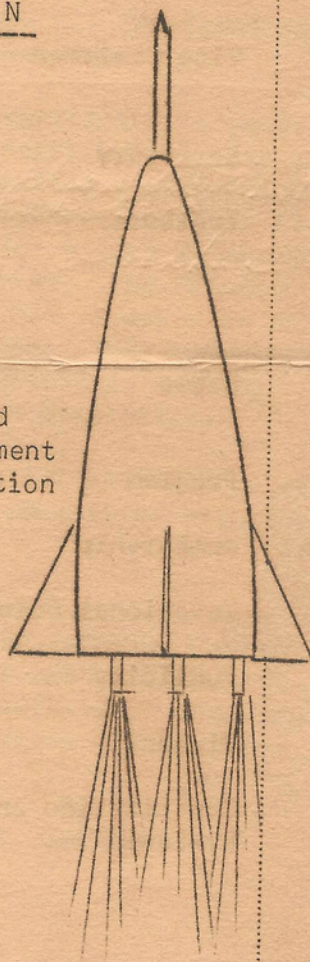
PLACE: Builders' Club
LaSalle & Wacker
Chicago

DINNER: \$3.50

SPEAKER: Dr. Vincent J. Cushing
Manager, Propulsion and
Fluids Research Department
Armour Research Foundation

SUBJECT: Space Technology

SOCIAL PERIOD: 6:00 P.M.
Sponsored by
Fuente and Webster



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A MESSAGE FROM THE NEW CHAIRMAN

President Holbrook has stated that the most important principle of the A.I.Ch.E. is to "Justify its existence and program by deserving the enthusiastic support of its members for satisfying their appropriate needs and wants".

The Board of Directors of the Chicago Section has been working diligently on programs and activities that will appeal to you and justify your support.

Your support consists not only of paying your dues but in attending our meetings and participating on the various committees.

The committees have planned a full program of activities this year. The Program Committee is securing speakers of general interest to all members and is arranging with the House Committee a real "night away from home" Ladies Night. The Vocational Guidance Committee is adding the chore of arranging with station WTTW for future TV shows depicting chemical engineering in various industries. The Finance Committee, not satisfied with our annual income, has embarked on a program of industrial support to the local sections. This program is proceeding satisfactorily. The Publicity Committee is working hard to present you an interesting and informative Newsletter.

Our entire working force hope that this year's activities will be of such an interest that you will want to associate yourselves with the Chicago Section in an active capacity.

The most important duty we all have to the National A.I.Ch.E. this year is the lending of our support to the United Engineering Center Building Fund. It will take all of our talents to bring the Building Fund Every Member Campaign to a successful conclusion. When you are approached, won't you please help by your donation and also in the solicitation of other members.

G. E. Bailie

ABOUT THE SPEAKER

Our speaker for the October 8 meeting is Dr. Vincent J. Cushing, Manager of the Propulsion and Fluids Research Department of Armour Research Foundation. His talk will emphasize rocket propulsion systems, including chemical and nuclear energy.

Dr. Cushing obtained his BS in physics and MS in mathematics from the University of Notre Dame. He studied for his doctor in physics at Illinois Institute of Technology. He is a member of the American Rocket Society, the American Ordnance Association and Sigma X.

Only eight years ago this man, whose mind now sends missiles piercing the stratosphere, was mired in the mud of the Cuyahoga River where he served as an engineer for a company that had the Corps of Engineers' contract to do the seasonal dredging on that important Ohio waterway.

From there he went to work for Eugene Mittleman, a Chicago consulting engineer, with whom he invented the electronic flow meter, a device that precisely and instantaneously insures the flow rate of fluid without coming in contact with it.

Coming to Armour Research Foundation in 1950 as an associate engineer, Dr. Cushing served as supervisor of the compressible flow and missiles section. In 1954 he was promoted to assistant manager of what is now the propulsion and fluid mechanics research department. He became manager of the now 90-man department in 1955.

From the start, he has contributed significantly to ARF's rocket and propulsion research. One of the first Foundation projects in which he participated was the development of a high altitude heat radiation measuring device to be ejected by a rocket near the apex of its climb. Data gathered by the instruments have proven valuable, in the design of high-flying aircraft, rockets, and the soon-to-be-launched earth satellites.

In another rocket project, Dr. Cushing was confronted by the question of what caused certain spinning rockets to burn their fuel at abnormally high rates. His analysis, borne out by experimental

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evidence, indicated that spin-induced gas circulation eroded the "windward" side of protuberances in the rocket grain, causing the greater burn-up.

Dr. Cushing's practical experience as an engineer and his doctoral study of physics obviously have facilitated solution of these tricky rocket problems produced by the demands of modern tactics.

The resulting weapons and modifications of weapons alter those tactics. In turn, this new change in tactics requires further weapons modifications.

Cushing personally favors working with the professional tactician. By so doing he believes he can best appraise the current tactical needs and how a given weapon designed to fulfill them is likely to be used. But he also recognizes that a scientist working on his own occasionally may come up with a device or concept that will completely revolutionize the tactics of the time.

Whichever method he uses, Dr. Cushing, though saving work for men and machines, is creating plenty for the tacticians.

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Yes, it's time again for the collection of dues. At the last meeting, annual dues were increased to \$3.00 because of the increasing cost of everything. Also, provision was made that non-members of the Chicago Section shall pay \$0.50 more for dinner than dues paying members after January 1st.

You received an important envelope with this issue of the Newsletter. Use it, and the next minute, to enclose your check for \$3.00 and drop it in the mail. Do it now! The Chicago Section depends upon you.

UNITED ENGINEERING CENTER

A new \$10,000,000 United Engineering Center is to be built to house the AIChE and a number of other professional societies. The building is to be located between 47th and 48th Streets in New York, facing the United Nations Plaza. Present plans call for occupancy in the Fall of 1960.

The new United Engineering Center will be owned and operated by the United Engineering Trustees, Inc., acting on behalf of the participating engineering societies. Present resources of United Engineering Trustees, Inc., and proceeds from sale of the present building are estimated at \$2,000,000. Of the balance, \$5,000,000, dollars will be sought from industry, and the remaining \$3,000,000 from individual Society members.

The AIChE, as one of the founder societies of the United Engineering Trustees, Inc., has the responsibility of raising \$300,000 as its share of the cost of this new center.

Charles F. Kettering, Honorary Chairman of the Members Gift Campaign, urges you:

"The Engineer-----needs an adequate platform from which to expand his efforts as a creator of economic and social values. He needs a symbol of his dynamic purpose."

The new United Engineering Center is to be this symbol.

The effort depends upon the individual AIChE member. When you are solicited, show your interest with a generous and prompt contribution. A cash contribution is welcome, of course. However, many will find it more convenient to make pledges payable over a three year period, at intervals designated as they wish.

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INSTRUMENTS AND CONTROL ENGINEERING COURSES

These have been quite popular with ChE's, and are again being offered (for the 7th time) at Navy Pier by the University of Illinois Extension Division in cooperation with the Chicago Section, Instrument Society of America. Advance registration and preordering of texts may be made by phone or card to:

Mr. T. H. Dekker, Illini Center
LaSalle Hotel
LaSalle and Madison Streets
Chicago 2, Illinois

1. INSTRUMENT OPERATING PRINCIPLES - Eleven 3-hour sessions, 7 to 10 PM, starting Wednesday, October 1, Room 127, Navy Pier.
2. INSTRUMENT APPLICATION IN CONTROL SYSTEMS - Eleven 3-hour sessions, 7 to 10 PM, starting Tuesday, October 7, Room 127, Navy Pier.

Two additional courses in INSTRUMENTATION and in ELECTRONIC INSTRUMENTS are offered at Chicago Vocational School, 8700 South Anthony, Tuesdays from 6:45 to 9:45 PM throughout the school year. Registration started September 4-5th, but late registrants are permitted.

MEETING OF INSTRUMENT SOCIETY OF AMERICA

A joint meeting of the Chicago and Northern Indiana Section of the ISA will be held on October 6 at Vogel's Restaurant, 1250 Indianapolis Boulevard, Whiting, Indiana. Dinner will be served at 6:30 PM and the technical meeting will begin at 8 PM. Mr. Henry C. Frost of Corn Products Refining Company will speak on "Challenges in the Expansion of Process Instrumentation".

EDITORIALS

We are soliciting editorials for inclusion in future issues of the NEWSLETTER: so if you have any thoughts or comments relating to Chemical Engineering, the Institute, or Engineering in general, please direct them to one of the members of the Editorial Board for review and publication in a future issue.

The following is the Editorial Policy which was established for the NEWSLETTER by the 1956-1957 Board of Directors of the Chicago Section:

1. The Editorial Board of the Newsletter shall exercise sole judgement to determine if editorials submitted to the Newsletter should be classed as controversial.
2. Should controversial subjects be submitted for publication, they are to be published clearly labelled as the opinion of the author. Further, it shall be stated that editorials in rebuttal are invited.
3. No release or publication of the Chicago Section shall be composed in such a manner as to be construed as promoting any commercial or profit-making enterprise.
4. All material to be published will be reviewed by the Editorial Board to insure that Article II of the Institute Constitution is not violated. Article II reads: "The objects of the Institute are the advancement of Chemical Engineering in theory and practice and the maintenance of a high professional standard among its members."

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PERSONAL NEWS

J. K. Roberts, Vice President of Standard Oil, has gone to Europe to develop markets for Standard's foreign crude production. Dr. R. C. Guinness of Standard has been elected to the Board of Trustees of the University of Chicago.

L. Haring of Visking's Chemical Development Section spent a month in Europe visiting Germany, Switzerland, France, Belgium, and The Netherlands. L. M. Simon of Met-L-Wood and C. D. Nelson of Visking are running for Mayor and Alderman, respectively, of the newly formed village of Country Club Hills.



Two recent additions to the staff of the Quaker Oats Research Lab at Barrington are K. Repholtz of Illinois Tech and R. Lutz from Michigan College of Mining and Technology.

Among those from the Chicago Section at the Golden Jubilee Meeting in Philadelphia were C. S. Steiner (Swift and Co.), G. Johnston and H. C. Thorne, Jr. (Amoco Chemical), F. L. Corson, W. C. Seng, R. A. Thurston and W. M. Bogart (Corn Products), S. Lawroski, W. A. Rodger, W. J. Mechano and I. G. Dillon (Argonne National Lab.).

S. S. Tomita is now the head of the Process Development Department for the Soap Division of Armour and Company. Dr. R. H. Snow of the Armour Research Foundation will present a paper at the Salt Lake City Meeting on "A Computer Study of the Free Radical Mechanism of Ethane Pyrolysis". Co-authors are Dr. R. E. Peck of Illinois Tech and Dr. C. G. von Fredersdorff of the Institute of Gas Technology.

Several local members have moved to new homes, including L. E. Dowd and J. G. Atwater, both of Swift and Company to Olympia Terrace, and R. N. Olson, of Visking, to Palos Heights.

Two recent promotions at the Swenson Evaporator Company were J. N. Brown to the Chicago District Sales Office and M. J. Beagle to the Houston, Texas office.

PERSONAL NEWS (Continued)

W. F. Rush has been assigned temporarily to the York Division of Borg-Warner. W. G. Watters, also of Borg-Warner, has resumed his MBA studies at the University of Chicago.

Papers presented during the summer by Eimco Corporation engineers were: "Factors Influencing Selection and Design of Liquids-Solids Separation Equipment in Hydrometallurgical Leach Circuits" by R. C. Emmett at the joint meeting of the AIChE and Chemical Institute of Canada in Montreal, Quebec; "Methods for the Design and Selection of Dissolved-Air Flotation Units" by E. Vrablik at the Sewage and Industrial Wastes Associates meeting in Stockton, California; and "Application of Continuous Filters in the Metallurgical Flow Sheet" by Dr. D. A. Dahlstrom at the Canadian Institute of Mining and Metallurgy in Vancouver, British Columbia. Dr. Dahlstrom also has become President-Elect of Tau Beta Pi.

C. J. Francisco, formerly Technical Manager of the Sinclair Research Laboratories at Harvey, has been promoted to Vice-President in charge of patents and licensing for Sinclair Research, and will have offices in New York. Another promotion at Sinclair was that of C. W. Gomes from the Economic Analysis Division of the Harvey Labs to Administrative Assistant in the Refinery Economics Division of the Manufacturing Department.

E. Grahl has joined the staff at Amoco Chemicals.

A. V. Graci of Wurster & Sanger, Inc., has just returned from Kingston, Jamaica, where he started up a continuous vegetable oil deodorizer.

R. T. Fitzsimon has been made Manager of Maintenance at Abbott Labs.

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PERSONAL NEWS (Continued)

Here are the marriages which took place during the summer:

E. J. Borsuk (Corn Products) to Ann Kubeca
J. W. Almlöf (Corn Products) to Glenna Gilbreath
D. C. Wise (Amoco Chemicals) to Janet Wynney
C. White (Amoco Chemicals) to Joyce Bonnin

New Engineers in the Technical Division of Corn Products are:

J. Blickhahn (Ross Polytechnic), D. Cook (Kansas State), G. Falk (University of Nebraska), G. Kaupas (Illinois Tech.) and H. Snella (University of Illinois. R. Brandquist has returned to the Process Engineering Section of Corn Products after three years in Corpus Christi, Texas. W. M. Bogart left Corn Products to work on his Ph.D. at the University of Minnesota.

E. C. Toloczko, of Corn Products, received his Masters Degree in Business Administration from the University of Chicago. E. W. Gelder has transferred from Corn Products' Central Engineering Dept. to the Argo Plant.

Two men from the Argonne National Laboratories, S. Lawroski and M. Levenson attended the Second International Conference on Peaceful Uses of Atomic Energy at Geneva, Switzerland.

Recent births were:

Marilyn Ann to W. L. Patrick (Abbott Laboratories)
Jennifer to S. S. Tomita (Armour and Company)
Michael Jeffery to Dr. D. A. Dahlstrom (Eimco Corp.)
Robert Michael to J. J. Romac (Sinclair Research Labs.)
John Alan to G. J. Stockmann (Wurster & Sanger, Inc.)

JUST A REMINDER _____

PLEASE MAIL YOUR RESERVATION...

CARD FOR

THE

OCTOBER 8TH MEETING

Mark Your Calendar to Keep the Date Open for
the Next Meeting of the Chicago Section:

Date:

November 12, 1958
November 12, 1958

Place:

Mangrove Antenn
Vogel's (South)

Speaker:

Mr. R. P. (Rudy) Lowe
President, Proportioneers, Inc.

Subject:

"Automatic Continuous Stream
Blending" *Amund*