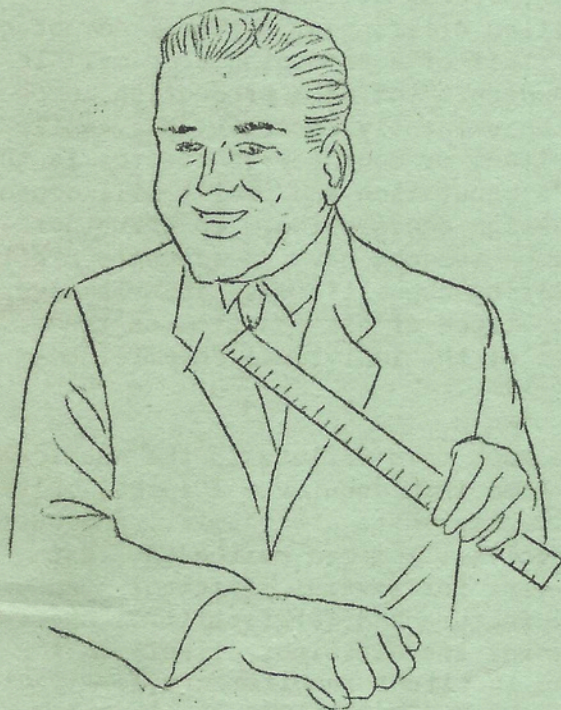


THE NEWSLETTER

AMERICAN INSTITUTE OF
CHEMICAL ENGINEERS



A.I.Ch.E. Meeting, Jan. 11, 1961
-Chicago Section-

TIME: 6:30 P.M.
PLACE: Builders' Club
LaSalle & Wacker
Chicago Loop
DINNER: \$4.00 (Pd. up Member)
\$4.50 (Others)
SPEAKER: Dr. Gerry Gray,
Associate Professor of
Aeronautical Engineering
Princeton University
Princeton, New Jersey.
SUBJECT: Electrical and Nuclear
Propulsion for Space.
SOCIAL
HOUR: 6:00 P.M.
SPONSORED Fuente and Webster, Inc.
BY:

MARK YOUR CALENDAR FOR THE FEBRUARY MEETING OF THE CHICAGO SECTION

Date: February 8, 1961
Place: Vogel's Restaurant, Whiting, Ind.
Program: Dr. P. C. White, General Manager
Research and Development.
Standard Oil Co., (Indiana)
Subject: The Future of the Petroleum Industry.

(Chemical Engineering as a Profession - The First Article of a Series)
CHEMICAL ENGINEERING FOR AN ENGINEER - CONTRACTOR

Of all of the various categories of chemical engineering employment—research, production, sales, teaching and design, the latter is, in many ways, the most rewarding. By process design is meant the development of flow sheet information, equipment and line sizing and unit operations calculations as required to establish the process conditions, the plant capacity and product analyses.

For chemical engineers who prefer process design, work in an engineering-contracting organization offers many distinct advantages over the same assignment on the staff of a producing company. In the first place, the engineering department of a production company is a service function, although an eminently important one, while the engineering staff of a consultant or engineer-contractor is the production unit and the company's reputation and profit will depend directly on the quality of the design engineering. On the other hand, there are some chemical companies who have an adequate profit picture in spite of their engineering capabilities. This is never true of a consultant and the importance of his function to the design firm enhances the prestige of the individual chemical engineer.

Secondly, consulting work offers much more variety to the chemical engineer over a given length of time than does even a large, multi-plant producing company. For example, there are chemical engineers on the DKA staff who have been actively engaged during the last twelve months in process design work for several different food products, for pharmaceutical manufacture and for fertilizer chemicals production. Even designing for two different clients in the same industry involves variations in client requirements, available plant utilities, labor problems, and considerations of climate, capital cost and process experience.

For instance, of three soybean solvent extraction plants designed by our staff last year, one was located in North Carolina where the climate allowed us to support the equipment with no building enclosure. Another plant was built in Western Minnesota where this design was not possible. One plant had to be able to handle cottonseed as well as soybeans and one plant had four times the capacity of the others.

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All of these varying conditions decidedly affected the process design conditions.

Because they serve such a broad spectrum of the chemical and food industries and because they are normally given the tougher process problems to handle, engineer-contractors cannot usually afford to train recent graduates, (or rather, they can't afford the extra supervision necessary to avoid mistakes a trainee might make). A typical engineering assignment might start with the collecting and evaluating of laboratory or pilot plant data in a relatively new field and require development of a process design. This would form the basis for the contractor to erect a plant for a firm price while supplying process guarantees. Obviously such an assignment demands mature judgment.

The minimum background requirements for a prospective chemical engineer employee for an engineer-contractor are: B. S. in Chemical Engineering from a recognized college or university, and at least four years experience in industry; preferably in design or development work on a variety of processes. The applicant is also evaluated as to his ability to handle all of the chemical engineering techniques since he may be called upon to make the most rigorous calculations. At the same time he must have the mature judgment to take short cuts during rough estimating and preliminary study phases of the work. He must be able to work under pressure continually and must be able to write good technical English. Ability to operate process equipment and to train plant personnel is also very important.

I have found that an opening in the chemical process design group is, by far, the most difficult for which to hire an engineer.

Generally speaking, a chemical engineer who works in process design for an engineer-contractor can expect to use his chemical engineering training to the utmost, to be engaged in very interesting and diversified projects, and to work under a constant head of steam, but can expect to earn more than in most other assignments. Many times, engineering-contractor experience is a prelude to top management in a producing company because of the wide variety of experience, background of accepting responsibility and making

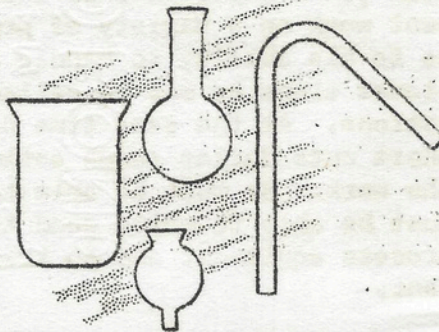
decisions, familiarity with business and cost principles, and the high level of contacts developed in contacts with clients.

(Signed)
HARRY M. BETZIG
Treasurer, A.I.Ch.E.

ABOUT THE SPEAKER

Dr. Gerry Gray is associate professor of aeronautical engineering, Princeton University, Princeton, New Jersey. His talk will concern electrical and nuclear propulsion for space and will include a brief discussion of various propulsion systems with a critical evaluation of the problems and potentialities of each.

Dr. Gray has a B.M.E. and a M.S. in engineering physics from Cornell and a Ph. D. in aeronautical engineering from California Institute of Technology. He has been employed in various engineering capacities at Cornell, Fairchild Engineering Company, Bell Laboratories, Marquardt and Galcit.



At Princeton, Dr. Gray is in charge of a research program in nuclear and arc jet propulsion. Among the companies for which he consults are Aerojet, Chrysler, Atlantic Research, and Potter Aeronautical.

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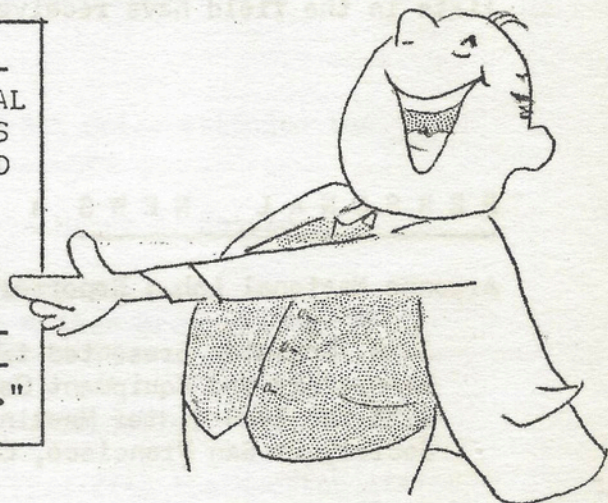
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DR. SMITH OF NORTHWESTERN RECEIVES TOP CHEMICAL ENGINEERING AWARD

DR. JOE MAUK SMITH, MURPHY DISTINGUISHED PROFESSOR OF CHEMICAL ENGINEERING AT NORTHWESTERN, IS 1960 RECIPIENT OF THE TOP AWARD OF THE AMERICAN INSTITUTE OF CHEMICAL ENGINEERS. THE WILLIAM H. WALKER AWARD OF THE 18,000 MEMBER SOCIETY IS GRANTED ANNUALLY FOR "OUTSTANDING CONTRIBUTIONS TO THE CHEMICAL AND ENGINEERING LITERATURE."



Dr. Smith received the award at the society's annual meeting in Washington, D.C. on December 4-7. He has been named for his services as educator, author of important textbooks and "prolific contributor to the chemical engineering literature" of reports on research findings. Smith, 44, has published nearly 60 technical articles and two best-selling textbooks. Entitled Introduction to Chemical Engineering Thermodynamics and Chemical Engineering Kinetics, the texts have been adopted at about 50 schools.

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Shortly after receiving the doctorate in chemical engineering at Massachusetts Institute of Technology in 1943, Smith began a stay of 12 years at Purdue University where he rose to assistant director of the Engineering Experiment Station. He held a Guggenheim Grant and Fulbright Fellowship during 1953-54, permitting him to do research in Holland. Upon coming to Northwestern in 1957, Smith was named professor and chairman of the chemical engineering department. Professor George Thodos replaced him as chairman last year.

The William H. Walker Award was established by AIChE in 1935. Walker, the father of chemical engineering in the United States,

brought the first ideas over from England about 1900. He was chairman of chemical engineering at MIT. Many of the top specialists in the field have received the award.

PERSONAL NEWS :

Argonne National Lab.; Reporter - Ira G. Dillon

J. H. Schraidt presented two papers at the Eighth Hot Laboratory and Equipment Conference held in conjunction with the 1960 Winter Meeting of the American Nuclear Society in San Francisco, California.

Mr. Schraidt's subjects were "A Radiation Stable Heavy Duty Electromechanical Manipulator" presented on December 14 and "Atmosphere Handling and Control for a Glovebox Facility" presented on December 15.

A daughter, Gail Caroline was born to Mr. and Mrs. Jasper Wolkoff on October 15, 1960.

Armour Research Foundation; Reporter - Dr. Richard Snow

Charles K. Hersh has been promoted to Senior Engineer.

Borg-Warner Corporation; Reporter - Harold L. Pabich

Bill Rush and Harold Pabich were appointed managers of the Chemical Engineering and Economic Evaluation Section, respectively, of Borg-Warner Research Center in Des Plaines.

Chemical Processing Magazine; Reporter - Ted Wett

A son, Jeremy 6 lb. 14 oz., was born November 6 to Mr. and Mrs. Jay Gossett. Jay is an assistant editor on Chemical Processing magazine.

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specia- Associate editor Ted Meinhold, represented both Chemical Processing magazine and the Chicago section of AIChE at the National meeting in Washington, December 4-7.

Corn Products; Reporter - E. C. Toloczko

G. R. Meyer, W. E. Brinker, and Bob Opila attended the Washington D. C. meeting of the AIChE.

Davidson-Kennedy Associates; Reporter - Harry M. Betzig

Ollie Bolduc and Ed Doran are presently starting up a facility designed and built for Miller Brewing Company in Milwaukee by D.K.A.

Eimco Corporation; Reporter - Conrad F. Cornell

Mr. Robert A. Risch was transferred from the Houston office to the Palatine Central Sales Division. Bob received his B. S. degree in Chemical Engineering from Northwestern in 1953.

Great Lakes Carbon Corporation; Reporter - Milton Kaplan

Mr. Ellsworth Staver went on a business trip to Los Angeles. Mr. Milton Kaplan went on a trip to St. Louis.

Illinois Institute of Technology; Reporter - Octave Levenspiel

Drs. R. F. Bukacek and R. E. Peck presented a paper at the 53rd Annual AIChE meeting in Washington, December 4-7, reporting the development of an equation of state which for the first time correlates PVT data in both the compressed vapor and liquid regions.

Institute of Gas Technology; Reporter - Wilford G. Bair

The following people attended the National AIChE meeting in Washington D. C.: Dr. E. B. Shultz, Jr. Mr. H. Feldkirchner
Mr. L. Marionowski Mr. P. Tarman

The Kendall Company; Reporter - Russell T. Ryan

Pat Ryan will transfer on Jan. 1, from his present assignment as Quality Manager of the Chicago Division, to the position of Production Engineer in the International Division. In his new position he will be responsible for the development of new manufacturing facilities and improvement of present facilities - all on an international scale.

Met-L-Wood Corporation; Reporter - Larry Simon

Mr. Larry Simon has been named Product Engineer

Northwestern University; Reporter - Prof. G. G. Lamb

Five men have been appointed or promoted in Northwestern University's chemistry department. They are Dr. Donald D. DeFord, promoted to full professor; Dr. Myron L. Bender, new associate professor; and Dr. Thomas Buch and Dr. Gerard V. Smith, new instructors. Dr. John O. Edwards, associate professor of chemistry at Brown University, is spending his sabbatical leave here.

Standard Oil Company, Indiana; Reporter - R. S. McDaniel

Henry Nolting is working at 910 South Michigan for Standard's (American to be) Coordination and Supply Planning Division.

Don E. Jones, active man from Kansas City, has been transferred to Chicago in the Planning Division of Manufacturing Department.

Standard Oil Company, Indiana; Reporter - M. F. Oxenrieter

V. P. Dorweiler spoke on "A Radio Tracer Determination of Entrainment in a Bubble-Cap Column" at the annual AIChE meeting in Washington.

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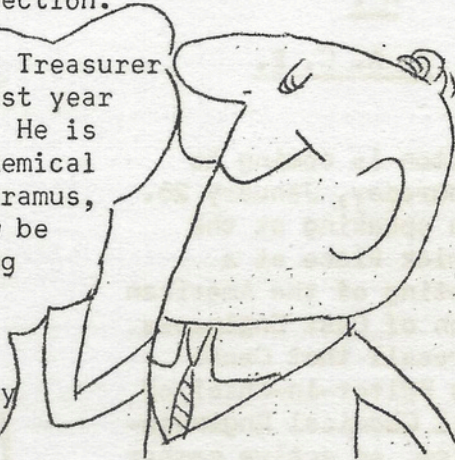
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Standard Oil Company, Indiana - continued

J. O. Howe discussed "Better Technical Writing" at a meeting of the Alton-Wood River Section.

John E. Anderson, who was Treasurer of the Chicago Section last year has moved to New Jersey. He is now working for Rexall Chemical Company, (Bergen Mall) Paramus, New Jersey. John can now be contacted at the following address:

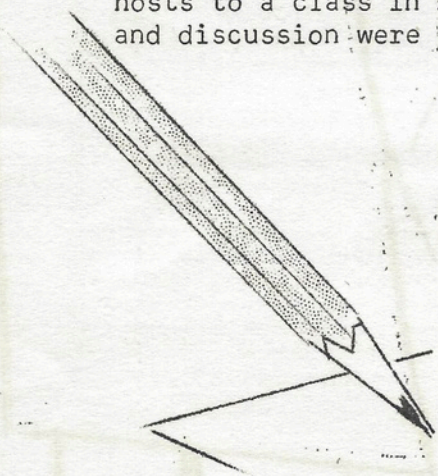
103 Walnut Street
Oakland, New Jersey



Universal Oil Products Company; Reporter - Raymond R. Herber

R. E. Sutherland spoke before the California State Motor Vehicle Pollution Control Board at San Diego on the problem of automobile exhaust vapors and smog control.

John Wenner and Ray Herber, Pilot Plant Division, were hosts to a class in Reactor Design from I.I.T. a tour and discussion were the order of the day.



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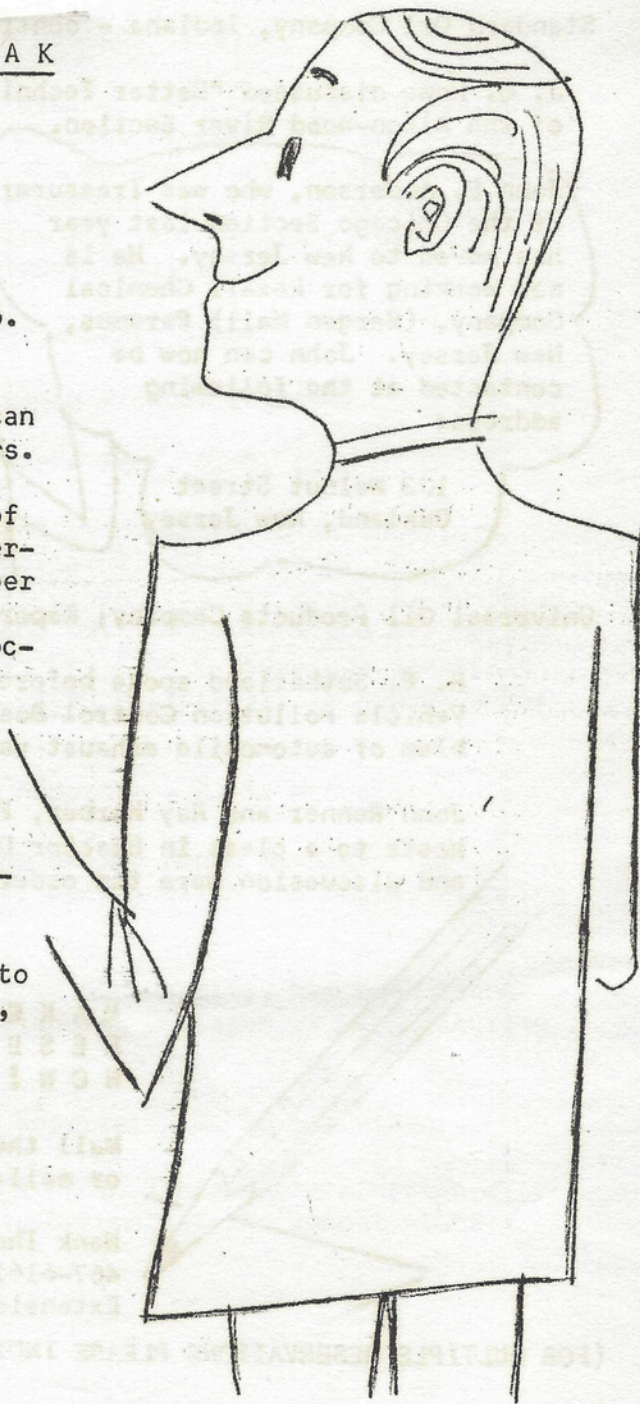
(FOR MULTIPLE RESERVATIONS PLEASE INDICATE NAMES OF ALL PARTIES)

CHILTON TO SPEAK

AT

A. A. C. E.

Cecil Chilton is coming to Chicago Thursday, January 26. He will be speaking at the new McCormick Place at a dinner meeting of the American Association of Cost Engineers. You will recall that Cecil Chilton is Editor-in-Chief of McGraw-Hill Chemical Engineering magazine, an active member of A.I.Ch.E. and a national officer of the American Association of Cost Engineers. Cecil recently had a book published, entitled Cost Engineering in the Process Industries. He is going to speak on the "Soaring or Souring 60's" and the contribution engineers can make to protect the profit margin. Those of you who would like to attend, can phone W. Twaddle, 467-6161, extension 328. There is to be a tour of the McCormick Place beginning at 5:30 and the dinner (\$5.25) begins at 6:30.



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