



JUICE LAB GETS ADDITIONAL GROUP ELECTRIC MOTORS

**Motor - Generator Set
Recently Placed
in Lab.**

SPECIAL EQUIPMENT

Through the efforts of Professor D. P. Moreton, professor of direct and alternating current machinery, a motor-generator set has recently been received by the electrical department.

The set, which has been installed in the dynamo laboratory, consists of a 110 volt direct current interpole motor and two three phase alternating current generators. The speed of the motor may be varied from 750 to 180 revolutions per minute. One of the generators is a four pole outfit; the frequency of its output may be varied from 25 to 60 cycles. The other generator is a 12 pole machine of the stationary armature type; it generates currents whose frequencies may vary from 75 to 180 cycles. The terminal voltage of these machines may be varied by making use of a field rheostat.

Study Made Easier

An interesting fact concerning these machines is that they produce an electromotive force which closely approximates a sine wave. Due to construction features a thorough verification of the fundamental laws of alternating current work is made possible. A study of this kind was not possible before, because no source of available alternating current approximated a sine wave upon which the fundamental laws are based. In addition, it will be possible to produce and study the fundamental and third harmonic currents, electromotive forces having frequencies varying from 25 to 60 cycles per second and combinations of the fundamental and third harmonics.

Variable Phase

The wave form of the resultant electromotive force produced by a fundamental and third harmonic may be changed by changing the phase relation; in this machine this is accomplished by rotating the stationary armature through a small arc. A means of measuring or determining the variation of iron losses in alternating current apparatus with the wave-form, a condition which should be studied thoroughly, is thus provided.

Professor Moreton states that a number of new experiments involving the use of the new equipment are being prepared to be given in the second semester of the Junior Laboratory Course.

Professor Roesch at Petroleum Meeting

The Anti-Knock Session of the American Petroleum Institute was held at the Stevens Hotel on November 12. Professor Daniel Roesch, of the department of Automotive Engineering at Armour, presented a demonstration of an Acoustimeter. This instrument, for measuring engine knock intensities, produced microammeter indications which were projected on an enlarged screen. Demonstrations were made showing variations of knock intensities with mixture ratio, variable throttle ratio, variable spark advance, and with fuels of various knock intensities.

Professor Roesch also made a report on the measurement of exhaust noises of about forty outboard equipped motor boats at Lake Geneva some eighteen months ago. In this work a range in noise intensity of from one to five hundred ergs per square centimeter per second was found in unmuffled racing quad engines.

At a recent meeting of the Armour Branch of the A.S.M.E., Professor Roesch gave a demonstration of his apparatus to the students.

Senior Activities Prominent Feature of Week; Men to Order Jewelry and Jackets; All Urged to Support Senior Dance; Cycle Requests Biographies

There is now under way one last spirited attempt to have a Senior Dance. Due to the deflated condition of the class treasury the school authorities will not stand back of a possible deficit. W. A. Schirmer, Social Chairman, with his committee has decided that they will endeavor to collect enough money by an advance sale of bids to assure financial success of the dance. With this assurance they will then definitely plan the dance, if not, the men who have paid, having received receipt for their money will get their money back upon presenting the receipt.

CYCLE SEEKS RECORDS

All seniors are urged to fill out and hand their biographies in to the Cycle staff on or before Wednesday, November 26.

Detailed information from each graduate is desired concerning place of birth, department, high school, honorary groups, social fraternities, clubs, organizations, athletics, publications and other activities that have to do with campus life. This information is vital for the early completion of the senior section. Blanks may be obtained from Stanley Livingston in the book store and after completion can be given to any member of the staff or placed in the Cycle box located on the first floor of the main building on the elevator shaft.

MEN TO ORDER JACKETS

Measurements for the senior jackets are to begin tomorrow, November 26. The jackets, which are now on display, are to cost \$7.50, according to Bob Wilson, chairman of the auxiliary committee. Payment will be required at the time of measurement, to prevent any jackets being left on the hands of the committee.

The jackets will be furnished by Rexford and Keller, according to the samples furnished the class. Delivery will be in two weeks after the measurement.

Assembly Learns of World Wide Outlook

At an assembly held Thursday, November 20, a discussion of the state and progress of countries of the world was given by Dr. John H. Randall, who is a director of the World Unity Foundation.

Dr. Randall was introduced by President Raymond and proceeded with a "trip" around the world showing the localities which see the

(Continued on page 3)

Work of Enlarging Electrical Lab Done

In order to provide more space in the electrical engineering laboratory, the machine shop which occupied a large corner is now being moved to the south end of the basement in the main building. Mr. Koster is in charge of the work.

It is expected that this increase in space will facilitate work in the laboratory.

J. R. Jackson's Mother Dies; Flowers Sent

John R. Jackson, F. P. E., '32, left Chicago a week ago, yesterday, for his home in Nashville, Tennessee, called there by the serious illness of his mother. Mrs. Jackson died on Wednesday morning, November 19.

Both the junior class and the F. P. E. society sent floral pieces to the family as an expression of their sympathy.

To date only forty of the one hundred and seventy seniors have kept their appointments with the class photographer. T. A. Woods, C. E. '31 chairman of the photography committee urges all seniors to visit the studio during the Thanksgiving holidays if possible. The studio will not be open on Thanksgiving Day.

Beginning Monday, December 1, definite appointments will again be made for those who have not had time.

Three Men Pledged by Pi Nu Epsilon

A meeting of Pi Nu Epsilon, honorary musical fraternity was held on Monday afternoon, November 10. At this time a tentative selection of candidates from the junior and senior classes was made.

Last Wednesday evening an examination was given the candidates at the Sigma Kappa Delta house at 3344 Michigan Ave. Formal pledging took place yesterday.

The men selected to wear the pledge ribbon of Pi Nu Epsilon are: Frank F. Strassenburg, '31. Philip H. Korrell, '32. George L. Bonvallet, '32.

Another group of men will be pledged next spring.

"Illinois Waterways," Subject of Talk at Last W. S. E. Meeting

"Illinois Waterways" was the subject of a talk presented at 9:30 last Thursday morning to the Armour Branch of the Western Society of Engineers by Mr. W. M. Smith, assistant chief engineer of the Illinois Division of Waterways.

Mr. Smith's address was given with the aid of colored slides of various waterway projects. A large part of the time was devoted to a description and explanation of the waterway along the upper Illinois river. Mr. Smith's talk started with the early forms of canal and river transportation and went through the various steps of development to the modern methods of today. He pointed out that, although to the novice it would appear that there is less river traffic now than in former times, in reality there is probably more because of the increased carrying capacity of barges over motor driven boats.

Mr. Smith described the construction and maintenance of the large modern canal locks, using as examples those recently installed near Chicago.

Mr. Smith is well known in engineering circles and was a member of the advisory board on the design and construction of the Panama Canal.

Ch.E.'s Celebrate by Gathering at Smoker

Flask and Beaker, professional chemical engineering fraternity, held a smoker at the Beta Psi house last Tuesday. The purpose of the affair was to celebrate the acceptance of the fraternity's petition to Alpha Chi Sigma.

Mr. M. F. Dull of the Upsilon Chapter of Northwestern represented the national fraternity and volunteered to answer any questions concerning the future installation of Alpha Psi Chapter.

No definite date for the installation has been set, but from present indications, it will probably take place on Saturday, December 13. This will be the second installation of a chapter of a national professional fraternity at Armour.

Records in the Dean's office indicate that four men named to serve on senior class committees will not graduate in June 1931. Four eligible men have been appointed by the class president, C. T. Link, to take their places so that those committees effected now stand as follows:

Announcement

A. H. Jens, Chairman.
M. J. Lamka.
F. F. Strassenburg.
C. M. Westerman.
R. H. Windbigler.
Auxiliary (Jacket)
R. N. Wilson, Chairman.
C. D. Brown.
D. M. Fetterman.
H. S. Holt.
S. A. Ott.
R. J. Schoen.

Cap and Gown

E. J. Stehno, Chairman.
F. S. Austin.
T. B. O'Connor.
R. Patzelt.
A. F. Wilde.

JEWELRY SOON READY

The committee on senior jewelry, headed by T. R. Schueler, has decided on a ring and key similar to those used last year, in an effort to establish a standard for all classes. Both ring and key will have an "A. I. T." monogram, and the ring will have symbols of the six departments on the shank.

Several firms are now bidding for the contract, which will probably be let by December 1. After that date, orders will be taken by the committee, which consists of the following seniors:

T. R. Schueler.
B. G. McLaughlin.
E. C. Erland.
R. M. Krause.
W. A. Schrader.
First deliveries will be in February.

Drive for Press Club Membership Now On

The Press Club has opened its drive for members according to A. H. Jens, president of the club. Applications for membership should include name of the school attended by applicant before coming to Armour and the activities of the applicant, especially those relating to newspaper and school annual work. Address the applications to the Press Club, care of R. G. Keilner, Secretary-Treasurer, and place in News contribution box.

It was announced that the Club will have a meeting shortly to decide the future actions to be taken. Also a smoker is held tentative at which some prominent newspaper man will be the speaker.

CORRECTION

In the list of pledges to Eta Kappa Nu, honorary electrical engineering fraternity, printed in the News last week, the name of T. B. O'Connor was omitted. This makes a total of seven pledges to the fraternity at the present time.

CALENDAR

Tuesday, November 25

5:00 P. M.—Orchestra Practice.
5:00 P. M.—Sigma Alpha Mu basketball practice.

Wednesday, November 26

10:30 A. M.—Assembly.

Thursday, Friday, Saturday, November 27, 28, 29

Thanksgiving Holidays.

NOTICE

There will be no issue of the Armour Tech News next Tuesday, December 2, due to the closing of school November 27, 28, and 29 for the Thanksgiving holidays. The next regular issue will be distributed on December 9.

Tau Beta Pi to Set Up Marker

Plans are being made by Tau Beta Pi, honorary engineering fraternity, for the erection of a marker upon the Armour campus to commemorate the twenty-fifth anniversary of the chapter. This marker will be placed upon the plot of ground directly north of the Faculty Club entrance, and will be, according to the tentative plans, a rock-finished concrete base with a large bronze Bent upon the top.

The work is being done by the present pledge group under the direction of the active members. The Bent has been cast and the base will be erected in the near future. Professor Huntly is acting as a supervisor, and is arranging for the materials. It is hoped by the chapter that this marker will be an inspiration and a constant reminder to the lower classmen that Tau Beta Pi is a goal for all men to work toward. Plans for the dedication of the marker are not yet fully decided upon.

Eta Kappa Nu's Hold Convention

Eta Kappa Nu, national honorary electrical engineering fraternity, held their 26th annual convention at Ames, Iowa, on Friday and Saturday, November 14 and 15. Nu Chapter of Iowa State College was host.

Delegates from other schools who passed through Chicago were guests of the Chicago Alumni Chapter at a dinner given at the Hotel La Salle, Thursday evening. Afterward, a meeting was held at the Lighting Institute in the Civic Opera building. A. R. Draus, of Delta Chapter, was the official Armour representative at this meeting.

The Armour delegation to the convention at Ames, consisting of W. Drigot, W. E. Penfold, C. Blahna, and R. Patzelt, made the trip by automobile and arrived with two worn tires and front wheels out of alignment.

The business session consisted of registration of delegates, discussion of topics, and the election of officers. G. H. Kelley, formerly a student at Armour Institute, was elected president of the organization.

The social program included a dinner, a smoker, and ended in the witnessing of the football game between Iowa State College and the Kansas Aggies on Saturday.

On the trip home our representatives were accompanied by the Oklahoma A. and M. delegation and the homeward journey made more interesting by an exchange of experiences and happenings.

Dr. G. L. Scherger delivered an address on the subject of "Vienna: Her Culture and Art" at the Belton-Stratford Hotel last Thursday. The body assembled there was the Junior Friends of Art of which Miss L. Olga Menn is the head. This organization has a membership comprised of many society women of Chicago.

Thursday, November 20, Professor Amsbury delivered his new lecture on "Literature, Its Inspiration and Power" to the students of Northern Teachers College at Marquette, Michigan.

NOTED SCIENTIST TO DEMONSTRATE MECHANICAL MAN

**Engineer Shows Results
of Research at
Assembly**

FEATURES ELECTRON

Front seats will be at a premium for the assembly to be held tomorrow morning, for Dr. Phillips Thomas, research engineer of the Westinghouse Electric & Manufacturing company, is bringing his electric flea circus to the Institute. He has presented his circus before various groups with such huge success that it was necessary to turn people away because of limited facilities for seating. It is feared that a large number of outsiders will be on hand to attend this exhibit so the students are warned to get to the assembly on time. There will be no music at this assembly. The time for the assembly has been tentatively set at 10:30, but the definite time will be announced on the bulletin board.

Uses Electrons

Doctor Thomas uses the electron in much the same way as a showman uses his trained fleas. He thinks of the electron as a flea on the back of an atom. In numerous spectacular and interesting ways he forces these electrons to do things similar to those that they are made to do when working for an engineer. In addition to the electrons, Doctor Thomas will bring Rastus Robot, his mechanical slave, with him. This robot will perform various duties at the sound of his master's voice with a quiet, astonishing efficiency. In addition to seeing this mechanical man work, the students will have the privilege of listening to his voice, for, *miabile dictu*, he speaks. While watching these marvels of this modern age of machinery, the undergraduate body will have the privilege of hearing Doctor Thomas explain how these things were conceived and developed by him in conjunction with his associates.

Campus Club Smoker to Be Held Tonight

A smoker and card party is to be given by the Armour Tech Campus Club in its rooms in Chapin Hall this evening. An attendance of about thirty-five is expected, since only active members are to participate. Professor Mangold, faculty advisor of the club, will also be present.

There will be plenty of "eats and smokes." An elaborate program is not being planned but several skits will be presented by members. There will be enough bridge and pinochle decks to supply all wants and a prize will be awarded to the best piggye player.

A. S. M. E. Smoker Is Enjoyed by Members

The Armour branch of the American Society of Mechanical Engineers held its first smoker of the year at the Theta Xi house last Friday evening. After a number of rounds of bridge silence was called and the pledges of Pi Tau Sigma put on several stunts. Included in these stunts was one "The Student's Idea of an Ideal Class" and another "Broadcasting Station. A. I. T." both of which were very good entertainment.

After the refreshments were served, all gathered around the piano to sing some "Engineer" songs composed especially for the A. S. M. E. and then continued to warble on popular themes.

Important guests of the evening were Mr. R. Leonard, secretary of the A. S. M. E. in Chicago, as well as several Professors of Mechanical Engineering from Armour.