Measurements Illustrated In pH Meter Talk

Mr. E. D. Coleman of the Coleman Electric Company was the speaker at the last session of the course on Instrumentation and Control. He spoke on the theory and applications of the Coleman pH Meter. This instrument, by means of a glass electrode, measures the hydrogen ion concentration of a liquid, and has applications ranging all the way from growing mushrooms and making honey to treating sewage and dyeing cloth. The basic theory behind it, is that a liquid with a given hydrogen ion concentration develops a proportional internal potential. The difference between this potential in the unknown and that in a neutral, saturated solution of KCl is measured by means of a bridge, and thus the pH is accurately determined.

Meters Developed

Mr. Coleman was formerly a professor of chemical engineering at the University of Wisconsin. Later he, with fourteen other men, organized the Coleman Electric Company, which is engaged in the technical applications of electrical methods.

The course on Instrumentation and Control, under the supervision of Professors Thompson and McCormack, has had sessions on temperature measurement and control, flow meters for fluids, proportioning of liquids and solids, pressure control devices, and now hydrogen ion measurement and control. The guest speakers have been representatives from such companies as Leeds and Northrup, Rotometer Company, Republic Flow Meters Company, Powers Regulator Company, Proportioneers Incorporated and the Coleman Electric Company.

Inspection Trips Helpful

"A very valuable item in the work to date," says Dr. Thompson, "has been an inspection trip to the new Southwest Sewage Disposal Plant of the Sanitary District. Here many of the instruments under discussion are in use, including the largest Venturi meter in the world—over nine feet in diameter."

Future speakers will be invited who are industrial specialists on electrical meters and control devices, humidity and air conditioning and the use of amplifiers and associated circuits in instruments.

SCHOLARSHIP—

(*Continued from page one*)

Prof. S. F. Bibb, Dr. H. W. Davey, Dr. W. M. Davis, Dr. H. A. Giddings, Mr. C. O. Harris, Mr. W. E. Kelley, Dr G. McColley, Mr. W. J. McLarney, Dr. M. J. Murray, Dr. J. G. Potter, Mr. A. L. Mell, Mr. A. M. Sear, Mr. W. H. Seegrist, Prof. S. M. Spears, Dean C. A. Tibbals and Dr. W. L. Wasley.

Scholarship examinations are a regular semi-annual occurrence. At some time during each semester prospective graduates are given this chance to compete for full tuition scholarships for their freshman year. The last one was given January 6th of this year. Fifty-five took the exam at that time and a somewhat larger group is expected this time since June classes run larger than February classes. Professor Winston estimates that the number of candidates will excede 250.

Physics Dept. Plans Exhibits

Tuesday and Wednesday, May 7 and 8 will see one of the biggest and best Open House demonstrations given by the Physics Department in the history of Armour. The Physics laboratories on both the first and second floors of the Physics Building will be open, and will present demonstrations in mechanics, sound, light, and electricity. The exhibits and demonstrations will be:

First Floor:

1) Polarized light experiments including large 2 foot polaroids. Applications to many problems of glare elimination, strain analysis, etc.
2) Liquid air demonstrations—Properties of materials at very low temperatures.
3) Stroboscope — Illumination of rotating and vibrating equipment, water jets, etc.
4) Flourescence and Color—Applications to tube lighting.
5) Electromagnetism—Induced currents, Electromagnetic waves, Thermal magnets.
6) Flow of Fluids—Rotor ship—Flow meters, etc.

Second Floor:

7) Photographic Laboratory.
8) Electronics Research Laboratory—Studies in mercury arcs.
9) Sound wave demonstrations showing the similarity in the behavior of light and sound.
10) Discharge tubes — Applications to tube lighting, smoke precipitation, high frequency discharges.
11) Compton Charts demonstrations concerned mostly with electromagnetic radiations.

Salon Planned By Armour Eye

All the Armour elbow-benders will be interested in the Camera Club saloon to be held in the library during Open House. Of course, one of the "o's" will be missing, making it a salon, and a photographic one at that, but President Pete J. Stanley of the Armour Eye promises that what the salon lacks in alcohol, it will more than make up in interest, artistic excellence, and popular appeal.

Open to any member of Armour, from the mightiest freshman down to the lowest faculty officer, the Eye's Fourth Annual Salon will be judged by the visitors to the Open House. The last salon saw more than 1,000 ballots distributed to an interested throng crowding in and out of the library. This year, due to the doubling of the exhibition time, and the material increasing of the club's membership, 2,000 ballots are expected to be used in the decision.

There will be ribbons for first, second, and third places, as well as three honorable mentions. The first three will also receive a dozen sheets of enlarging paper each. All the prints shown will have a sticker placed on their reverse sides to show that the pictures were in the salon. All pictures must be in by Friday, May 3.

Professor Bliss, Chairman of the mathematics department of the University of Chicago, will address the student body this Wednesday at 12 noon in room 2W of the Student Union.

Math Open House Exhibit To Feature 'Million' Magnitude

The exhibit of the Department of Mathematics at the 1940 edition of Open House on May 7th and 8th, will appear under the general title "How Much is a Million?"

In these days of New Deal spending and lending, the "Billion" has become a common term, while the "Million" is about the smallest unit worth talking about in national finance.

This being the case, the term "Million" seems to have lost much of its hugeness, and just as the world grows smaller with modern transportation the million seems to grow smaller with modern government. If, however, one actually attempts to visualize this "smallest unit" in terms of familiar object or periods of time, it again assumes staggering proportions, difficult to comprehend and a challege to the imagination.

Professor Ford, the head of the Mathematics Department is in charge of preparations for the exhibit. He is being assisted in his work by sophomore members of his class in Math 210.

SUBWAY—

(*Continued from page one*)

entire group will go underground and visit the river section of the Lake Street-Milwaukee Avenue division of the subways, through the courtesy of the contractors, Paschen Brothers. They will first meet at the office of the contractors at Desplaines Street and Milwaukee Avenue. Following this, there will be a dinner at the Chicago Engineers' Club.

A.T.S.A.—

(*Continued from page one*)

year man from the B group, and the other would be a 4th year man from the A group. The 4th year co-op is to be elected for two years, much like the 1st vice-president of the A.T.S.A.

One of the most recent accomplishments of the A.T.S.A. Board is the standardization of awards given to captains, graduating seniors, lettermen, etc. A complete set of rules has been established whereby the type of awards given for a certain activity is not left to the discretion of the coach or sponsor of the activity.

CHEM EXHIBIT—

(*Continued from page one*)

invisible inks and electricity, colored flames, colloids, fire and fireproofing, electrochemistry, chemical continual-motion group, and a special exhibition in luminescence.

Lab Experiments Featured

The physical chemistry section will be directed by Dr. Bruce Longtin. Its open house projects will not feature any "spectacular" exhibits. They will feature, rather, the regular laboratory experiments, merely dressed up for the benefit of the visiting public. These experiments will be very interesting because of the very nature of the work as well as the appeal to the eye, and will include such setups as a series of colored solutions to trace out the curve of their refractive indices by means of the light passing through them, and the "chemist's clock," wherein two solutions when mixed, change color suddenly at the end of a specified time interval.