

## Prof. Schommer Lectures Aiche

Professor John J. Schommer, director of Placement and professor of Industrial Chemistry, was the guest speaker at the AICHE meeting held last Friday morning. The essence of Professor Schommer's talk lay in the definition of education and its function when the student leaves school.

It was pointed out by Professor Schommer that an education should teach the student to think and develop in him the ability to do productive work through the experience gained in the laboratory and classroom. Differing from the theory of Chancellor Hutchins of the University of Chicago that a well educated person, if he is a great thinker is productive even if he is a liability to the community, Schommer believes that an education should enable one to be an asset to his community and country.

After graduation success depends greatly upon the individual's personality, aggressiveness, character, and the desire to improve his status quo. The fact of the matter as revealed by Professor Schommer was that the causes for dismissals in the engineering and business fields were due, in sixty-eight percent of the cases, to character traits, and only thirty-two percent to technical deficiency.

Another important factor in the engineering field is the ability for one to get along with people, organizing ability, and ingenuity. A job is what you make of it and, to progress, it is vital that courses supplementary to one's position be taken, e.g. time study, advertising, and production management. Professor Schommer concluded his talk with the suggestion for all engineers to read the following books: Foundations for Human Engineering, and Elements of Human Engineering, both by Gow. These books are available at the Institute's library.

Dean White's office has issued the following notice: "The Institute provides bulletin boards in various places throughout the campus for the posting of all notices and announcements. The posting of such material on walls or in any places other than these bulletin boards is not authorized and, therefore, will not be permitted."

## Alpha Sigs Trounced In Interfrat Opener

Pi Kappa Phi trounced Alpha Sigma Phi 36-15 in the interfraternity opener last Wednesday.

The Alpha Sigs who recently won the IF football tournament lacked the ability and finesse to crack the Pi Kap defense. The Pi Kaps with their superior height controlled the rebounding at both backboards to completely sew up an otherwise outmanned and outplayed Alpha Sig team. Hallinan paced the victors with eleven points.

**Scoring:**  
Rittenhouse, c. 10 0 Van Ness, f. 12 12  
Rheinacker, c. 10 15 Hallinan, f. 12 12  
Donohue, c. 10 15 Bunkaler, f. 12 12  
Smith, f. 10 00 Belke, f. 12 11  
Brown, f. 10 00 Benton, c. 11 11  
Hottelner, c. 10 12 Sachs, f. 12 00  
Shuldes, c. 10 00 Pottenger, c. 10 01  
Parker, c. 10 00 Fenshl, c. 11 11  
Referee: Dickinson, Thompson

Dec. 11, 7:00—Fraternities vs. Daedalus  
Officials: Sigma Alpha Mu, Delta Tau Delta

Dec. 17, 7:00—Theta Xi vs. Rho Delta Rho  
Officials: Daedalus, Praetorians

Dec. 17, 8:15—Delta Tau Delta vs. Sigma Alpha Mu  
Officials: Pi Kappa Phi, Alpha Sigma Phi

## Pledges Chosen By Rho Epsilon

Rho Epsilon, honorary electrical fraternity, has chosen its pledges for the coming term, according to James Brophy the pledge master. Of the many men interested in joining the group the following ten have been pledged: David Pivan, George Roggenkamp, Herbert Sachs, Bert Toppel, Thomas Marchwick, Frank Lidd, Leonard Kutroff, Walter Koelle, Pete Kuthra, Jerome Friedman.

Since Rho Epsilon's purpose is to facilitate experimenting on the part of its members, the background and interest in the application of electrical theory was a prime factor in the choice made. Half of the men chosen already have their amateur radio license and almost all served as some type of electrician in the armed service.

The pledge period has begun and will continue for a period of four weeks. Among the pledge activities will be collecting the member's signatures, carrying a code buzzer, and doing some constructive work in the fraternity's quarters. Each pledge will also be required to construct some electrical apparatus of his own choosing.

## NAVY NOTES

### APPOINTMENTS AND STAFF CHANGES

Lieut. (jg) Magnus W. HJALMARSON, USNR reported for duty as instructor from several years sea duty, mostly as an Engineer Officer. Last duty was the U.S.S. TOPEKA.

HUCKINS, Herman C. Chief Yeoman, USN reported for duty after 4 extremely interesting years at Punta Arenas, Chile, or the Horn, at the south end of South America.

OLIVER, Ernest W. Yeoman First Class reported for duty from Naval Air Station, HOUMA, La.; prior to that he was stationed in the Pacific with the mobile communication unit.

SHAFLEY, Earl L. Chief Yeoman, USN was detached for duty in Detroit near his home.

SMITH, Charles R. Yeoman First Class USN was transferred to the Separation Center at Great Lakes where he is to be discharged from the Naval Service.

### PERSONALS

1st Lieut. Robert A. HEATH, U.S. Marine Corps has a new boy a few weeks old. Both father and son doing fine.

### PROGRESS

SANGAMO Attack Teacher for instruction in elements of Anti-Submarine Warfare is completed in Alumni Hall and instruction started during drill periods for upper-classes.

Carpentry work on the JORDY Trainer, a device for instructing Officers of the Deck and Signal Officers in tactics and ships maneuvers, has started.

### GENERAL NEWS

Visit of Lieutenant Colonel SNYDER, USA and talk on Universal Military Training.

## Eta Kappa Nu Pledges Eleven Top Electricals

At a recent meeting of Eta Kappa Nu, EE honorary, the eleven new pledges met the actives, four of whom have just returned from war service.

Grant Hansen, Vice President and pledge master, announced a revision in the usual pledge schedule. Among refinements are: no more carrying of BX cable, greatly reduced memory work, and a system by which pledges have all the necessary information on their fraternity in note book form.

This pledge group is the largest in the last five years. Members of the group are Bill Gauthier, Tom Marchwick, Dudley Budlong, Joseph Parlow, Lester Haskett, Warren Sommers, Lewis isher, Gail Fleisher, Charles Hill, Felix Rosenthal, and William Parks.

## Rusinoff, ME Prof. Completes Second Book Written Within Year

Samuel E. Rusinoff, assistant professor of mechanical engineering at IIT has recently completed the second of two engineering textbooks written in 1946.

The first text, "Practical Descriptive Geometry," is Rusinoff's effort at clarification of the misconstruction of descriptive geometry, a need recognized in his twenty-five years in shops and industry. The book is a departure from previously written texts in that it is self-explanatory, with each chapter presenting the fundamentals of a phase and containing sufficient questions to make self-instruction possible. Although it is prepared on a technical school level, it is usable for college instruction, as a reference book, or for self-instruction.

The second text, "Practical Shop Mathematics" was designed for general instruction purposes and for reference by machine shops, tool rooms, drafting rooms, inspection departments, and gage laboratories. It offers a comprehensive survey of mathematics from elementary math (arithmetic) through algebra, geometry, trigonometry, logarithms, and the slide rule. It is useful for all practicing engineers as it gives computations without the aid of calculus.

The text has been prepared on a technical institute level, and may also be used in evening high school courses, or non-credit evening college courses. Rusinoff sees it as an excellent method of presenting refresher courses or as a method of self-instruction. The entire text gives comprehension on a level that does not require an extensive mathematical background in that it may be used and understood by a person with only high school mathematics or by a skilled mechanic or draftsman with even less formal training.

## FRATERNITIES, Sororities

(Continued from page 3)

### SIGMA ALPHA MU

At the last meeting of Sigma Epsilon Chapter the fraternity was fortunate in securing as its distinguished guest Mr. John J. Schommer.

He gave a very interesting lecture on football; Schommer is thoroughly qualified to speak on the subject, as he has played All-American.

The hayride was a huge success and the social committee deserves much credit for a job well done. The next affair will be given by the pledges and promises to be quite interesting.

Allen Moss was elected prior to replace Sheldon Levy. The change was due to the fact that the expiring is now a graduate student, and Dean White's office objected to any graduate student holding office.

The tennis team, consisting of Bob Zeitlin, Jona Cohn, Marks Levy and Harvey Weinstein triumphed over Triangle, Rho Delta Rho, and Delta Tau Delta to win the Inter Fraternity tennis championship.

### THETA XI

Parents, friends, alumni, the Mothers' Club and members were present to enjoy the homecoming last Saturday. Starting in the early afternoon, the guests were entertained at cards and games, with light refreshments being served. About five o'clock the Mothers' Club arranged a buffet supper consisting of a great variety of food. After the repast Robert Hardy led the Theta Xi Choir in the singing of fraternity songs. More musical treats were then presented in the form of a concert by Brother Salvatore Terranova and his orchestra. The remainder of the evening was spent with dancing in the basement converted room, ping pong in the converted study room and card playing in the

## ARF Gage Laboratory Serves Industry; High Precision Needed

by S. A. Shaheen

One of the lesser known divisions of the Armour Research Foundation is the Gage Laboratory, which calibrates block gages for manufacturers. The lab equipment, which is valued at \$100,000 can measure anything from ten-millionths of an inch to forty-eight inches.

The research and lab technique required in performing this testing necessitates meticulous care. Even air conditions must be closely controlled in the lab to maintain the required accuracy of the instruments, said Mr. Kogut, head of the laboratory. The equipment requires that the air be held at 70 degrees F., have a relative humidity of 50 percent, and be filtered to remove dust. Dust and humidity cause the highly polished calibrating equipment to become abrasive, lessening the accuracy obtainable.

A slight variation in heat, such as a man's hand touching an electric gage, in five seconds can cause a five-millionths of an inch variation, which requires twenty minutes for the gage to return to normal. The allowance permitted the gage laboratory in 10 percent of the manufacturer's allowance—5 percent for wear and 5 percent for tolerance. This is usually two-millionths of an inch.

A functional gage measures only one dimension and is made to fit perfectly the contour it measures. For example, if a key slot on a breech block is to be measured, there would be a functional gage solely for the purpose of finding if the key slot meets specifications. This is done by moving the gage into the key slot until a point on the gage touches a point on the slot. By using this method, interchangeability of parts is possible, without which mass production would be extremely difficult, if not impossible.

As an indication of the scope of the laboratory's work, consider the inspection of a 37 mm anti-tank gun. This small bore gun alone requires 193 different gages; costing about

\$15,500. The assembler of the gun must have two complete sets on hand at all times, with replacement gages for those that wear more rapidly than average. Each parts manufacturer must have at least two sets of gages for each part made. Since there are 150 plants making parts, it is important to have parts that fit.

The gages are made of C-53 to C-62 Rockwell hardness steel, and have to be rechecked after from 10,000 to 40,000 uses. All identification is on the handle of the gage so that there is no chance of error. These gages are more expensive than die tools: a small gage costs \$275, and a medium sized one about \$375.

The calibrating equipment is periodically checked by measurement of known lengths in a precision block set. These blocks are so accurate that, when two are put together, they are inseparable by pulling, and measure exactly the sum of their individual lengths. A secret process and components are used in their manufacture to minimize the effect of temperature. In turn, these blocks are checked against a master set in order to guard against incorrect measurement resulting from wear.

Included in the laboratory equipment are two projecting machines. An irregularly shaped object may be projected on a screen, magnifying it 62 1/2 times. From the screen, the angle of inclination of the different planes and other information may easily be had. The space between the lead and wood of a pencil, when projected on the screen, appears to be 1/16th of an inch.

## Lucy Flower Grads Guests of Home Ecs

The Home Economics Club will entertain the February graduates of Lucy Flower Technical High School at a tea in the department tea room Wednesday afternoon, Dec. 11 at 2 p.m. A part of the afternoon's program will be a tour of the various labs and classrooms in the downtown center showing the visitors the equipment and other facilities available to women following Home Economics Curricula. Miss Mary Louis Mojonier, head of the department and Miss Ruth Severud, instructor, are in charge of the committee.

Recently two speakers from the Home Economics department, Miss Betty Skinner and Miss Mary Ann Cahay, both alumni of Flower Tech, visited their alma mater and spoke on the opportunities afforded women at Illinois Tech.

## Betty Pace Addresses Forum Club Meeting

Miss Betty Pace, a youthful representative of the "Student's for Federal World Government" was the guest speaker at the Forum Club's Friday meeting.

Miss Pace, formerly a student of Northwestern, has dropped her studies to devote full time to the cause of world government.

Commenting briefly upon the work of the various organizations striving to maintain international peace through world government, Miss Pace set forth the idealism, principles, and theories of the world federalist. The lecture was followed by a lengthy question and answer session, in which the issue of world economics (rather than the broader concept of world government) seemed to be the only topic of interest to the engineers.

## Beta Omega Nu Pledges One, Initiates Six Men

Beta Omega Nu, interfraternity honorary, initiated six men at their meeting last Wednesday.

The new initiates are: Edward Zietz and George O'Brien of Phi Kappa Sigma, Al Bruckner and John Rittenhouse of Alpha Sigma Phi, Joseph Hassler of Delta Tau Delta, Michael Dassovich of the Phi Delta Theta, and Lorenz Schmidt of Triangle.

lounge. A very congenial atmosphere prevailed throughout the evening with many persons meeting friends they had not seen during the war years. There was much to be discussed.

Royal Carlson, co-chairman of the social committee, is working out the details for a Christmas party scheduled for December 20. Plans presently formulated include chubby Otto Arnston portraying the role of Santa Claus. Otto will distribute presents purchased by the fraternity to the members' dates. President Paul Boggess announces: "We will strive to achieve the same success with this party as we did with the recent Homecoming. All members on the campus are invited to the affair. Bring your dates."

### PI KAPPA PHI

Dean of Students Jack F. White will be guest speaker at the annual Pi Kappa Phi Founders Day banquet to be held tonight in the Chicago Bar Association building. Dean White will talk on fraternity activities, and future plans for fraternities at Illinois Tech.

The banquet will be sponsored by the IIT chapter of Pi Kappa Phi, Alpha Phi, and the fraternity's Chicago alumni chapter.