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# DEPARTMENT NOTES

## Civil Engineering

### IMPROVED BUSINESS CONDITIONS

The Civil Engineering department reports that many of its graduates have received engineering positions on PWA and WPA projects. Prof. Sherman stated that the demand for experienced civil engineers now exceeds the supply. Recently he had a call for forty civil engineers experienced in specification writing.

### SUMMER SURVEYING CAMP

During the summer, all undergraduate students in Civil Engineering must either obtain practical engineering employment or attend the summer surveying camp.

Last summer the camp was held near Bishopville, Ohio, in the midst of U. S. Forest Preserve District No. 9, eighty miles southeast of Columbus. Among the thirty-four students in attendance was one young lady, Miss Betsy Mullsberry of Youngstown. The session was under the competent direction of Prof. R. C. Sloane, ably assisted by J. M. Montz and C. H. Wall.

The camp period lasted from June 11 to July 20. The work consisted of surveying reservoir sites for the State Water Conservation Board. It provided excellent experience in topographic and land surveying. The object of such surveys is to find the cubic content of reservoirs created by dams of proposed heights.

The largest surveyed was on the east branch of Sandy Creek. If constructed this reservoir would furnish an abundant water supply for Glouster and all cities below during dry weather. It would also serve to mitigate floods downstream.

### MUSKINGUM WORKS INSPECTION TOUR

Friday and Saturday, October 4 and 5, the upper classes in Civil Engineering made an inspection tour of the great Muskingum Conservancy District, at present the largest engineering project in the state of Ohio. All parties met at Zanesville where a description of the project was given by those in charge.

There are to be a total of fourteen great reservoirs which will be formed by a corresponding number of large earthen dams now under construction. After all necessary railroad and highway changes are made the total cost of the project will reach forty million dollars. The reservoirs on this project are entirely different from those of the Miami River basin. The latter impound no water except temporarily during flood periods. The Muskingum dams will impound dry weather flow as well as catch floods; thus permanent lakes will be formed by all Muskingum dams except two. All the dams will have gates to control the waters upstream. These gates will be opened when

floods come and closed when the floods subside. This maintains large lakes for conservation in draught seasons.

Saturday was devoted to the inspection of the largest and most interesting dam. The time was exceptionally opportune for seeing the large mechanical equipment employed in moving the immense quantities of dirt and rock. While the dams are under construction it is necessary to shump rivers from their courses. During last August the flood engineers encountered a severe task in taking care of the high waters caused by the record rainfall of the Muskingum Valley. The students benefited greatly from the practical information gained from the tour.

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## Ceramic Engineering

The Ceramic Research Department has perfected the "Standard Pyrometric Cone," used in Ceramic firing processes, to such an extent that all previous difficulty in their use has been overcome. The previous trouble in the use of the cones was the evidence of a slight warpage of the formed product, so that the initial deformation in service was frequently in doubt. However, through investigation conducted by Ohio State Graduates, connected with the Engineering Experiment Station, this fault has been eliminated and the cones are now being produced with absolute accuracy. These conical devices, invented by German and French investigators, are three sided pyramids about three inches tall and are of such definite mineral composition that they fuse at known temperatures ranging from 585°C to 2015°C. Their principal use is in determining definite temperatures in kilns and furnaces.

It is interesting to know that the Edward Orton Jr. Foundation has produced the "Standard Pyrometric Cone" since 1896. They have established numerous Cone Systems and have used the "Cones" in controlling many industrial firing processes of Ceramic products.

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Dr. S. R. Scholes, a nationally known authority in the field of glass technology and a former lecturer in the Ceramic Engineering Department has written a book known as "Modern Glass Practice." This volume will be published this autumn by Ceramic Industry, one of the leading Ceramic monthly journals.

Copies of this book by Dr. Scholes will be available about November 1, 1935, and will be used as a text in the courses dealing with glass in the Ceramic Engineering Department.

## Chemical Engineering

Mr. Albert H. Vilbrandt, Instructor of Chemical Engineering, The Ohio State University, died suddenly in his laboratory office, June 13th, 1935. He was connected with the staff of the chemical engineering department for the past eighteen years and was recognized as a natural teacher of high order, outstanding in testing of materials, and other phases of Chemical Engineering. During the war Mr. Vilbrandt served as a junior gas chemist with the U. S. Bureau of Mines. Later he entered the Chemical Warfare Division of the United States Army, serving as an analytical engineer in examining war gases.

Mr. Vilbrandt was a brother of Dr. Frank C. Vilbrandt, Chairman of the Department of Chemical Engineering, Virginia Polytechnic Institute.

Mr. Herbert L. Feinberg of Flushing, New York, and Mr. Merrill William Davis, of Chillicothe, Ohio, have been appointed instructors in the department of Chemical Engineering. Also Messrs. Napoleon A. Agapetus, William Swisher, Albert R. Morrison, Frank Sercelj and James O. Pence have been appointed as graduate assistants for the year 1935-1936. Mr. Pence was instructor at the University of Idaho last year and is a candidate for the Ph.D. degree.

## A. I. E. E.

The Electrical Engineers turned out a hundred strong for the first meeting of the student society held Friday evening, October 11. The Freshman and Sophomore classes were exceptionally well represented. Professor Caldwell, the Faculty Counselor, was introduced by chairman Paul G. Fritschel. In the course of his welcome he stated that it was the largest "E.E." gathering he had seen in many years. He also pointed out that the Ohio State Student Branch was one of the first student branches to be established among the colleges of America.

Chairman Fritschel gave a short talk outlining the purpose of the A.I.E.E. and the activities being planned for this year. There are going to be inspection trips through the outstanding electrical industries, and demonstration lectures by men expert in their particular line of electrical engineering activity.

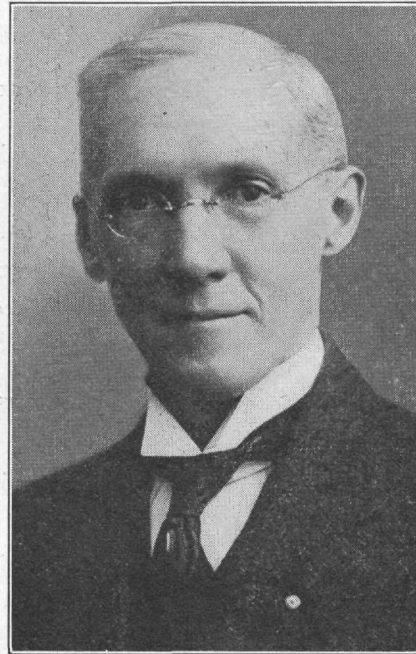
After abundant refreshments of cider and doughnuts were served, the members were taken on an inspection tour of the communications and power laboratories, and through the University radio station, WOSU.

Beginning October 24, regular meetings will be held every other Thursday evening in the auditorium of the Communication building. Prospects look bright for a larger and more active organization.

—JAMES M. ROBINSON.

## PROFESSOR MAGRUDER

The death of William Thomas Magruder the twenty-first day of June of this year brought to a close a lifetime career of service as an educator and leader in engineering. He was one of the most outstanding figures in the development of the Engineering College.



Mr. Magruder was a graduate of Stevens Institute of Technology. After working and teaching in various places for several years he came to Ohio State in 1896 where he succeeded Professor Stillman W. Robinson, who had resigned the year previous, as the head of the Mechanical Engineering Department. The rapid development of this department

so ably started by Professor Robinson continued under Professor Magruder's direction. This development reached the point where more laboratory and class room space was necessary and the present Robinson Laboratory was built.

In 1929 Mr. Magruder wished to resign, however, he remained as a professor. In 1933 he was made Professor Emeritus. At that time he had devoted thirty-three years of faithful service to his department. Until the time of his death his advice and assistance was highly appreciated.

He was a member of the council which founded the present Engineering Experiment Station in 1913. Mr. Magruder was a competent, highly respected and well-known educator and engineer. For more than fifty years he was a member of the American Society of Mechanical Engineers. He served one term as president of the Society for the Promotion of Engineering Education which he had helped to organize. As a Tau Beta Pi he was a very active figure. As a crowning honor the Doctor of Engineering Degree was bestowed upon him by the Stevens Institute of Technology.

The Ohio State Engineer on behalf of the College of Engineering, faculty and students wish to express their deepest sorrow for the loss of one to whom we owe an everlasting debt of gratitude.