

# RHEOLOGY BULLETIN

Publication of the Society of Rheology

Volume 29, No. 1

Spring, 1960

## THIRTY-FIRST ANNUAL MEETING

The Annual Meeting of the Society this fall will be held at the Mellon Institute, Pittsburgh, Pa. on October 31 through November 2. Local arrangements are under the charge of Dr. Hershel Markovitz, of the Mellon Institute. Note that the meeting time is Monday—Wednesday instead of Wednesday—Friday as has been the case in recent years, and that the dates are not those announced at Lehigh. It was realized after that meeting that the dates originally chosen included Election Day, November 8th, and so a rescheduling was called for.

Technical sessions are expected to comprise about 25 papers including a Symposium on Free Volume theories. The Program Committee includes: J. T. Bergen, Chairman (Armstrong Cork Co., Lancaster, Pa.); H. Markovitz; F. H. Gaskins; M. L. Williams; and E. Collins. Those wishing to submit papers for the annual meeting should notify the Chairman, or other member of the Program Committee, of the title as soon as possible. Abstracts should be in the hands of the Program Committee by August 15 to permit the Committee to establish the final program and to allow publication in the Fall issue of the Bulletin.

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 at the annual meeting, and such papers should be submitted to him within two weeks after the meeting. 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.

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 gratefully received by the Program Committee.

## Additional Proposed Symposium

It appears that sufficient interest exists in the Rheology of Suspensions to warrant a symposium on this subject at the Annual Meeting, 1960. The topic may include theoretical or experimental work on suspensions of spheres, rods, platelets, needles and mixed

shapes in systems including no solvation or interaction — e.g. sand in water — and systems approaching true solution. Suspending media may be aqueous, non-aqueous, fluid, plastic or viscoelastic. The rheological behavior may be dilatant, thixotropic or Newtonian, including pseudo-viscous and viscoelastic phenomena.

The Program Committee is already accumulating abstracts for this Symposium. Authors wishing to present papers on this topic are urged to contact either F. H. Gaskins at Aeroprojects, Inc., 310 Rosedale Ave., West Chester, Pennsylvania, or the Program Chairman as promptly as possible. Society members who are interested in attending such a Symposium will aid the Committee by indicating their interest to a Committee member, together with comments on the area of particular interest to them.

## THE TRANSACTIONS, VOLUMES III AND IV

The delay which has beset recent issues of the Transactions is expected to be eliminated. Material for both volumes is now being processed by the Publisher, and the distribution to members of Volume III, 1959, is expected to take place in June, and Volume IV, 1960, in July. These will be distributed to the active members during the corresponding years. In future, publication of the Transactions in the early summer immediately following the Annual Meeting is expected, and this will thus provide a rapid vehicle for publication.

## COMMITTEE APPOINTMENTS

The President has appointed the following committee chairmen and committees:

Bingham Award Committee

F. D. Dexter, Chairman

W. Busse

J. H. Dillon

H. Eyring

B. Maxwell

## RHEOLOGY BULLETIN

E. H. Lee, Editor

Division of Applied Mathematics

Brown University

Providence 12, R. I.

### Annual Meeting Program Committee

J. T. Bergen, Chairman  
(Armstrong Cork Co., Lancaster, Pa.)  
E. Collins  
F. H. Gaskins  
H. Markowitz  
M. L. Williams

### Annual Meeting Arrangement Committee

H. Markowitz, Chairman  
R. M. Arnold  
D. J. Plazek  
H. L. Toor  
N. Weber

### Annual Meeting Publicity Committee

W. C. Teach, Chairman  
G. D. Hansen

### Membership Committee

J. C. Miller, Chairman  
T. L. Smith (West Coast Representative)

### U. S. Representative on the International Committee on Rheology

R. S. Marvin

## HEAT TRANSFER AND FLUID MECHANICS MEETING

A meeting which will be of interest to some members of the Society will be held at Stanford University, California, on June 15, 16, 17, 1960. It is the 1960 Heat Transfer and Fluid Mechanics Institute. The purpose of these annual Institutes is to present technical and scientific advances in fluid mechanics, heat transfer and related fields. Particular topics to be discussed at the meeting are: rotating fluid systems, flows not in thermodynamic equilibrium, time-dependent viscous flows, separated flows, origins of turbulence, and turbulent mixing and diffusion.

David M. Mason, Division of Chemical Engineering, Stanford University, Stanford, California is General Chairman of the Institute.

## MINUTES OF 1959 BUSINESS MEETING LEHIGH UNIVERSITY—BETHLEHEM, PA.

November 5, 1959

1. The meeting was called to order by President Dillon at 5:40 P.M. with about 40 in attendance. Dr. Dillon noted that because of the lateness of the hour and the banquet at 7 P.M. the meeting would necessarily be brief.

2. The Minutes of the business meeting held at Franklin Institute November 6, 1958 were approved as published in the Bulletin.

3. Dr. Dillon expressed the appreciation of the Society and his personal thanks to the many people who had made the meeting such a success; to Lehigh University which provided excellent meeting facilities, to Dr. Myers, the Local Arrangements Chairman, and Mrs. Myers who for the first time in the history of the Society arranged an interesting and entertaining "Ladies Program", to Mr. Bergen, Program Chairman and his committee for assembling the excellent papers presented, to Dr. Dienes and his Bingham Award Committee and to Dr. Rivlin who made arrangements for Dr. Soderberg of M.I.T. to introduce Dr. Orowan the Medallist, to Dr. Miller, Membership Chairman and his committee, to Prof. Maxwell and his nominating committee and to many other members who had assisted. He expressed especial thanks to Dr. Elmer Hutchisson of the American Institute of Physics, whom he introduced to the meeting, and his staff for their continued cooperation and assistance.

4. Dr. Dillon noted that the Executive Committee had held two lengthy meetings, one on January 12 and the other on November 3, and that meetings were planned for the following day and early in 1960.

5. The last count before the business meeting showed about 200 registered with more expected the following day, making this the largest meeting held to date.

6. The Membership Committee report (Dr. John C. Miller, Chairman) showed a total membership on October 31, 1959 of 529, an increase of over 5% from last year at the same date. Some 86 new members joined which compensated for the 62 lost through resignation and non-payment of dues. This entitled us to nominate two members to the Governing Board of the American Institute of Physics which according to our By-Laws will be the President and Secretary-Treasurer.

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

8. Drs. J. C. Miller and R. A. Andrews, Jr. the appointed tellers presented their report of the election as follows:

*President*—J. H. Elliott, 216

*Vice-President*—J. D. Ferry, 218

*Editor*—E. H. Lee, 217

*Secretary-Treasurer*—W. R. Willets, 217

### *Members at Large Executive Committee*

(Those two with the most votes being elected)

R. S. Marvin, 169

J. P. Tordella, 133

J. T. Bergen, 122

In addition to the members-at-large on the executive committee (Drs. Marvin and Tordella) the immediate past-president, Dr. Dillon, continues to serve as a member. There were a few write-in candidates but none received more than one vote.

9. Dr. Dillon turned over the chair to the new president Dr. Elliott for consideration of new business. It was decided that the Executive Committee would select the site and time of the next meeting, preferably the week before or after Election Day. A show of hands showed that the members had no great preference. Dr. Elliott also announced that plans for locations and dates of future meetings would be made several years ahead, if possible.

10. Plans for the International Congress on Rheology are still uncertain as there has been no reply to Dr. Dillon's letter inviting the Congress to meet in this country in 1963. Dr. Marvin will continue as liaison.

11. The fact that West Coast and Texas sections were under consideration by the Executive Committee was noted.

12. The meeting adjourned with a rising vote of thanks to the retiring president, Dr. Dillon, at 5:50 P. M.

Respectfully submitted,

W. R. WILLETS,

*Secretary-Treasurer*

## INTERIM REPORT OF SECRETARY-TREASURER Annual Meeting November 4-7, 1959

### 1. FINANCIAL STATEMENT

The tentative financial statement is appended. On September 30, 1959 our expenditures were actually only about \$720 which is far less than the actual estimated 1959 disbursements of \$2366 which still do not take into account an additional conservative estimate of \$1900 for printing the last four issues of the Bulletin and Volume 3 of the Transactions for 1959 which will not be billed until 1960. Such outstanding sums, which should be charged to 1959, can only be roughly estimated, and make it difficult to arrive at realistic figures.

### 2. MEMBERSHIP

This has continued to grow under the excellent guidance of Dr. John C. Miller, the chairman of the membership committee, and now exceeds 500. This entitles us to two members on the Governing Board of the American Institute of Physics. These two nominees of our Society are (according to our By-Laws) the President and Secretary-Treasurer.

### 3. PUBLICATIONS

Three issues of the Bulletin were published. Volume II Transactions for 1958 were published and sent to all

bona fide members for 1958. Volume III Transactions for 1959 are being prepared for the printer and will be sent to all bona fide members for 1959 (even though not published until 1960).

### 4. ANNUAL MEETING FOR 1959

Prof. R. R. Myers of Lehigh University was in charge of local arrangements, with Mr. J. T. Bergen of the Armstrong Cork Company, the program chairman. The first list of titles was distributed late in September, and the abstracts were mailed on October 16. Both were included in issues of the Bulletin.

### 5. EXECUTIVE COMMITTEE

A special meeting was held on January 12, 1959 to consider publications and other critical issues. A meeting was held on November 3, 1959 prior to the Annual Meeting of the Society.

### 6. RELATIONS WITH A.I.P.

The President of our Society, Dr. Dillon, attended meetings of the A.I.P. Governing Board. Messrs. Dillon and Willets attended the annual corporation meeting of the A.I.P. February 27, 1959. Messrs. Hutchisson and Willets were Society proxies at a Corporation meeting May 6, 1959 to vote on acceptance of the American Crystallographic Association for associate membership. Mr. Willets attended a similar meeting as Society proxy for acceptance of the American Astronomical Society as an Associate Member Society of the A.I.P. on October 29, 1959. Messrs. Dillon, Elliott and Willets attended meetings of the officers of A.I.P. member societies and corporate associates at Arden House, Harriman, N. Y. September 30-October 2, 1959. All these contacts serve to strengthen the relationships between the various member societies of the A.I.P. In addition the secretary-treasurer visits A.I.P. Headquarters on occasion to discuss details of mailing, printing, circulation, etc. with members of the staff and also has many telephone conversations with them.

As usual A.I.P. handles all of our general mailings, billing, bookkeeping, and accounting.

### 7. CORRESPONDENCE

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

### 8. ACKNOWLEDGMENTS

The secretary-treasurer again takes pleasure in expressing to the officers of the society, committee chairman and many individual members, and especially to the staff of the American Institute of Physics his sincere thanks for their continued cooperation and understanding.

Respectfully submitted at the Annual Business Meeting at Lehigh University  
November 5, 1959

WILLIAM R. WILLETS  
*Secretary-Treasurer*

October 30, 1959

SOCIETY OF RHEOLOGY  
ESTIMATED APPROXIMATE FINANCIAL  
STATEMENT FOR 1959  
As of November 4, 1959

Balance in Account, January 1, 1959 .....	\$7104
Dues .....	1027
<b>Total Receipts .....</b>	<b>\$8131</b>

*Disbursements:*

Contribution to AIP .....	\$ 215
AIP Charge for Dues Collection .....	270
Vol. 2 Transactions 1958 (inc. mailing) .....	1475
Bulletin Mailings (billed and estimated) .....	175
Election Expense (ballots, mailing, etc.) .....	51
Membership Committee .....	65
Office Supplies .....	20
1959 Meeting (estimated) .....	75
Sec.-Treas. office .....	20
<b>Total Estimated Disbursements .....</b>	<b>\$2366</b>

*Unbilled 1959 Expenses (estimated) which may be billed in 1960:*

Printing Bulletins .....	300
Vol. 3 Transactions (1959) .....	1600
Additional Disbursements chargeable to 1959—	
<b>Total .....</b>	<b>\$1900</b>
<b>Total Disbursements Chargeable to 1959 .....</b>	<b>\$4266</b>
<b>BALANCE December 31, 1959 .....</b>	<b>\$3865</b>
Less Bingham Fund Interest (\$233.95)	
and Memoirs Fund (\$81.21) .....	315
<b>WORKING BALANCE December 31, 1959 .....</b>	<b>\$3550</b>
Bingham Fund "G" Bonds due December 1, 1960	\$ 700

SOCIETY OF RHEOLOGY  
ESTIMATED 1960 BUDGET  
As of November 4, 1959

*Receipts:*

Cash on Hand January 1, 1960 .....	\$3550
Estimated Dues .....	4000
<b>.....</b>	<b>\$7550</b>

*Disbursements:*

Bulletins .....	\$ 400
Transactions Vol. IV (1960) .....	1700
Membership Committee .....	100
Roster .....	200
AIP Service Charge — Dues Collection .....	300
AIP Assessment .....	400
Meeting Expense .....	100
Stationery, etc. ....	100
Miscellaneous Contingencies .....	100
<b>TOTAL .....</b>	<b>\$3400</b>
<b>EST. BALANCE DECEMBER 31, 1960 .....</b>	<b>\$4150</b>