V. Komarewsky Gets Equipment For Oil Research

Under the direction of Professor Vasili Komarewsky, the Petroleum Research Laboratory was recently augmented by some valuable equipment. Included is a new cracking apparatus in which cracking reactions of different organic materials can be performed under high pressure.

The work is being completed by four graduate students who are working for their masters and doctors degrees. These students are J. R. Coley, Douglas Meigs, John T. Stringer, and Lesnid Warshawsky.

Project Sponsored

A petroleum technologist, M. J. Beyt, is engaged in the industrial part of this work. The entire project is sponsored by the Universal Oil Products Company.

The work of the graduate students concerns the double reaction of mixed catalysts, as in the dehydration and dehydrogenation of alcohols, as well as catalystic cracking of different petroleum products.

This work is a continuation of the previous investigations of this laboratory by those who have already received their masters and doctors degrees. Much of the work has already been published in Scientific magazines such as the Journal of American Chemical Society and the Journal of Industrial and Engineering Chemistry.

A.I.E.E. Group Hears Second Student Paper

"Developments in Magnetic Materials" was the subject of a student paper presented before the local A.I.E.E. chapter last Friday by Leonhard W. Holmboe. After reviewing recent theories of magnetism, Mr. Holmbee pointed out that laboratory developments have been so rapid in the last few years that theory has not yet had time to catch up with practice. For example, it is now possible to manufacture permanent magnets that will lift more than 1500 times their own weight. Laboratory samples of iron for core material have been made with permeabilities of about 1,000,000 as compared with 6000 for ordinary iron. The processes used in preparing these materials involve special heat treatments, which must be determined by trial and error, since no complete explanation for their behavior has yet been offered.

Due to lack of time, a paper on "Fourier Series Analysis" by George E. Frost was not presented.

At a short business meeting two men were elected as representatives to W.S.E. They are James Rummell and Ben Cole.

Plans are now definite for an A.I.E.E. smoker to be held in the Student Union at 7:30 P.M. on Thursday, April 4. A full program has been worked out, and all members of the society are looking forward to the event.

Kane, Rosenberger In Guest Lectures

This evening at six thirty, the second in a series of guest lectures, "Measuring and Control Instruments," will be presented to the classes of Professors Thompson and McCormack.

"Flow Meters and Control and Recording of Flow" will be the subject of this lecture. Two speakers will be introduced, Gordon Kane of the Rotometer Company who will speak on "The Rotometer and Its Applications" and A. J. Rosenberger of the Republic Flow Meters Co., who will discuss "The Measurement of Steam Flow."

This series presenting lectures about once in every two weeks, is part of two courses on instruments given by Messrs. Thompson and McCormack. The sessions are open to all persons who are interested. The first lecture was given last Tuesday by Mr. Frost of Leeds and Northrup Company on "Automatic Temperature Control."

Senior Electricals Make Power Study On Inspection Trip

Last Tuesday, in their series of weekly inspection trips the senior electricals visited the Field Building located in Chicago's loop. The trip, under the guidance of Professor Ernest H. Freeman, was conducted through the courtesy of Commonwealth Edison Company and the Field estate. With few exceptions the entire class was present and all appeared to greatly enjoy the trip.

First In Power

A 45-story structure, the Field Building was the first building in Chicago to be supplied with an electric power of 12,000 volts. This large amount of power is generated by four transformer sub-stations, the largest of which was inspected by the Armour men. Much of this electric power is used to run the air-conditioning and elevator systems. Both systems employ the most modern equipment and machinery in the world. In the air-conditioning unit, the air is carefully washed, dehumidified and made dust-free before being circulated throughout the building.

This week, the group will visit the General Electric X-Ray Plant, where x-ray units are made for both medical and industrial uses. Among other things the men hope to see a million volt x-ray machine. The purpose of these trips, as explained by Professor Freeman, is to give the Armour students an idea as to what the electrical engineer is expected to do in industry and to show first-hand practical applications of the knowledge they have learned in four years at school.

Library Joins Association to List Magazines

A new service is being added to the many aids offered by our Armour Library. The library is now one of 200 American and Canadian contributors to the "Union List of Serials."

All the periodical reviews found in these libraries are listed in this publication. For each serial, the libraries having copies are entered, with individual statements as to the holdings of each contributor. The staff, directed by Miss Steele, is going through the Armour periodicals and checking the edition of the list in sections. As each section is completed, it is sent in to the Library of Congress Committee editing the work. To date, Miss Neal, assistant librarian, has done most of the work. The **Union List of Serials** is indispensible to any American library in which references to periodicals are constantly sought.

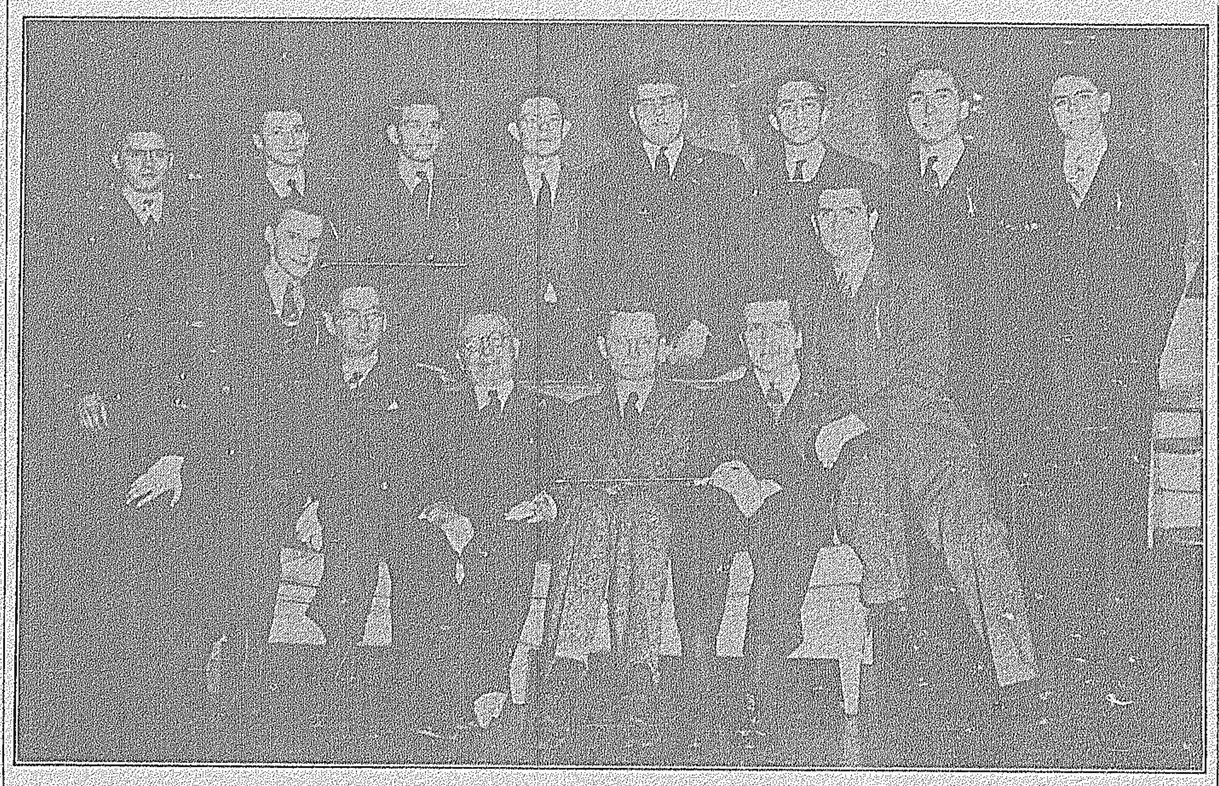
Further expansion has been made by the complete revision and renewal of the file of trade catalogs. Because since many companies have gone out of existence in the last few years, the files had to be checked for discarded names. Since Dec. 1, about 1000 requests have been mailed and as a result, several new catalogs are being received daily. Because of the large number of new catalogs, it has become necessary to add three new files to the library equipment. These trade catalogs will be a source of much valuable information to students and faculty.

Thordarson Electric Gives Transformer To Electrical Dept.

Last week the Armour Institute Department of Electrical Engineering received 150 assorted samples of power, output, and audio transformers, a gift from the Thordarson Electric Manufacturing Co.

H. J. Hubenthal of Thordarson contacted Professor Sear and arranged for the delivery of the transformers, which are mostly of the power type. They will be very useful in the Electrical Laboratory, and also in the Radio Lab for power supplies, making it possible to run the radio experiments by merely plugging in on the A. C. line. Most of the transformers to be used are of low voltage.

The Electrical Department wishes to express its appreciation for this generous effort on the part of the Thordarson Manufacturing Co.



Photograph of thirteen of the fifteen Armour men pledged to the Beta Chapter of Tau Beta Pi during the general assembly last Friday. Two of the pledges, Frank Heidenreich and Robert Mead, were not present for the picture.

TAU BETA PI—

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he comes in contact because of the qualifications necessary for its acquirement. The pledges were then presented with their pins by senior Tau Beta Pi members of their respective departments.

Civics Honored

The members of the civil engineering department honored were Donald Mackey, senior, president of the W.S.E., member of Chi Epsilon, manager of the golf team, member of the senior social committee, member of the A.S.C.E., and junior marshall for the civil engineering department; and LeRoy Goetz, junior, Transit editor of Chi Epsilon, member of the glee club, member of the A.S.C.E., student assistant in the civil engineering department, who spends 35 hours a week on outside employment. Also honored was a graduate student of the civil department, Clark Crawford, graduate of Duke University, graduate assistant in the civil engineering department, and manager of the Graduate Club.

Coops Pledged

The pledges of the Co-op department were Peter Woods, fifth year, editor-in-chief of the *Armour Tech News*, member of the orchestra, member of the Sphinx, member of Pi Nu Epsilon, member of the Co-op Club, and member of the A.S.M.E.; Frank Heidenreich, fifth year, member of Pi Tau Sigma, member of the A.S.M.E., president of the Co-op Club, member and treasurer of Pi Kappa Phi, and a member of the interfraternity council; David Whittingham, fifth year, president of the B group of the Co-op Club, member of Pi Tau Sigma, member of the A.S.M.E., honor marshall for one year, and chairman of the Co-op Open House exhibit; Edward Hanuska, fourth year, member of the A.S.M.E., feature writer for the *Armour Tech News*, member of the Co-op Club, member of the Co-op Open House committee, and maintainer of a straight A average.

The chemical engineering department was represented by Henry Newman, senior, president of Phi Lambda Upsilon, member of Alpha Chi Sigma, member of the A.I.Ch.E., member of the W.S.E., honor marshall for two years, and a member of the interhonorary council; Constantine Kazmierowicz, senior, member of Phi Lambda Upsilon, member of Alpha Chi Sigma, member of the W.S.E., member of the A.I.Ch.E., member of the varsity wrestling squad, who has earned 100% of his school expenses; Robert Mead, junior, member of the glee club, copy editor of the *Armour Tech News*, member of Pi Lambda Upsilon, member of Alpha Chi Sigma, honor marshall for two years, and a student assistant in the registrar's office.

Pledges of the mechanical engineering department were John Catlin, senior, Treasurer of Pi Tau Sigma, member and secretary of the A.S.M.E., member of the W.S.E., member of the Athletic Club, and has earned 100% of his school expenses; and Leo Stollman, junior, member of Pi Tau Sigma, student assistant, member of the A.S.M.E., honor marshall for two years, and active in intramural athletics.

Electricals Represented

The two members of the electrical engineering department were Alo-

John Calkin Gives Second Grad Talk 'Space Dimensions'

"Spaces with Infinitely Many Dimensions" was the subject of the second lecture in the spring series of graduate school lectures. This lecture was delivered by Dr. John W. Calkin, Assistant Professor of Mathematics, in room 105 Chapin Hall on Friday, March 8th at 10:00 A.M.

Dr. Calkin pointed out that the word "space" has, in modern mathematics a very broad meaning and, in particular, that any class of entities within which a conceptually satisfactory notion of nearness is defined, is called a space. He then defined a wide category of classes which are spaces in this sense, and showed that both the plane and the three-dimensional space of Euclidean geometry occurred within this category, as well as the analagous spaces with any finite number of dimensions. There also appear certain spaces which could reasonably be said to have infinitely many dimensions. In conclusion, he noted certain applications of these ideas to problems in the field of differential and integral equations.

ARMOUR EYE—

(*Continued from page one*)

ing last Friday, as a result, attendance at every fourth meeting, at least, is required of all members. A committee composed of George Raymond and Richard Eng was appointed to investigate miniature enlargers for the object of suggesting a new one which the club shall soon purchase.

Rooms Redecorated

The rooms of the Armour Eye were completely redecorated last week under the direction of the vice-president Robert Zelin, and both dark-rooms are now in tip-top shape. Membership is open to all undergraduates in attendance at Armour, who, after serving a pledge period are admitted at secret initiation ceremonies.

ysius Veras, senior, president of the A.I.E.E., recording secretary of Eta Kappa Nu, member of the senior jewelry committee, member of the W.S.E., and has earned 60% of his college expenses; and George Frost, senior, vice-president of the W.S.E., secretary of the A.I.E.E., corresponding secretary for Eta Kappa Nu, Chairman of the senior cap and gown committee, member of the orchestra, and a member of Triangle social fraternity.

Fred DeMoney, junior of the fire protection engineering department, secretary of the A.T.S.A., Sports Editor of the *Armour Tech News*, manager of the swimming team, member of the F.P.E.S., member of the glee club, and timekeeper for N.Y.A. students, was also a pledge.

"All Sophomore and Junior students intrested in serving as circulation and business assistants for the ARMOUR ENGINEER & ALUMNUS please come to the Public Relations Office, 43 West 33rd Street, and arrange for an interview.

Tau Beta Head Here Thursday

Thursday night both the Armour chapter and the alumni organization of Tau Beta Pi, met for dinner at six thirty. This was followed by a meeting in the auditorium, during which pictures were shown illustrating the utility and service of the Coast Guard. Introduced by a brief history of the department, the pictures dealt with lifesaving and commerce-protecting activities and with the economy realized in saving the shipping as compared with the cost of operation. Surprisingly enough, the Coast Guard is operated by the United States Army.

Spencer Talks

After the movies, the meeting was turned over to Dr. Charles Douglas Spencer, Chairman of the National Organization of Tau Beta Pi. Dr. Spencer was passing through Chicago on a quick trip East; but, fortunately, was able to stop long enough for this meeting. His talk dealt with national affairs in their present condition with special reference to Tau Beta Pi. He spoke of the history of the organization and some of its accomplishments throughtout the years. Emphasis was given to loyalty, standards of membership and continued development.

Dr. Spencer is a retired engineer and possesses a great variety of experience in industry and research. Until recently he has occupied an important position in a prominent national industry. As a result of his wide background he has a broad perspective and was able to deliver a very inspiring address.

The Armour Chapter considers itself fortunate in having Dr. Spencer as a guest for the second time in a year and a half. His previous visit was in November, 1938.

Research Cuts Machine Noise

Through the efforts of the Research Foundation at Armour Institute of Technology in the person of Dr. H. A. Leedy, the comptometer people, manufacturers of Comptometer calculating machines, were able to offer radical improvements in their new model which was placed on the market about four months ago. These advancements in design consisted of lowering the noise level of the machine; thus making for more efficient work in offices where calculating machines are in use. The laboratory model operated ten decibles quieter than the corresponding machine of the previous style. Quantitatively this means a ninety per cent noise energy reduction. Ten of these new and improved machines would be needed to make as much noise as one of the old style.

After a great deal of observation, the Research Department found that most of the noise was being transmitted through the frame because the internal mechanism was firmly anchored to it. As a remedy the machine was mounted on resilient supports which were in turn fastened to the frame.

SIDELINES

By Michael Kunz

American Undersecretary of State Sumner Welles is now in Europe visiting the capitols of the belligerent nations involved in this, the second World War. The purpose of his visit, as announced by President Roosevelt, whom Mr. Welles is representing, is to confer with the governing officials of each nation in an endeavor to learn their respective viewpoints and to ascertain the minimum demands of each for a peaceful settlement.

President Roosevelt has twice before suggested that the Western Powers of Europe settle their differences around the conference table, but to no avail. With the opening of hostilities, the president again appealed to each nation, asking them to refrain from bombing civilians. The latter plea has apparently been adhered to thus far in the war. Observers in Washington have expressed the opinion that Mr. Welles' mission is the last effort of the president to bring about peace.

Purpose Of Mission

As announced by the president at a press conference, the object of Mr. Welles' mission is to "sound out" the belligerents for such information that may lead to a peaceful settlement before the war unleashes its fury of death and destruction. All the experts believe that the chances of further peace negotiations are indeed very slim. However, recent episodes have taught us that experts can be wrong. Many prominent radio commentators on national and foreign events predicted in no uncertain terms that Germany would not invade Poland. The experts were wrong again when they declared that a military alliance between the Soviet Union and England was a foregone conclusion. Their ideas were based on the enmity existing between Naziism and Bolshevism. As a result of such happenings, it will be well for us to expect the unexpected.

Upon receiving notice of Mr. Welles coming visit, each of the belligerents and Premier Mussolini of Italy, the non-belligerent axis partner of Herr Hitler, expressed their willingness to cooperate in this latest peace effort of the President of the United States. The press of Great Britain devoted much comment and bestowed a good deal of praise upon the president, and declared the British government would gladly give any information that might assist in his efforts to end the war. But they added that there can be no peace with the present German Government, using the well known phrase, "Hitlerism must be abolished."

Attitudes Different

In Germany the attitude of the national press was quite different as contrasted with that of England. The announced visit of Mr. Welles recalled the visit of Colonel House, President Wilson's peace emissary in the last world war, whose mission was similar to that of Mr. Welles. Colonel House, however, was not the neutral observer that his position required. He came back to the United States strongly advocating the cause of the Allies. His duty was only to listen to the terms for peace that might be considered by the warring nations, but instead he spoke openly in London of all he had heard in Berlin. Thus we see the underlying reason for the skepticism that manifested itself in German political circles when they learned of Mr. Welles' coming visit. German newspapers did assure the undersecretary of state of a welcome and polite reception, all unpleasant reminiscences of Colonel House notwithstanding.

Ambassadors Not Pleased

American ambassadors, Joseph Kennedy and William Bulliet, to Great Britain and France respectively, were not so well pleased with the announcement of Mr. Welles' mission. They declared themselves capable of getting the information the president desired. But we have no ambassador to Germany, and Mr. Alexander Kirk, American charge d' affairs in Berlin, has no authority to receive the audience of Germany's foreign minister, Herr von Ribbentrop. If diplomatic relations between the United States and Germany were not severed, Mr. Welles'

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