SOCIETIES AND MEETINGS

HONORS AND PRIZES OF THE AMERICAN SOCIETY OF CIVIL ENGINEERS

ONE of the colorful events which always dignifies the annual meetings of the American Society of Civil Engineers is the presentation of honors and prizes. The event this year occurred on Wednesday morning, January 19, 1944, in the auditorium of the Engineering Societies Building, 33 West 39th Street, New York City.

The first prize awarded was given to Thomas E. Stanton, recently vice-president of the society, for his paper on "Expansion of Concrete through Reaction between Cement and Aggregate." This prize is the oldest and highest within the gift of the society. It has been awarded for over sixty years. Mr. Stanton's paper dealt with the physical consequences that may result from chemical reaction between high alkali cement and certain mineral constituents of aggregate. It provides an adequate explanation of a number of startling cases of concrete deterioration that have occurred in coastal regions. The engineering profession, the concrete industry and the users of concrete in general are benefited by the studies recognized in the award of this prize.

Next in the list of prizes was the J. James R. Croes Medal, named in honor of the first winner of the Norman Medal. This year the medal was awarded to Carl R. Gronquist, associate member of the society, a bridge engineer with the New York firm of Robinson and Steinman. His contribution was entitled "Simplified Theory of the Self-Anchored Suspension Bridge," and appeared together with other prize-winning papers in the 1942 volume of the society's "Transactions." The type of structure described differs from the ordinary suspension bridge in that the horizontal pulls of the cables at the ends are resisted by the structure itself rather than by the abutments. The new theory lends itself to a straightforward and expeditious analysis. Although the suspension bridge has occupied the spotlight during recent years, the self-anchored form has not enjoyed great prominence because of the complexity of its analysis. Mr. Gronquist's work, therefore, is of practical and immediate value.

Next was the Thomas Fitch Rowland Prize, named for its donor, a former officer of the society, to memorialize outstanding papers describing construction of engineering works. It was awarded this year to Paul Baumann, member of the society, for a paper on "Design and Construction of San Gabriel Dam No. 1." Because of the scarcity of dam sites distinctly favorable for masonry structures, engineers are faced more and more with the problem of constructing dams at locations far from ideal. The solution in the case considered by Mr. Baumann was an adaptation of a type known as the rock-fill dam to meet special local conditions. In addition to a discussion of design and construction, he gave a full analysis of the materials and correlated his laboratory tests with actual field construction experience to an admirable degree.

Another experience with a dam was illustrated in the award of the James Laurie Prize, which was given to Thomas A. Middlebrooks, associate member of the society, for a paper on the "Fort Peck Slide." Perhaps no part of the technical responsibility of the American Society of Civil Engineers is so important as the free and open discussion of civil engineering failures. This paper is based on tests and analyses conducted on the soil and rock at the dam site, as bearing on the disastrous slide that occurred in September, 1938. The particular value of the paper is in that it focuses attention on the results of studies conducted after the slide to determine its cause and to outline a method of repair.

The Arthur M. Wellington Prize commemorates one of the society's great thinkers in the field of transportation and economics. This award went to Milton Harris, associate member of the society, for a treatment of the topic, "Traffic Engineering as Applied to Rural Highways." This paper sets up basic points of view relative to the modernization of highway facilities as well as the design of new highways, showing that the engineering study should recognize the practical use of the highway as well as the engineering provision for specific needs utilizing stated materials. Major Harris, formerly of the California Department of Highways, is now in service in North Africa.

Somewhat different in character is the Collingwood Prize for Juniors, limited to the younger members of the society. The winners were Ray K. Linsley, of the U. S. Weather Bureau in Sacramento, and William C. Ackermann, of the Tennessee Valley Authority, Knoxville, Tenn. Their joint paper was entitled "Method of Predicting the Runoff from Rainfall." The subject is one of much interest to engineers. The merit of the paper lies in the fact that it develops methods of computing values of runoff in advance, which agree quite favorably with the observations for actual storms. These researches therefore have a practical application.

The Construction Engineering Prize is under the construction division of the society and is awarded yearly for the best paper on construction appearing in

the society's journal, *Civil Engineering*. Carlton B. Jansen, member of the society, engineer of the Dravo Corporation in Pittsburgh, received the award for a most interesting paper on "Submerged Shipways with Steel Sheeting Walls," describing a recent installation of great engineering interest in Wilmington, Del.

Another prize under the auspices of a society division rather than the society as a whole is the Karl Emil Hilgard Prize, in memory of a celebrated Swiss engineer who lived for many years in America. The hydraulics division of the society determined that this prize should go to Professor Harold A. Thomas, member of the society, of the Carnegie Institute in Pittsburgh, and Emil P. Schuleen, associate member, of the U. S. Engineer Office, in the same city. Their paper was entitled "Cavitation in Outlet Conduits for High Dams." Cavitation is the mechanical deterioration, in this instance of concrete, due to high water pressures and velocities. Two types of apparatus for studying cavitation are described, with analysis of the results, and a development of the hydraulic theory involved.

The last award for engineering studies was made to George J. Schroepfer, member of the society, chief engineer of the Minneapolis-St. Paul Sanitary District, for a paper entitled "Experiences in Operating a Chemical-Mechanical Sewage Treatment Plant." This paper received the Rudolph Hering Medal at the hands of the sanitary engineering division of the society. This medal commemorates a famous American engineer. The paper describes the problems that arose in the first two years of operation of a new plant, the expedients developed to overcome the difficulties, and further changes to effect economy or simplification. The results have a direct appeal to sanitary engineers faced with similar practical problems.

Four celebrated American engineers were awarded honorary memberships, highest recognition among American civil engineers. Best known of these men was Thomas H. MacDonald, for many years head of the government roads program, now the Public Roads Administration in Washington. Another well-known engineer is Francis T. Crowe, who has been construction superintendent on Boulder, Shasta and other huge western dam projects. Gerard H. Matthes is well known among American civil engineers for his outstanding work in the fields of river hydraulics, surveying and geology. Still another new honorary member is Edward H. Connor, long a leader in the field of large bridge construction and difficult deep foundations.

In their presentation for these distinguished honors, the new honorary members were accorded the following citations:

EDWARD HANSON CONNOR: Long a leader in the contracting field, attacking difficult bridge and foundation problems; whose character and integrity have earned success in a most hazardous engineering business.

FRANCIS TRENHOLM CROWE: Construction engineer specializing in tremendous dams; whose masterworks have brought protection to flood-stricken valleys, vital power to great industrial centers and life-giving water to a thirsty land.

THOMAS HARRIS MACDONALD: Pioneer in American transportation engineering, devoting a lifetime to distinguished public service; through whose clear vision and administrative powers the world's greatest highway development is being consummated.

GERARD HENDRIK MATTHES: Happy combination of Dutch and American training; master of many engineering fields, now lending great talents to solving the hydraulics of the Mississippi River; cultured gentleman who honors a great profession.

At the same meeting the following newly elected officers were installed: *President,* Malcolm Pirnie, New York City; *Vice-Presidents,* Richard E. Dougherty, New York City, and Franklin Thomas, Pasadena, Calif.; *Directors,* S. C. Hollister, Ithaca, N. Y.; Gail A. Hathaway, Washington, D. C.; R. W. Gamble, Milwaukee, Wis.; Wilbur M. Wilson, Urbana, Ill.; Frank C. Tolles, Cleveland, Ohio; William D. Shannon, Seattle, Wash., and Royce J. Tipton, Denver, Colo.

SYDNEY WILMOT,
Manager of Publications

SPECIAL ARTICLES

THE POSSIBLE SYNTHESIS OF BIOTIN FROM DESTHIOBIOTIN BY YEAST AND THE ANTI-BIOTIN EFFECT OF DESTHIOBIOTIN FOR L. CASEI[1]

RECENTLY the yeast-growth-promoting activity of desthiobiotin has been described, together with an improved method for its preparation from biotin by hydrogenolysis with Raney nickel.[2] Desthiobiotin was found to be equally as effective as biotin in stimulating the growth of *Saccharomyces cerevisiae,* but could not replace biotin as a growth stimulant for *Lactobacillus casei.* These differences in the growth-stimulating properties of biotin and desthiobiotin for

[1] The authors wish to express their appreciation to Mrs. Glenn Ellis and Miss Carol Tompkins for carrying out the bioassays.

[2] V. du Vigneaud, D. B. Melville, K. Folkers, D. E. Wolf, R. Mozingo, J. C. Keresztesy and S. A. Harris, *Jour. Biol. Chem.,* 146: 475, 1942. D. B. Melville, K. Dittmer, G. B. Brown and V. du Vigneaud, SCIENCE, 98: 497, 1943.