

## Discuss 'Welding' on First of Civil Engineering Series

### Grinter, Simpson Talk on X-Ray Tests

The first of a new series of educational broadcasts concerned with the field of civil engineering and sponsored by Armour Institute of Technology, was presented March 12, over Station WCFL, at 7:00 o'clock by Alexander Schreiber. The scientific interpreter. The subject of the evening's broadcast, "Welding," was discussed by Dr. L. E. Grinter, director of the Department of Civil Engineering and Dean of the Graduate Division, and Mr. W. M. Simpson, also of the Department of Civil Engineering at Armour.

Mr. Simpson reviewed Chicago's New Building Code which was passed last November by the City Council. When the code goes into effect, it will be legally possible to weld important structures in Chicago. The general specifications of the code cites the materials to be welded, the severity of atmosphere conditions permissible during welding, such as rain and wind, and the precautions which must be taken during objectionable atmospheric conditions. The code also specifies the allowable stresses, both in the materials to be welded, and in the weld itself, and also the method of testing welds.

#### Test by X-Rays

Dr. Grinter discussed the various tests which must be made on welded constructions before it is approved by the city engineers. At least 3 per cent of the welds in important members must be tested before the steel is enclosed in concrete or any other fire-proofing medium. These weld tests are actually made on the job. The test loading is one and one-half times the loads which the structures will later have to carry.

Structural engineers today can product joints in structural steel by welding that are fully as strong as those produced by riveting. A weld can easily be made stronger than the actual material that is welded, whereas a riveted joint will usually break in the rivets. The trend is definitely to replace light riveted structures with welded ones.

#### Explained City Regulations

There are two types of processes commonly used in welding today. They are: electric arc welding and gas welding. In both processes, the object is to heat the metals to be welded, at the same time to add additional molten metal and then allow the weld to cool so that all parts are banded firmly together. The difference between the two methods is that gas or oxy-acetylene welding supplies heat by the combustion of acetylene and oxygen; whereas in the case of electric welding, the heat required to melt the steel is obtained from the electric arc. The metal rod, used as an electrode, melts away to supply the additional metal necessary which is carried across the electric arc on minute liquid drops. The rods are coated with a material which guards the weld from the atmosphere by producing a gaseous envelope around both the weld and the arc. Otherwise, the nitrogen and oxygen from the air would be absorbed in the weld and make it brittle.

#### Use Electric Arc and Gas

In order to determine just how safe a weld is, the process of x-raying welds is being used. The rays are passed through the metal and they affect a photographic plate placed on the far side. Flaws such as slag, nitrogen, or oxygen pockets are indicated by tiny spots so minute that they are almost invisible.

Next Saturday evening, Alexander Schreiber will present another in this series of applied scientific broadcasts sponsored by the Institute.

### David Baker, Arch. '38, Wins 1st Medal For Second Time

Winning the Beaux Arts' class A competition for the second time, David Baker, Arch. '38, becomes the only architectural student in Armour's history to ever win two first medals. The problem to be solved was "An Alumni Club." The problem for which Baker received his other first medal was "A Chalice for Antioch."

Baker also placed first in a Beaux Arts class B competition. He won on his solution to "A Bookstore."

## Registrar's Office Releases Averages; School Average 1.44

(Continued from page one)

Leading the Seniors in individual ratings is W. R. Marshall, chemical, with an average of 2.92. Marshall has been in the lead of all of his classes while at Armour. M. Ephraim, mechanical, and A. M. Zarem, electrical, are tied for first honors in the Junior Class with 2.94. G. J. Derrig, mechanical, who alternated with Zarem for first place in past semesters came in second with 2.93, just one fractional point behind the leaders. R. S. Kohn, mechanical, leads the sophomore class with an average of 2.84, the first average below 2.90 to lead any class in the last five semesters for which records have been reviewed. M. Camras, electrical, leads the Freshman Class with a perfect score of 3.00.

The first ten in individual standings of the Senior Class and their averages are as follows:

Marshall, H. R., Ch.E.	2.92
Wagner, E. F., Ch.E.	2.90
Anderson, N. K., Ch.E.	2.88
Gamson, B. W., Ch.E.	2.88
Johnson, S. J., C.E.	2.81
Schlx, W. F., C.E.	2.77
Speer, T. L., C.E.	2.76
Parker, L. B., F.P.E.	2.72
Kiefer, W. M., E.E.	2.65
Schrieber, A. N., M.E.	2.63

Of the 116 Seniors in the class, 37 of them averaged 2.00 or better.

The first twelve in the Junior Class and their averages are as follows:

Ephraim, M., M.E.	2.94
Zarem, A. M., E.E.	2.94
Derrig, G. J., M.E.	2.93
Jacobson, D. W., F.P.E.	2.82
Loutzenheiser, E. J., Ch.E.	2.76
Yeakle, T. W., F.P.E.	2.74
Wagner, W. A., Arch.	2.69
Moculeski, S. J., Ch.E.	2.63
Peltier, P. J., Ch.E.	2.47
Jaffee, R. I., Ch.E.	2.45
Anthon, H. S., C.E.	2.45

Ephraim and Zarem are tied for first, and Jaffee and Anthon for tenth.

Of the 166 Juniors in the class, 30 of them averaged 2.00 or better.

The fraternity averages indicate that the standing of their students compared well with the general average of all other students. The average of the fraternities which own or rent their own chapter house is 1.40. Those of all other students is 1.45. The honorary scholastic fraternity's averages are of course generally higher. Phi Lambda Upsilon leads the list with 2.58. Tau Beta Pi is a close second with 2.53. Sigma Alpha Mu leads the social fraternities by a large margin with the average of 2.12. Having the highest average of all social fraternities for the last three years allows Alpha Sigma Mu to retain the scholarship trophy. The complete fraternity averages and classifications were released as follows:

#### Honorary Fraternities (Scholastic)

Phi Lambda Upsilon	2.58
Tau Beta Pi	2.53
Chi Epsilon	2.37
Salamander	2.35
Pi Tau Sigma	2.26
Eta Kappa Nu	2.17

#### Honorary Fraternities (Non-Scholastic)

Sphinx	2.01
Pi Nu Epsilon	1.81

#### Professional Fraternities

Alpha Chi Sigma	2.05
Scarab	1.64

#### Social Fraternities

Sigma Alpha Mu	2.12
Theta Xi	1.65
Rho Delta Rho	1.61
Triangle	1.54
Phi Kappa Phi	1.51
Delta Tau Delta	1.48
Phi Pi Phi	1.24
Phi Kappa Sigma	1.22

The averages computed are weighted averages. The letter grades are assigned numerical values as follows: A equals 3 grade points, B equals 2 grade points, C equals 1 grade point, D equals 0 grade points, and E equals 0 grade points. The averages are computed by taking the sum of each grade point multiplied by the corresponding number of semester hours, the total being divided by the number of semester hours credit. In computing averages, grades in Physical Training are omitted. A credit (Cr.) for work at other institutions is considered equivalent to 1 grade point if the student's scholastic standing for work at Armour is below 2 grade points, 1 to 1.5 if equal to or more than 2, and 2 if equal to, or greater than, 2.5.

## Armour to Be Host April 6 at A.I.E.E. Joint Meeting

Wednesday, April 6th, is the date set for the joint meeting of student electrical engineers of Armour Tech, Lewis Institute and Northwestern University. This meeting, to be held at Armour, is sponsored by the Armour branch of the A. I. E. E. Invitations have been extended to the entire Chicago section of the American Institute of Electrical Engineers.

As yet no definite plans have been made, but J. Sodaro, chairman of the affair, expects to offer a program consisting of a dinner, followed by several student talks, and concluding with an open house in the electrical laboratories. Students from Lewis and Northwestern have been invited to take part in the program. It is expected that the program will begin at about six in the evening.

The men in charge of the various program details are: W. J. Laise, reception; R. E. Worcester, dinner; G. M. Ives, student talks; I. Gebel, laboratory work. R. M. Ansel, A. I. E. E. treasurer, is in charge of financial arrangements, and A. M. Zarem is publicity chairman.

## 'Polarized Light' Discussed at 'Eye' Meeting Wednesday

A meeting of the Armour Eye took place at 12:20 p.m. last Wednesday, March 9. The meeting was held in the club's new studio, located on the fourth floor of Chapin Hall, second entrance.

The topic of the meeting was "Polarized Light." A projector to show slides on the subject, was operated by Peter Stanley. Robert Grunwald was the narrator who described slides as they appeared on the screen. Questions pertaining to the subject were discussed later by members of the club and two ardent camera fans of our faculty: Mr. Van Atta and Mr. Hammett.

Prints 8x10 inches or preferably 11x14 inches mounted on 16x20 inch mounts will be accepted from any Armourite for the Open House Night Salon.

It has been suggested that night school students form an auxiliary branch of the Armour Eye. The dark rooms and studios could be used during the evening.

## M. R. Kingery Speaks at W.S.E. Meeting

At last Friday's W.S.E. meeting, the guest speaker, M. R. Kingery, revealed that for every thousand people in Chicago, four acres of land, and five hundred feet of business building frontage are required for industry and business. These were only a few of the many interesting facts revealed by Mr. Kingery, who is director of the Chicago Regional Planning Board. The topic of his speech was "Future Planning Problems in the Chicago Area."

One of the main problems of the Chicago board is to provide parks for the city. Ten acres of park grounds is considered necessary for every thousand persons in a community, but Chicago has an extremely low figure of 1.7 acres per thousand inhabitants. The average for this region is 6.6 acres, but Mr. Kingery believes Chicago can never have over five acres per thousand.

Highways were also discussed. In 1924, 1,700 miles of pavement existed in this region, only two miles of which were over 18 feet wide. In 1937, these miles of highways increased to more than 4,000, of which

## Woman's Mathematics Club Sponsors Poster Contest

A mathematics poster contest is being sponsored by the Women's Mathematics Club of Chicago and vicinity. The subject of the posters should be the correlation of mathematics to daily life, or any subject in the curriculum. The poster will be exhibited at Mandel Brothers from May fourteenth to May twenty-third. A committee of qualified judges will choose the best one and a tuition award of \$100 at the Ray School of Commercial Art will be awarded the winner.

The posters should be made on poster board 22x28 inches in size. All those desiring to enter the competition should deliver their entries to the Women's Club Bureau at Mandel Brothers before May ninth.

over 800 miles were four-lane or wider, with seven super-highways in Chicago. The highways were built as a result of suggestions by the Chicago Regional Planning Board.

At a short business meeting preceding the speech, the Society decided to hold a splash party within the near future and a committee was selected for the affair.

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