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RHEOLOGY BULLETIN

Publication of the Society of Rheology

Volume 19, No. 1

Spring 1950

PAPERS FOR 1950 MEETING

As stated elsewhere, in the 1949 minutes, the 1950 meeting will be held in New York as in the past and at approximately the same date (see 1950 Fall Issue, Rheology Bulletin). Since the Nov. 1949 meeting the Program Committee and the editor suggested to the Executive Committee that September 1, 1950 be set as a deadline for the receipt of all papers to be presented. The suggestion was accepted. This will permit pre-meeting reviewing and refereeing and the selection of papers for presentation as well as publication. This should eliminate a recurrence of the embarrassing publication position the Society found itself in this year, as well as a much earlier publication date.

RHEOLOGY ISSUE—J. COLL. SCI.

Rising printing costs have required an unavoidable modification of our scientific paper publication arrangements with the Academic Press. Although we are not a large group, our interest in the behavior of all forms of matter under stress is broad in nature and international in character. For this reason it has been to the mutual advantage of both the Society and Academic Press to collect and publish our annual papers in a single annual journal, the RHEOLOGY ISSUE of the JOURNAL OF COLLOID SCIENCE during that journal's formative years. In this accomplishment we have received outstanding assistance and cooperation from the Academic Press in the persons of Mr. Kurt Jacoby and Prof. Victor K. La Mer.

The total number of pages economically feasible for publication by the Academic Press as the six issues of the Journal of Colloid Science is limited however. Since the journal has grown with the years, it receives much worthwhile copy from various sources and demands for its services have grown accordingly. As a corollary, the interests of its subscribers have broadened. Consequently, it has become necessary to restrict to 100 the number of pages that can be set aside annually for the Rheology Issue. The Press has agreed, however, to grant an additional 20 pages at \$10 per page. Beyond that, the Society, or authors, must bear the printing cost of \$15 per page that would not be defrayed by the subscriptions received from the Journal's readers.

The Society's editor was not informed that these limitations would be required for the 1950 Rheology Issue until a month before the November 4 meeting. The matter was discussed at the Executive Committee Meeting of November 3 and at the Business Meeting on November 4. Since the authors felt that personal sub-

INCREASING MEMBERSHIP

The rather marked "turnover" in membership noted in previous years seems to be somewhat reduced. This trend, if real, is an important criterion for stability of the Society. The appreciable gain in membership is largely the result of the membership campaign. The membership stands at the highest point in the history of the Society and a goal of 400 members for 1950 seems entirely realistic.

It is believed that the Society must publicize the idea of activity to maintain and gain members. This result can be achieved in numerous and diverse ways: (1) Prompt replies to letters; (2) Membership campaign; (3) Releases in trade and scientific journals; (4) A regular publication such as the "Rheology Bulletin"; (5) Cooperation in sponsoring symposia in different cities and by different societies; (6) Cooperation in sponsoring publications (comparable to those of the British Rheologists' Club).

FUTURE MEETINGS

For 1951 there are two invitations for the annual meeting, both very desirable, which conflict: (1) To join with the AIP in a general meeting of the component societies in Chicago in October; (2) To join with the National Bureau of Standards in a large meeting commemorating the 50th Anniversary of the Bureau in Washington, D. C. in September. It has been proposed that the Society of Rheology consider sponsoring an international rheological symposium on this occasion. Letters of invitation were received from H. A. Barton (AIP) and E. U. Condon (NBS). One possibility that may work out felicitously is to have a general meeting with the AIP in Chicago and to sponsor jointly with NBS an international rheological symposium in Washington, D. C.

sidization would be an imposition, it was evident that some papers must be omitted from the next Rheology Issue. This became a disagreeable editorial task. Some authors withdrew their papers and some were rejected by reviewers and referees. Twelve papers were found acceptable by the referees, the editor and the Academic Press. Their print volume totaled 156 pages. Attempts to avoid any deletion whatever continued until April, to no avail. Obviously 36 pages had to go and the manuscripts were accepted by date of receipt. This required the regrettable elimination of three papers totalling 37 pages. Academic Press has been requested to publish them in the August issue of J. Coll. Sci.

RHEOLOGY BULLETIN
W. H. MARKWOOD, JR., EDITOR
Hercules Experiment Station
Wilmington 99, Delaware

PUBLICATION POLICY

It will be recalled that the RHEOLOGY BULLETIN last appeared in December 1947, Vol. 18, No. 4. At the preceding Executive Committee and Society Business Meetings it was decided that the use of a bulletin as an abstract service was of questionable value. It was felt that publication needs might be served by publishing Society news in the newly established PHYSICS TODAY and annual meeting papers in the JOURNAL OF COLLOID SCIENCE. The 1948 Meeting disclosed dissatisfaction with the plan and the members expressed a desire for a return to some form of bulletin, mimeographed or printed. Consequently, as a trial, two mimeographed "Newsletters" were issued in 1949. The 1949 Meeting indicated that this method was still not the one to be preferred, and that new members would be more readily attracted if a printed Bulletin devoted to the Society's interests was supplied.

Accordingly, the editor was granted \$150.00 with which to prepare, print and mail two issues annually of a reinstated RHEOLOGY BULLETIN, of which this is the first for 1950. Our scientific papers will continue to appear in the Journal of Colloid Science.

APPOINTMENTS FOR 1950-51

- AAAS Representative:** Earl K. Fischer
Representative on Governing Board of American Institute of Physics: W. F. Fair, Jr.
National Association of Corrosion Engineers—Inter-Society Committee on Corrosion: W. F. Fair, Jr.
American Institute of Physics Committee for 1951 Meeting in Chicago: W. R. Willets
Bingham Medal Award Committee (for 1950): W. H. Markwood, Jr., Chairman; John D. Ferry, Earl K. Fischer, H. K. Nason, Ruth N. Weltmann
Program Committee 1950 & 1951 Meetings: R. S. Spencer, Chairman; J. H. Elliott, Ruth N. Weltmann
Arrangements For Meeting at Hotel New Yorker: W. R. Willets, A. G. Lynch
Membership Committee: F. D. Dexter, Chairman; C. L. Babcock, R. Buchdahl, C. Mack, M. A. Tauffer, G. F. Holland, A. G. Lynch, A. C. Shuman, W. R. Willets, J. J. Bickerman, A. K. Doolittle, J. D. Ferry, W. Prager, H. K. Nason, R. M. Levy, R. N. Weltmann, A. Nadai, C. E. Hartwig; Turney Alfrey
General Publicity Committee: Earl K. Fischer

1949 BUSINESS MEETING

The meeting was called to order at 4:00 p.m. November 4 by President Fair.

Dr. Spurlin reported the results of the ballot for new officers. A total of 181 votes were received, and the following officers were declared elected:

- R. N. Traxler President
R. S. Spencer First vice-president
A. A. Bondi Second vice-president
W. H. Markwood, Jr. Editor
C. J. Dienes Secretary-treasurer

Dr. Fair turned the chairmanship of the meeting to Dr. Traxler.

Minutes of the 1948 business meeting were read by Secretary Fischer and approved by vote. The financial condition of the Society was reported and the tentative budget for 1950 submitted. A digest of these reports is given below. (Complete reports are on file with the Secretary-Treasurer's records.)

Cash Account, 1948:

Cash on hand, Dec. 31, 1947	\$1,176.98
Income for year 1948	1,422.92
Total	<u>\$2,599.90</u>

Disbursements 1,121.42

Balance, Cash, Dec. 31, 1948 \$1,478.48

Bingham Medal Fund:

U. S. Government Series G. Bonds	\$ 700.00
Savings account	47.00

Total \$ 747.00

Rheological Memoirs Fund

(As of Nov. 5, 1948) \$ 59.00

The interim accounting for 1949 showed an income of \$1,500.52 and expenses of \$1,179.71 to October 31.

Problems connected with publication of the new American Institute of Physics journal, "Physics Today", and the decision of the Executive Committee were presented in detail by Dr. Barton (see "Ex-Committee Minutes"). It was decided to appropriate \$2.00 per member for the cost of continued mailing of "Physics Today" to each member. A notation on the 1950 dues statement will request a voluntary contribution of \$2.00 from each member to reimburse (at least partly) the funds taken from Society reserves.

The publication of the 1949 meeting papers in the Journal of Colloid Science and the decisions of the Executive Committee were presented by Mr. Markwood (see "Ex-Committee Minutes"). Discussion on the general problem of publication costs resulted. There was general agreement that the papers should continue to be published in a group, but concern was expressed by several members over the means for selecting papers for publication.

Publication of the Rheology Bulletin was also discussed by Mr. Markwood and the decision of the Executive Committee was reported.

Brief discussion of the meeting place for 1950 resulted in a motion, carried unanimously, that the Executive Committee proceed with necessary arrangements for a meeting in New York City.

INTERNATIONAL BULLETIN

The abstract journal published by the British Rheologists' Club is proving a financial burden to that organization. Plans are being made to found an international journal which would involve interested Dutch, British, and American organizations.

An excerpt from a letter from Dr. G. W. Scott-Blair of September 22, 1949 bearing on this subject is as follows:

"I expect you will have heard from Dr. Mark that the International Joint Committee on Rheology is forming itself into an International Union, and will seek recognition by the I.C.S.U. and further, that a number of prominent American Rheologists are being invited to join the Assembly of the new Union as soon as it is formed.

"Our first activity will be to organize an International Rheology Abstracts Bulletin and, as you know, it was felt that it would be easier to build this on the stock of the existing British Bulletin than to start it entirely new elsewhere. But although the new Bulletin will be edited and printed in this country, we are of course very dependent on our colleagues in America and elsewhere for help and support. I understand that there will be an American Assistant Editor, and we shall do everything that we can to ensure that the Bulletin, when it comes into being, serves a useful purpose for rheologists in all countries which are interested."

An expression of opinion on the nature and extent of our cooperation which can be sent to Dr. Scott-Blair would be desirable. It is entirely possible that the Society would send copies to all members, but the matter of finance is at present an imponderable problem.

(On publications proposed, see Rheological Memoirs.)

EX. COMMITTEE MEETING NOV. 3

Present: members of committee—Fair (Chairman), Fischer (Secretary), Markwood, Spurlin, Traxler; visitors—Barton (American Institute of Physics), Dienes, Jacoby (Academic Press), LaMer (J. Colloid Science), Weltmann, Willets.

The discussion of various items of business, and action taken, are summarized for the record.

Motion that registration fee at meeting for members be set at \$1.00 and for non-members at \$2.00. (Carried.)

Motion that Society approve plans of AIP (as agent) to carry advertising in journals published by member societies. (Carried.)

Discussion of meeting place for 1950 was in favor of New York City.

Discussion of meeting for 1951 approved plan to join AIP in general meeting, Chicago, week of October 22nd.

Appointment of Mr. W. R. Willets to AIP committee on 1951 meeting by Chairman Fair.

Discussion of restrictions on space in Rheology issue of "Journal of Colloid Science" presented by Mr. Jacoby and Dr. LaMer. Proposed by Mr. Jacoby that 100 pages be provided without charge by Academic Press, 20 addi-

tional pages for \$200, and all pages in excess of 120 at \$15 per page. Motion to appropriate \$200 from 1949 funds to pay for the additional 20 pages and to submit a per-page charge of \$15 to each author whose paper contains more pages than the pro-rated average.

Conditions for publication of Rheology Bulletin discussed. Proposed two issues (Spring and Autumn) of a 4-page news bulletin, costing about \$75 per issue from preliminary estimates. Motion to appropriate \$150 from 1950 funds for publication of two issues of Bulletin.

Problems connected with publication of the AIP journal, "Physics Today", presented in detail by Dr. Barton. This journal, originally intended as a publication serving all the member societies, has not found adequate subsidy, and a decision was made in August to send the journal to subscribers only. From preliminary returns, about one-third of AIP members are estimated as subscribers at \$4.00. It would be preferable to send it to all societies of the AIP, however, and economies in handling mailings if societies subscribe or subsidize entire membership make possible charge per member to each society of \$2.00. Discussion of changes desired in "Physics Today" resulted: consensus of opinion was that more news of AIP member society activities was needed. Motion for Society of Rheology to appropriate \$2.00 per member for cost of continued mailing of "Physics Today" to each member with notation on 1950 dues statement requesting voluntary contribution of \$2.00 from each member.

Discussion of conflicting invitation for 1951 meeting from Dr. E. U. Condon, Director, National Bureau of Standards and decision to hold annual meeting with AIP in Chicago. Alternative plan for the Society to sponsor jointly with the NBS an international rheology symposium at the Bureau, September 1951, in Washington, D. C. Plan viewed favorably, and Secretary instructed to ascertain feasibility of the symposium, especially with respect to cooperation of rheologists in England and Holland.

Nomination for representative on Governing Board of AIP: Dr. Fair to continue for 1950-1.

A.I.P. BOARD MEETING—APRIL 1950

There were no particularly controversial issues this year. "Physics Today" is still the biggest financial problem, but it is hoped that its deficit may be reduced considerably this year and next year. A committee headed by J. B. Fiske is to investigate its publication and make recommendations to the Executive Committee. It seems that there is still a possibility that advertising will eventually pull "Physics Today" out of the red.

Another item of interest is the action taken by the Board in setting contribution of Member Societies to the support of the Institute at 13% for 1951. This supporting contribution has been 15%. It is felt that reduction to 13, even though very slight, might be taken as token evidence of the desire of the Board to reduce the Member Societies' contributions as much as possible. It is hoped that further reductions may be made later.

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FINANCIAL STATEMENT JANUARY-DECEMBER, 1949

Cash on hand, Jan. 1, 1949	\$1,478.48
Income	
Dues, 4th quarter, 1948	\$445.80
Dues, 1st quarter, 1949	713.10
Dues, 2nd quarter, 1948	183.20
Dues, 3rd quarter, 1949	58.00
Bulletin, back number sales	100.42
Registration, 1949 meeting	139.00
Total Income	1,639.52
Total Cash	3,118.00
Expenditures	
Academic Press (1949 Rheology issue, J. Colloid Science)	659.82
A.I.P. assessment	183.60
A.I.P. member service charge	90.00
Meeting, 1948, A.I.P. clerical services	20.00
Meeting, 1949, Hotel New Yorker	128.40
Badges	12.22
Printing and mimeographing	138.14
Secretary's expenses (stenographic, postage, incidentals)	78.23
Mailing services	73.72
Engraving Bingham medal	6.12
Total Disbursements	1,390.25
Balance, Cash on hand, Dec. 31, 1949 ...	1,727.75
Appropriations	
Academic Press (For printing of 1950 Rheology issue, J. Colloid Science. To be paid in 1950.)	200.00
Net available cash	\$1,527.75
Special Funds	
Bingham Fund	
U. S. Gov't. Series G. Bonds	\$700.00
Interest on bonds	8.75
Balance in savings account	35.28
Interest on savings account	2.97
Total in Fund	\$747.00
Rheological Memoirs Fund	
Sale of surplus copies	\$ 59.00

POISEUILLE'S MEMOIRS

A stock of copies of "Poiseuille's Memoirs" which formed the first and only issue of "Rheological Memoirs" was found in storage at Lafayette College and was shipped to the Secretary by Dr. J. H. Wilson, head of the Lafayette Chemistry Department. This volume is a translation of the classic Experimental Investigations upon the Flow of Liquids in Tubes of Very Small Diameter. The translation, by Winslow H. Herschel, has been anno-

tated with critical notes and a biography by the late Professor Bingham. This book of 101 pages is available to members of the Society at the following prices: cloth binding, \$2.00; paper covers \$1.50. The sale thus far totals \$49.50. Remaining copies on hand and their potential value are as follows:

cloth bound, 28 copies at \$2.00	\$ 56.00
paper bound, 148 copies at \$1.50	222.00
	\$272.00

Storage is something of a problem, but it may be possible to divide the stock, placing some with AIP (c/o Miss Ruth Bryans, Publication Manager) and retaining some by the Secretary. Those who wish to purchase copies are requested to send orders with remittance to the Secretary, Dr. G. J. Dienes, c/o North American Aviation, P. O. Box 309, Downey, Calif. (Please do not request to be billed for the book.) Proceeds from the sale will be retained in a separate fund for publication of other classic papers.

ARCHIVES

In the course of the past two years the Secretary has acquired various records of the Society for deposit in the file at the American Institute of Physics. The archives file contains the following material:

- (1) Secretary's reports and minutes (1940 to date)
- (2) Constitution and By-Laws: records of changes, various versions, etc.
- (3) Miscellaneous records of historical interest: history of the Society by E. C. Bingham, newspaper and journal clippings, brochures for soliciting new members, correspondence regarding various plans for publications, photograph of persons in attendance 1948 meetings, etc.
- (4) Programs of meetings including abstracts (complete except for years 1936, 7, 8, 9)
- (5) Publications: (a) Journal of Rheology (complete); (b) Rheology Leaflet and Bulletin (complete); (c) Copy of Rheological Memoirs I; (d) Rheology Issue Journal of Colloid Science, 1949
- (6) Nomenclature of rheological subjects: records and correspondence of committees, mimeographed lists of recommended definitions and symbols, etc.
- (7) American Institute of Physics reports.
- (8) Old membership lists
- (9) Exhibits at 1947 meeting (correspondence)
- (10) Viscosity of water: records, correspondence
- (11) Bulletin and other printing records (AIP).

As noted in last year's Secretary report, records of Society matters prior to 1940 are fragmentary.

NEW AIP JOURNAL RATES

	Non-Members	Members
Rev. Sci. Instruments	\$ 7.00	\$ 5.00
J. Applied Physics	9.00	7.00
J. Chemical Physics	15.00	12.00

Subscriptions are handled directly by AIP.