

RHEOLOGY BULLETIN

Publication of the Society of Rheology

Volume 26, No. 1

January, 1957

1956 ANNUAL MEETING

Seventy-eight members and fifteen guests attended the Annual Meeting held at the Mellon Institute, Pittsburgh on November 7th, 8th and 9th. The technical program of five half-day sessions covered a broad range of fields of interest to Rheologists. Once again the bringing together of scientists from such diverse fields of interests as adhesives, metallurgy, polymers and viscous liquid through the common bond of rheology produced stimulating discussions and resulted in cross fertilization of the various fields represented.

The Social Hour Smoker was held at the Pittsburgh Athletic Association on the evening of November 8th. Dr. J. H. Dillon acting as proxy for Sir Hugh Taylor made the presentation of the 1956 Bingham Medal to Arthur V. Tobolsky. This presentation speech will be printed in the forthcoming first issue of the Transactions of the Society of Rheology. Departing somewhat from the usual custom of discussing a technical subject Dr. Tobolsky presented his views on the economic and sociological problems of the scientist in our time. His very pertinent remarks were well received and it is planned to have this paper published in an early issue of Physics Today. Following the presentation and acceptance of the Medal, the formal meeting was adjourned and the remainder of the evening was devoted to informal discussion. Once again this part of the program of the Annual Meeting was found to be most stimulating and productive of interchange of ideas.

At the business meeting of the Society on the afternoon of the 8th the President reported on the solution of several of the problems which faced the Society a year ago. The Revised Constitution and By-Laws have been accepted by the membership and are now in force. These should prove of great assistance in conducting the business of the Society. The Executive Committee voted to accept the offer of Interscience to publish Transactions containing the papers presented at the Annual Meeting. With our own publication no restrictions can be placed on the nature and character of papers published and we will be limited as to quantity only by the financial status of the Society. This year's Transactions should be distributed to the membership in the early spring.

The Society is indebted to Dr. H. Markovitz and his committee for making the local arrangements for the 1956 Annual Meeting and to Mr. R. M. Arnold for arranging the social evening at the Pittsburgh Athletic Association.

ANNUAL FALL MEETING, 1957

The Society has accepted the kind invitation of Dr. J. H. Dillon of the Textile Research Institute to hold this year's meeting at Princeton, New Jersey on November 7th, 8th and 9th. The technical sessions will be held at the Textile Institute with Paul Alford serving as Chairman for local arrangements. Adequate blocks of room reservations have been reserved at the two local hotels for the nights of November 6th, 7th, and 8th. Dr. John Tordella will once again be Chairman of the Program Committee. Rheologists interested in presenting papers at this meeting should contact him at their earliest convenience.

INTERIM REPORT OF SECRETARY-TREASURER

1. FINANCIAL STATEMENT

The financial statement is appended. This includes available cash only and does not take into account the Series G Bonds (\$700) nor interest (\$181.45) in the Bingham Fund, nor the Rheological Memoirs Fund (\$81.21).

The proposed budget for 1957 is predicated on our adopting the publication of "Transactions" at a cost of \$1000. In 1956 publication of the 1955 meeting papers in the Journal of Applied Physics cost \$531.25 for 425 copies of the Rheology Issue.

2. MEMBERSHIP

As of October 5, 1956 the Society had 399 personal members and 40 company and institutional members as compared to 360 and 39 respectively at the same time last year, a gain of about 10%. Membership applications

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Bryce Maxwell, Editor
The Princeton University
Plastics Laboratory
Princeton, New Jersey

received after September 1st were again applied to the following year (1957) as provided for in the Constitution and By-Laws.

Dr. J. H. Dillon and his staff with the cooperation of the A. I. P. Staff prepared and distributed a Roster to all members, as was done last year.

3. PUBLICATIONS

Three issues of the Rheology Bulletin have been published and distributed to the membership this year.

The Journal of Applied Physics Rheology Issue (Volume 27, No. 5, May, 1956) devoted 47 pages to publishing about half of the papers presented at the 1955 meeting.

4. CONSTITUTION AND BY-LAWS REVISION

As noted in the Fall Bulletin this revision was approved by the membership and put in force.

5. EXECUTIVE COMMITTEE

The Executive Committee met in New York City on February 4th, May 4th and October 19th and a brief meeting was held on November 8th in Pittsburgh primarily to consider publications policy.

6. CORRESPONDENCE

All correspondence, notices and membership applications have been handled as quickly as possible, as in the past. Items of possible interest for publication are sent to the Editor for use in the Bulletin as he sees fit.

7. RELATIONS WITH A.I.P.

The President and Secretary-Treasurer were proxies to the Annual Meeting of the A.I.P. in February.

Our accounts, as in the past, are being kept and all monies received and dispersed by A.I.P.

8. ACKNOWLEDGMENTS

The Secretary-Treasurer wishes to express his appreciation for the continued help being given by the staff of the A.I.P. and to the various officers and committee chairmen who have submitted written reports at meetings of the Executive Committee.

Respectfully submitted,

WILLIAM R. WILLETS
Secretary-Treasurer

ABRIDGED ESTIMATED FINANCIAL STATEMENT

FOR 1956 AND 1957 INCLUDING 1957 BUDGET

| | |
|--|-------------------|
| Cash on Hand January 1, 1956..... | \$4,471.82 |
| Income to October 1, 1956..... | 595.54 |
| Total | \$5,067.36 |
| Disbursements to October 1, 1956..... | \$1,279.86 |
| Est. Disbursements Oct. 1-Dec. 31, 1956..... | 260.00 |
| Bingham and Memoirs Funds..... | 236.41 |
| Total | \$1,776.27 |
| Available Cash Balance January 1, 1957..... | \$3,290.09 |
| Estimated 1957 Income (Inc. 1957 Dues)..... | 1,600.00 |
| Total | \$4,890.09 |
| Estimated 1957 Disbursements | |
| Rheology Bulletin | \$ 400.00 |
| Publication—Transactions | 1,000.00 |
| Membership Committee (incl. Roster).... | 200.00 |
| Election—(letter ballots, etc.) | 100.00 |
| A. I. P. Assessment and Serv. Chge. | 300.00 |
| Mailing (Roster, Bulletins, etc.) | 150.00 |
| Office Supplies (Stationery, etc.) | 50.00 |
| Meeting Expenses | 70.00 |
| Duplicating, Misc. Expenses | 100.00 |
| Total | \$2,370.00 |
| Estimated Cash Balance—January 1, 1958..... | \$2,520.09 |

MINUTES OF 1956 BUSINESS MEETING MELLON INSTITUTE, PITTSBURGH November 8, 1956

1. The meeting was called to order by the president, F. D. Dexter, at 4:40 P.M. with all the officers and approximately fifty other members attending.

2. The interim report of the Secretary-Treasurer, together with the financial statement and proposed budget for 1957, was accepted without discussion.

3. The membership of the Society at the start of the Annual Meeting consisted of 399 personal and 40 company and institutional members; a gain of about 10% over the same time last year. During the course of the Annual Meeting, twelve additional members were accepted. Dr. Dillon and his Membership Committee were commended for their excellent work.

4. The acceptance of the Revised Constitution and By-Laws of the Society by an overwhelming letter ballot (as noted in the Fall 1956 issue of the Bulletin) was noted. The work of the committee charged with the task of revision consisting of Drs. Fair, Marvin, Mooney and Spencer was commended.

5. The four Executive Committee meetings held during 1956 were noted as essential for the consideration of the many problems confronting the Society.

6. The petition of the Society of Exploration Geophysicists to become a member of the society of the A. I. P. (as noted in the Fall 1956 Bulletin) was discussed with the membership being advised that the Executive Committee favored such application and had so advised A. I. P.

7. The Report of the Committee on Nomenclature submitted by Dr. Leaderman August 1956, was highly commended and notice given that it will be published and distributed to the membership in the near future. Thanks and appreciation were expressed to Dr. Leaderman and his committee.

8. The meeting was advised that 50 copies of the Nederlandse Reologische Vereniging "Proposals on Rheological Nomenclature and Definition" have been received and some distributed to individuals particularly interested, with a small number still available.

9. The method by which all Rheological Societies can be kept better advised of activities has been adopted as noted in the Spring 1956 Bulletin. This method provides for the interchange of notices, bulletins, and other pertinent information gratis among the seven societies involved.

10. Notice was given that a suggestion has been made that the Third International Rheological Conference might be held in this country. Correspondence between Dr. Spencer and Dr. Seal (of the Netherlands) as reviewed by Mr. Dexter, indicated that while our Society would welcome the opportunity to serve as a host on such an occasion, if the meeting were held in a "soft-money" country international participation might be better.

11. The matter of publication policy with particular reference to the issuance of "Transactions" (Spring 1956 Bulletin) was discussed at some length. Special thanks were extended to Dr. Eirich for his work in developing essential information on this problem and for his continuing efforts. The result of the letter ballot regarding this was 170 for and only 9 against, with many authors expressing approval. A motion was made by Dr. Marvin that the meeting go on record as opposed to the publication of "Transactions" but this was not seconded although

the matter was discussed from the floor. Dr. Marvin then withdrew his motion stating that the majority agreed with the Executive Committee that the issuance of such "Transactions" appeared a calculated risk. Many matters such as reprint costs, format, final editing and the like, remain to be settled.

12. The meeting was advised that the National Bureau of Standards was setting up a Rheology Section under Dr. Robert S. Marvin.

13. The meeting was advised that the Executive Committee had accepted the Textile Research Institute's invitation extended by Dr. J. H. Dillon to hold the 1957 meeting in Princeton.

14. Mr. Dexter announced he would appoint a Nominating Committee before December 1st to function in accord with the Revised Constitution and By-Laws.

15. The meeting adjourned at 5:45 P.M.

Respectfully submitted,

W. R. WILLETS

Secretary-Treasurer

STANDING COMMITTEES

The composition of the Standing Committees for 1957 is as follows:

Publicity—J. H. Dusenbury, Chairman.

Membership—J. H. Dillon, Chairman.

Arrangements—Paul Alford, Chairman.

Program—John Tordella, Chairman.

Bingham Medal—J. D. Ferry, Chairman.

Second Viscosity Standard—A. B. Bestul, Chairman.

Nominations—Edmund Thelan, Chairman,

R. D. Andrews

W. H. Markwood

Nomenclature—This committee is now inactive. Its report of recommended nomenclature has been gratefully received by the Executive Committee and will be published in the forthcoming Transactions.

BRITISH SOCIETY

The British Society of Rheology is organizing a conference on "Rheology of Elastomers" to be held at the Rubber Producers Research Association at Welwyn Garden City on May 30th and 31st, 1957. Contributions are invited for this conference and intending speakers are asked to first write to the Hon. Secretary, 52, Tavistock Road, Edgware, Middlesex.

A. I. P. DEVELOPMENT FUND

The American Institute of Physics has successfully negotiated the purchase of a new headquarters building

at 335 East 45th Street, New York, and has arranged for the sale of the present facility at 57 East 55th St. During the past five years it has become increasingly evident that additional space, suitable for efficient operation of the several departments, was imperative.

In the period 1943 to 1955 the number of physicists has increased threefold. The services performed by the Institute, measured on a dollar basis, has increased to nine times the amount for which the present headquarters was designed. In spite of this difficult situation the Institute has more than quadrupled the number of journal pages published per year and distributed them to three and one-half times as many subscribers.

The fund drive is the result of study and preparation over a period of three years. This need for funds is not based on any changes in the scope or nature of the work of A.I.P. It does contemplate a need, which is considered urgent, for the provision of more pages for the publication of research.

The highly fortunate transfer of properties which has been consummated does not completely solve the housing problem. It will be necessary to convert the basement and first three floors of the new building into proper form for the various Institute functions. Plumbing, electrical and heating systems must be renovated and an elevator installed.

The appeal is broken down into the following three categories:

| | |
|--|-----------|
| 1. Renovation of working space in new headquarters | \$250,000 |
| 2. Expansion of Publishing Program.... | 200,000 |
| 3. Funds for stimulation of training of physicists | 50,000 |
| Total..... | \$500,000 |

The last item is one of utmost importance. The need for a concentrated effort to guide young men and women into this field is evidenced by the change in the demand for physicists in the last ten years. In 1946 there were 1.13 openings per registrant in the A.I.P. placement service. In 1956 the number reached 6.69. This is a five-fold increase in the number of job openings.

It is proposed that the half million dollar goal be divided into two parts, \$150,000 from individual members and the remainder from industrial organizations. The total goal is not large for physics, being less than half the amount of one year's outlay of the Institute. Nevertheless it is a sum of such magnitude that it can only be raised through the best effort of every one of us.

PUBLICATION PLANS

After an exhaustive study and serious deliberation the Executive Committee voted to initiate a Society publication to present the Annual Meeting papers. Through the efforts of F. R. Eirich a favorable offer was received from Interscience Publishers. Sufficient copies for distribution to each member will be supplied for a fee of \$1000. The Transactions will be printed in a style and design similar to that used for the Journal of Polymer Science and will contain about 190 pages. The publisher will also prepare additional copies and put them on the market at a list price of \$6.00 for non-subscribers to the Journal of Polymer Science and \$5.00 for subscribers. Reprints of individual articles will be available to authors at a standard price.

This arrangement has several merits. It makes possible the publishing of our papers in one volume which can be supplied to the members without an excessive cost to the Society. The availability of the Transactions on the open market will permit greater dissemination of the papers, promote interest in Rheology outside our membership and make possible the preparation of this journal without placing too high a financial burden on the Society.

Twelve or thirteen papers will be printed in this issue. With the help of R. D. Andrews, Assistant Editor of the Society, each paper has been sent out for review by a competent man in the field. Since, under this publication arrangement, we do not have to meet the requirements of a host journal, no restrictions need be placed on the scope or nature of the papers published. Each reviewer was asked only for his opinion as to the desirability of including the article in the Transactions and to make any comments that would be of assistance to the author.

Because this publication plan was not formally agreed to before the Annual Meeting, several speakers committed their papers to other journals. Notice of the place of publication of these papers will be given in a future Bulletin.