Worldwide Requests for Illinois Tech Catalogs and Applications Total 3,545

by Frank Valvoda

A total of 3,545 requests for IIT catalogs and applications were received during the period from September, 1946, to February, 1947, according to a tabulation released recently by the Admissions Office.

Letters were received from 45 states and the District of Columbia and varied from a total of 1,904 from Illinois and 395 from New York, to one each from Delaware, Idaho, and Nevada. Only Maine, Colorado, and New Mexico were not represented among the requests.

Foreign requests were greatest from India (30) and Palestine (25). Requests were also received from China, Cuba, Canada, Norway, South American countries, and U. S. Territorial possessions.

One unusual inquiry concerning entrance to the Fire Protection and Safety Engineering curriculum was received by overseas radio and telephone from Yokahoma, Japan. A Lt. L. A. Wooldridge made the person-to-person call which was radioed to Honolulu, phoned to San Francisco and then to Chicago. The reception, the Admissions Office said, was equal to any local connection.

Honor Fraternities To Pledge by May

"All honorary fraternities in the Interhonorary Council will complete pledging activities before the end of April", said Don Asire, chairman.

It had been hoped that pledging could be completed before Junior Week, but the delay in receipt of grade averages upset original plans. "These averages are now available in the IBM report", Asire said, "and may be obtained from Russell E. Elmquist, assistant registrar."

The withdrawal of Rho Epsilon from the IHC has been approved. It was also announced that the IHC constitution has been rewritten to discontinue the fifty-cent pledge fee required of each fraternity heretofore, and to substitute a system of special assessments to finance IHC services.

In this connection, Asire voiced the hope that all unpaid fees due from last semester will soon be turned in. Such money may be left at the FPE office, 103C.

40 Senior Mechanicals Feted by the Chicago Section of the ASME

Forty mechanical engineering seniors were the guests of the Chicago section of the American Society of Mechanical Engineers last Thursday evening at Northwestern University.

The meeting consisted of a tour of the Technological Institute followed by a banquet in Lunt Hall, and a short address by James D. Cunningham, president of Republic Flow Meter Company and chairman of the board of trustees of Illinois Tech.

The main points of interest of the tour were the mechanical engineering laboratories, the materials testing laboratory containing a million pound testing machine, and the hydraulics laboratory.

A technical paper contest sponsored by the ASME is to be held at the University of Minnesota on May 19 and 20. Entries will be judged by the ME department and the writers of the two best papers will be sent, at the expense of the society, to the University of Minnesota to compete against other colleges and universities.

"There is no limitation of subject and the ME department will assist all writers", said Kurt Kuhnle, ASME president. Some suggestive topics are pre-stressing, smoke abatement, and jet propulsion. Anyone interested in writing a paper should contact Mr. S. E. Rusinoff, honorary ASME chairman.

Council Members Elected by ITWA

Elections for members of the Illinois Tech Women's Association council were held at the recent dinner. The women elected by the Tech coeds will start the organization functioning and will serve until June. A new council will be elected in September.

Those chosen were Council president, Maristell Dixon; senior representatives, Clare Sonnenblum, Raleighnae Patterson, and Ramona Osherow; junior representatives: Ida Wright, Kay Kamalick and Edith Stroshein; sophomore representatives: Maurine Boyle and Betty Duke; freshmen representatives: Audrey Salomon and Lillian Kozlowski.

The temporary faculty chairman will be Jeanette MacLucklie. The permanent advisors will be appointed in the future.

Bookmarks Available

The Illinois Tech bookstore has a limited supply of a very colorful and useful bookmark for students desiring them, according to Mr. Paul Fox, bookstore manager. For your free bookmarks, just ask the sales-clerk on duty.

They are exceptionally useful because they have a 1947 calendar printed on both sides which may serve as a ready reference when questions concerning quizzes and assignments come up during class. They also picture Jo Stafford and Perry Como of the Chesterfield Supper Club radio program.

95 IIT Writers Hear Graffis

On Wednesday, April 2, the Normandy House was the scene of the annual joint banquet of Illinois Tech student publications and Pi Delta Epsilon, honorary journalism fraternity. The IIT literary staffs heard Mr. Herb Graffis, a *Chicago Times* columnist, as speaker of the evening. Ninety-five writers attended.

In addition to the usual banquet talks, *Technology News* and Integral staff members found something new this year. The place cards were slugs of type. A package of cigarettes was given free to each staff member thanks to Paul "Chesterfields are Dandy" Thompson, business manager.

Martin Gabriel, vice-president of Pi Delt, announced that three writers will be honored for outstanding work each semester, one each in the fields of news, feature and sports writing.

Chicago's Bridges Topic of ASCE Talk

"Chicago's Bridges" was the topic of the talk given by Donald N. Becker at last Friday's meeting of the ASCE.

Mr. Becker, who has been Engineer of Bridge Design for the city of Chicago for the past 24 years, discussed bridges, past and present. Many of Chicago's earlier bridges were nothing more than "floating logs", according to Mr. Becker. Chicago's first bridge was built in 1829 at a cost of $489.27. Mr. Becker also discussed the relation between bridges, navigation and trade.

Mr. Becker discussed the workings of the City-type bridge, which the city uses. He also explained the construction of several other types of bridges.

'Aurora Armour Co-ops' Hold Reunion April 25

"All Aurora students and alumni of Illinois Tech are invited to attend the reorganizational and reactivating meeting of the former Aurora Armour Co-op Club," Osmond Orland stated today. The first meeting will be held at 8 p.m. Friday, April 25, at the home of Jacques Brownson, 6th Avenue and Ohio Sts., Aurora. Aims and objectives will be discussed as well as deciding upon a new and more appropriate name. Refreshments and a social hour will follow.

For further details students may contact Osmond Orland, Ken Johnson, or Paul Thompson.

BODER ASSEMBLY

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tive languages of the DP's; and the recordings will be supplemented with translations by Dr. Boder.

In addition to the wire recordings, Dr. Boder will illustrate his talk with slides of several rotograph views by the Polish artist, Zelinski, who himself spent several years in a concentration camp and is still a DP in Munich. During those years of internment, Zelinski collected the sketches for his pictures depicting concentration camp life.

Dates of further sessions to be held for students wishing to hear selected excerpts from more of the recordings will be announced in the near future.

Du Pont Digest

Items of Interest to Students of Science and Engineering

Research Problems in the Manufacture of Nylon

Last month in this space the development of nylon was traced from a fundamental research study on linear polymers to the first synthetic organic fibers, the superpolyamides. This installment deals with the complex manufacturing research problems that followed.

From the start there were obstacles to the production on a commercial scale of the "66" polymer—so named because the adipic acid and hexamethylenediamine from which it is made have six carbon atoms each.

Although adipic acid was being produced in Germany, it was necessary to develop a new process to meet conditions at Du Pont's Belle, W.Va., plant, where, because of the catalytic technique involved, it was decided to make this intermediate. Hexamethylenediamine was only a laboratory curiosity, and a process for its commercial production had likewise to be worked out. Fortunately it was found that the diamine could be made from adipic acid by new catalytic processes. The results of these investigations may be summarized as follows:

Carrying out experimental autoclave polymerizations of condensation polymers. J. H. Blomquist, Ph.D. Chemistry, Ohio State University '41; O. A. Bradeson, Ph.D. Chemistry, M. I. T. '41; J. E. Waltz, Ph.D. Chemistry, University of Indiana '41.

Studying the distillation of new intermediates for condensation polymers: T. J. Dickerson, B. S. Mechanical Engineering, Virginia '43 and E. E. Magat, Ph.D. Organic Chemistry, M.I.T. '45.

The synthesis of intermediates was only part of the problem. Nylon polymer was an entirely new material with properties different from any previous synthetic product. It provided the first example of spinning fiber from a molten polymer (m.p.263°C) and required entirely different techniques from rayon spinning. Information was acquired only by painstaking experimentation at each step.

Manufacturing Process Outlined

The process as finally developed for the manufacture of nylon and its fabrication into yarn may be briefly outlined as follows:

Nylon salt is heated in an autoclave with addition of stabilizers to control molecular weight and viscosity. A long-chain linear polymer is formed with a molecular weight of 10,000 or higher.

The melt is converted to solid chips that are later re-melted and extruded through a spinneret to form filaments at a speed of 2,500 feet a minute. The filaments are then drawn out to about four times their original length in order to develop the desired textile qualities characteristic of nylon.

These operations sound simple enough, but some of the problems encountered were extraordinarily difficult. For example, a specially designed grid for melting the polymer was necessary because of the poor thermal conductivity of the polymer; pumps had to operate at 285°C with only polymer as a lubricant; special abrasion-resistant steels that did not soften or warp at 285°C were necessary; the spinning assembling required radically new engineering developments to produce the necessary fiber qualities.

All of these chemical, physical and mechanical engineering problems had to be solved and dove-tailed into a unified process before manufacture of nylon could be undertaken. In all, about 230 technical men and eight manufacturing and staff departments share the credit for making nylon the important part of American life it is today.

Questions College Men ask about working with Du Pont

WHAT ARE THE OPPORTUNITIES FOR ENGINEERS?

Most openings at Du Pont are for chemical and mechanical engineers, but opportunities are also available for industrial, civil, electrical, metallurgical, textile, petroleum and other engineers. Practically all types of engineering are required in the work of the ten manufacturing departments as well as in some of the staff departments. Write for the booklet, "The Du Pont Company and the College Graduate." 2521 Nemours Bldg., Wilmington 98, Delaware.

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