

RHEOLOGY BULLETIN

Publication of the Society of Rheology

Volume 30, No. 1

Spring, 1961

THIRTY-SECOND ANNUAL MEETING

The Annual Meeting of the Society this fall will be held at the University of Wisconsin, Madison, Wisconsin, Monday through Wednesday, October 30th — November 1st, 1961. Local arrangements are under the surveyance of Professor John D. Ferry, Chairman of the Local Arrangements Committee, which includes in its membership Professors Millard W. Johnson and Arthur M. Swanson. Technical Sessions will be held at the Wisconsin Center, and there will be a Smoker on Tuesday evening, October 31st. Details of the arrangements and provision for accommodations will appear in the next issue of the Bulletin.

The technical sessions are expected to comprise about 25 papers, and selection is in the hands of the Program Committee: Edward A. Collins (Chairman), J. G. Brodnyan, T. G. Fox, P. S. Francis, C. C. McCabe, and A. H. Nissan. The feasibility of a Symposium on "The Rheology of Paper Coatings" is being assessed by Dr. Nissan, Rensselaer Polytechnic Institute, Troy, New York. Other groups of related papers are also under consideration, including papers on dynamic mechanical behavior of polymers. Those wishing to submit papers for the Annual Meeting should notify Dr. Edward A. Collins, B. F. Goodrich Chemical Company, P. O. Box 122, Avon Lake, Ohio, Chairman of the Program Committee or a Committee Member as soon as possible, and a title should be submitted. Two copies of abstracts should be in the hands of the Program Committee by August 15th to permit the Committee to establish the final program and to allow publication in the Fall issue of the Bulletin. Each abstract will be reviewed by the Program Committee for general content, originality, relevance to Society purposes and technical character as a basis for acceptance. Any members who are aware of persons likely to present suitable papers are urged to call the Fall meeting to their attention, or to refer their names to the Program Committee. Presentation of papers is not restricted to members of the Society. Any other suggestions regarding meeting program will be welcomed by the Program Committee.

The Society encourages submission of papers presented at the Annual Meeting for publication in the Transactions. It would be helpful if authors would inform the Editor of such intent as soon as possible after the program has been selected, and certainly not later than at the Annual Meeting. Two copies of manuscripts must be submitted to the Editor by November 15th. Earlier submission would be appreciated, since it would expedite the processing of papers and so contribute to earlier publication of the Transactions. The deadline

for submission of papers is set two weeks after the Annual Meeting, not in the expectation that authors will write up their contributions after presentation, but to permit minor revision of a manuscript in the light of discussion at the meeting. What delay has occurred in the current volume is mainly due to some apparently hurriedly prepared manuscripts which placed inordinate demands on referees and caused delay because of the need for extensive revision. Papers will be refereed by authorities in the field, and this will form the basis for the Editor's decision concerning suitability for publication in the Transactions. It is expected that the Transactions will be issued early in the following summer.

THE TRANSACTIONS, VOLUME V

All material for this volume is now in the hands of the publisher, and galley proofs have been corrected of some articles. Publication in early summer is expected.

COMMITTEE APPOINTMENTS

The President has appointed the following committee chairmen and committees:

Annual Meeting Program Committee

Edward A. Collins (Chairman)
(B. F. Goodrich Chemical Co., P. O. Box 122,
Avon Lake, Ohio)

J. G. Brodnyan
T. G. Fox
P. S. Francis
C. C. McCabe
A. H. Nissan

Bingham Award Committee

J. T. Bergen, Chairman
E. B. Bagley
W. F. Fair
R. R. Myers
J. P. Tordella

Steering Committee for the 4th International Congress

R. S. Marvin } Co-Chairmen
R. S. Rivlin }
F. D. Dexter
J. H. Dillon
J. D. Ferry
E. H. Lee
H. Oser

The Bingham Award Committee would be glad to receive suggestions from members of the Society for this year's award.

RHEOLOGY BULLETIN
E. H. Lee, Editor
Division of Applied Mathematics
Brown University
Providence 12, R. I.

MEMBERSHIP COMMITTEE ACTION

John Miller, Chairman of the Membership Committee submitted the following items:

Regular Membership

The Society of Rheology at present has over 600 members. Approximately 250 new members have joined the Society in the past four years with a loss of about 100 members due to normal attrition and the dues increase in 1959. The success of the membership efforts is the result of work by the men who worked on the membership committee during this period. The members of the committee have made a significant and tangible contribution to the society.

Although the Society has grown quite well over the past 10 years, a continuous effort to inform people of the benefits and advantages of the Society membership is necessary. Your aid in this vital area will be appreciated and a descriptive brochure and membership application have been enclosed for this purpose.

Sustaining Membership

A decrease in the number of Sustaining (\$25.00) memberships has occurred in the past few years. The result of this trend is less income for the Society. A Sustaining member, by definition, contributes more income to the Society, and the extra income is discretionary and can be used for new activities. There has been a tendency for Sustaining members to become Regular members instead. This is unfortunate in the case when the member represents a company or institution which regularly sends personnel to the meetings. The Society of Rheology is not only an organization for accomplished rheologists to exchange views but the meetings also provide education for novices. There are only a few formal courses where rheology is taught and the Society's activities are frequently the school where rheologists are trained. A decrease or increase in these activities can depend on the number of Sustaining members.

In a few cases, institutional and company memberships are used for registration at the annual meeting. There are no restrictions on this use of a membership, but these memberships should be Sustaining. The Society makes every effort to hold the cost of individual dues at a low level. Sustaining membership by companies and institutions greatly simplify the problem by supplying more income.

**NOMINATIONS FOR
 SOCIETY OFFICERS FOR 1962-3**

In accordance with the Constitution of the Society, the Nominating Committee: F. D. Dexter (Chairman), F. R. Eirich and T. L. Smith announce the following slate for 1962-3:

President—Prof. John D. Ferry, University of Wisconsin

Vice President—Mr. J. T. Bergen, Armstrong Cork Company

Sec'y-Treasurer—Dr. J. C. Miller, Bakelite Co.

Editor—Prof. E. H. Lee, Brown University

Additional nominees may be made by petition forwarded to the Secretary-Treasurer, W. R. Willets, Titanium Pigment Corp., 99 Hudson St., New York 13, N. Y., before June 15th, and signed by at least fifteen members of the Society in good standing. The complete slate will appear on ballot forms to be circulated to the membership before August 1st.

**Fourth U. S. Congress of Applied
 Mechanics — 1962**

The Fourth U. S. National Congress of Applied Mechanics will be held on the Berkeley campus of the University of California during June 18-21, 1962. The cooperating societies and other interested organizations are urged not to schedule conflicting meetings on these dates.

Research workers in the theoretical and applied mechanics of solids and fluids are invited to submit papers for consideration by the Editorial Committee. Further announcements concerning the preparation of papers and deadlines for submission will be made as the Congress draws nearer.

The members of the organizing committee on the Berkeley campus are:

Professor W. GOLDSMITH, *Secretary*

Professor E. V. LAITONE, *Treasurer*

Professor R. M. ROSENBERG, *Chairman of the
 Editorial Committee*

Professor W. W. SOROKA, *General Chairman*

Inquiries regarding the Congress should be addressed to Professor W. Goldsmith, Secretary, Division of Mechanics and Design, University of California, Berkeley 4, California.

**Fourth International Congress of
 Rheology — 1963**

The Fourth International Congress of Rheology will be held at Brown University, Providence, R. I. from August 26, to August 30, 1963. Dr. R. S. Marvin of the National Bureau of Standards and Professor R. S. Rivlin of Brown University have been appointed Co-chairmen of the Congress. A Steering Committee has been appointed as detailed in the earlier section on committees.

Notices regarding the submission of papers and other matters relating to the Congress will appear, when appropriate, and be reproduced in this Bulletin.

Communications and enquiries regarding the Congress should be addressed to Professor R. S. Rivlin, Brown University, Providence, R. I. who is Chairman of the Local Arrangements Committee.

**MINUTES OF 1960 BUSINESS MEETING
 MELLON INSTITUTE, PITTSBURGH, PA.
 November 1, 1960**

1. The meeting was called to order by President Elliott at 4:20 P.M. with about 70 in attendance.
2. The Minutes of the business meeting held at

Lehigh University November 1, 1959 were approved as published in the Bulletin, Volume 29, No. 1, Spring 1960.

3. The Secretary-Treasurer made his interim report which is printed elsewhere in this Bulletin. The report was accepted.

4. Dr. Elliott noted that Volumes III and IV of the Transactions had been published and distributed to all bona fide members in the dated year of publication. He expressed his thanks, and the gratitude of the Society to Dr. E. H. Lee, our editor, for his excellent job in this and in the two issues of the Bulletin which actually contained more information than the greater number of issues published in some past years.

5. Dr. Elliott expressed thanks to the many people whose efforts had resulted in a very successful meeting including Dr. Hershel Markovitz, local arrangements chairman, Mr. J. T. Bergen, program chairman, Mr. F. D. Dexter, Bingham award chairman, and to Mr. Robert Porteous of Mellon Institute and Mr. Eugene Kohn of the American Institute of Physics who had arranged such excellent publicity. While no final count was available at the time of the business meeting approximately 180 had registered by noon. Dr. Elliott noted that (as discussed in the Secretary-Treasurer's interim report) the Executive Committee had held more than the usual number of meetings.

6. The report of the Membership Committee showed that as of October 25th there were 563 members representing a 6% increase over the same time last year when there were 529 members (during the year there were 65 new members but this was offset by 10 losses through death or resignation and 29 because of dues delinquency). At the meeting 28 membership applications were received and will be processed as promptly as possible. Dr. J. C. Miller, membership chairman, and his committee were given the Society's thanks for their excellent work.

7. Dr. Elliott reported that there was a growing interest on the West Coast regarding the possibility of the Society establishing a section there and possibly having meetings either alone or in conjunction with other societies. Dr. Thor Smith was appointed membership chairman for the West Coast to stimulate such interest and to develop information to serve as a guide for the Society's activities in this area. Dr. Smith requested any members in the area to get in touch with him.

8. The Society of Rheology will sponsor the 1963 International Congress on Rheology. This will be held at Brown University, Providence, R. I. in 1963 during the week just before Labor Day. Drs. Marvin and Rivlin are co-chairmen of the Committee to handle the affairs of the Congress; this Committee will operate autonomously but with the advice and counsel of the Society of Rheology's Executive Committee. Finances for the International Congress will be independent of the Society's.

9. The next meeting will be held at the University of Wisconsin, Madison, October 30-November 1, 1961. Dr. Elliott noted that meeting places and dates for 1962 and 1963 have been under discussion by the Executive Committee but that no conclusions have been reached.

10. Under new business the perennial question of preprints of papers for the annual meeting was discussed. There were several who felt preprints would be

advantageous while others felt they would detract from the meeting. It was stated that the Society could not finance such preprints in any event. The consensus was that any author could provide preprints if he saw fit at the time of the meeting but that the Society would not undertake to mail such preprints.

11. Dr. Lee assured authors of papers in Volume IV of the Transactions that preprints would be sent out by Interscience Publishers in the near future. He noted that it seems very probable that Volume V for 1961 containing papers given at the 1960 meeting would be published in the early summer of 1961.

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

Respectfully submitted,
W. R. WILLETS,
Secretary-Treasurer

INTERIM REPORT OF SECRETARY-TREASURER ANNUAL MEETING — 1960

1. FINANCIAL STATEMENT

The tentative estimated financial statement for the year is appended. It will be noted that the amount of dues collected is less than estimated in the Budget for 1960. Certain expenditures for 1960 were somewhat lower than estimated; for example the publication of Volume 3 (1959) and Volume 4 (1960) of the Transactions cost less than originally thought although final costs of distribution of the latter are not as yet available. On the other hand, the cost of the Bulletin was somewhat more than estimated. The budget for 1960 estimated a working balance of \$4150 at the close of the year; actually it may be about 10% below that estimate. In estimating the 1961 Budget, also appended, the dues collections are estimated somewhat lower than for 1960, based on the experience of dues collected for 1960. It should be remembered that a large proportion of the dues for 1961 will actually be collected in the last quarter of 1960, so that when the annual report of our account is received from the American Institute of Physics the balance shown will not agree with the "Working Balance on hand" shown in our 1961 Estimated Budget. The estimate for the Bulletin has been increased, based on 1960 experience. There will be no roster published in 1961, which will represent a cash saving, but there will be an election which will almost balance the expense. While we still maintain our financial position any extraordinary expenses are definitely not warranted and any expenditures beyond those necessary for the usual Society operations should be very carefully scrutinized.

2. MEMBERSHIP

Under the excellent guidance of Dr. John C. Miller, Membership Committee Chairman, membership continues to increase and now exceeds 550.

3. PUBLICATIONS

Two issues of the Bulletin have been published. Volume III of the Transactions for 1959 was published and distributed to all members in good standing in 1959. Volume IV of the Transactions for 1960 has also been published and distributed to all members in good standing for 1960. A copy of the Transactions is sent to each

March 1, 1961

member in good standing in the dated year of publication as part of his membership. (Transactions in hard-bound copies can be purchased by anyone from Interscience Publishers, Inc., 250 Fifth Avenue, New York 1, N. Y.)

4. ANNUAL MEETING FOR 1960

Dr. Hershel Markovitz of Mellon Institute was in charge of local arrangements with Mr. J. T. Bergen of Armstrong Cork Company, the Program Chairman. The first list of titles together with meeting registration forms was distributed in September and the Bulletin with the abstracts the middle of October.

5. EXECUTIVE COMMITTEE

Meetings of the Executive Committee were held on November 6, 1959 and February 9, September 17 and October 30, 1960. It will be noted that more meetings than usual were held following the last Annual Meeting of the Society but this was necessary to consider publication policies, the International Rheology Congress planned for 1963, the advisability of forming a West Coast Section, and other urgent matters.

6. RELATIONS WITH AMERICAN INSTITUTE OF PHYSICS

Messrs. Elliott and Willets attended the meeting of the Board of Governors on March 26, 1960 and Dr. Elliot attended the meeting of the Board held in conjunction with the Assembly of Member Society Officers at Harriman, N. Y. September 29-30. Mr. Willets attended a meeting of the A.I.P. Committee of Member Societies Secretaries and Treasurers on June 3, 1960. In addition the Secretary-Treasurer visits A.I.P. on occasion to discuss details of mailing, printing, distribution and the like with members of the staff and in addition usually has several telephone conversations a week with them. The American Institute of Physics continues to handle all our billings, bookkeeping and accounting, as well as overall mailings (Bulletins, Transactions, meeting notices, rosters, etc.).

7. CORRESPONDENCE

All correspondence, notices, meeting minutes, and membership applications are being handled as promptly as possible but again the secretary-treasurer wishes to emphasize that occasional delays and errors may occur because his officership is extra-curricular, being subject to the performance of his regular business activities.

8. ACKNOWLEDGMENTS

The secretary-treasurer takes pleasure in again expressing to the Society officers, committee chairmen, and many individual members, and especially to the staff of the American Institute of Physics, his sincere thanks for their continued cooperation and understanding. In spite of the fact that his employer contributes notably by providing incidental expenses, facilities and secretarial aid in performing his duties, he would be unable to function as the Society's secretary-treasurer without the valued cooperation received from the Membership and the A.I.P.

Respectfully submitted at the Annual Business Meeting at Mellon Institute, November 1, 1960.

WILLIAM R. WILLETS,
Secretary-Treasurer

AMERICAN INSTITUTE OF PHYSICS,
INCORPORATED for
SOCIETY OF RHEOLOGY
Statement of Account
December 31, 1960

Balance in account, December 31, 1959.....		\$ 7,306.93
Dues collected — January 1 — December 31, 1960:		
1960 Dues	\$1,094.00	
1961 Dues	1,762.00	2,856.00
Interest on "G" bonds		17.50
Redemption of "G" bonds		700.00
Registration fees at meeting		651.00
Sales of old bulletins to Walter J. Johnson.....		201.00
		<u>\$11,732.43</u>
Disbursements, January 1 — December 31, 1960:		
A.I.P. charge for collecting dues		\$ 285.08
Contribution to A.I.P.		315.24
Purchase of U. S. Gov't 3 1/2% bonds, due 5/15/68		1,000.46
Secretary's office expense		40.00
Bingham Medal		7.20
Membership committee:		
Running strip list of delinquent members	\$ 2.81	
Printing membership cards	12.85	
Addressing membership cards	3.47	\$19.13
Roster — printing, stuffing, and mailing (1,000 copies)		164.86
Transactions, Volume 3:		
Editor's expense	21.99	
Printing and mailing (530 copies)	1,325.00	1,346.99
Transactions, Volume 4:		
Envelopes, addressing, stuffing, mailing, and postage	122.57	
Printing (1,000 copies)	1,412.50	1,535.07
Bulletins:		
Vol. 29, No. 1:		
Printing	\$115.80	
Addressing, stuffing, mailing and postage	132.85	248.65
Vol. 29, No. 2:		
Printing	379.29	
Addressing, stuffing, mailing and postage	65.65	444.94
Meetings expense:		
Announcement:		
Envelopes and paper	26.12	
Addressing, stuffing, mailing and postage	76.16	102.28
Expenses at meeting	151.60	253.88
Total disbursements		\$ 5,661.50
Balance on account, December 31, 1960.....		<u>\$ 6,070.93</u>
Bingham Fund:		
U. S. Government Bond — 3 1/2% due 5/15/68.....		\$ 1,000.00

SOCIETY OF RHEOLOGY
Estimated Budget — 1961

<i>Receipts</i>	
Working balance on hand January 1, 1961...	\$6070.93
Dues	3500
Total Estimated Receipts	<u>\$9570.93</u>
<i>Disbursements</i>	
Bulletins	\$ 700
Transactions Vol. V (1961)	1700
Membership Committee	100
A.I.P. Dues Collection	350
Contribution to A.I.P.	350
Election	100
Meeting Expenses	100
Stationery, etc.	100
Miscellaneous Contingencies	100
	<u>\$3600</u>
Estimated Balance December 31, 1961	<u>\$5970.93</u>

W. R. WILLETS,
Secretary-Treasurer

November 1, 1960