

RHEOLOGY BULLETIN

Publication of the Society of Rheology

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INTERNATIONAL RHEOLOGY CONGRESS

The Third International Congress on Rheology will be held on September 23-30, 1958 in Bad Oeynhausen, Germany. (The Second International Congress was held in Oxford in 1953). The meeting has been organized jointly by the Deutsche Rheologische Gesellschaft and the Deutsche Rheologen-Verein.

A large number of brochures on the Congress have been received and members interested in obtaining information on the Congress are urged to write to our Secretary, Dr. W. R. Willets, for one of these brochures. The brochure contains an application card for attendance, and for submission of papers for the program. It is planned to issue preprints of the papers presented, and some fairly early deadlines were set - April 1 for preliminary application for attendance (more detailed information is sent when this is received) and May 1 for submission of manuscripts. However, those of our members who would be interested in participating, and who have not yet taken any steps in this direction, should act immediately, since possibilities may still be open to some extent. All Congress fees are supposed to be paid by June 1.

The program will include a number of lectures by invited guests, and technical sessions devoted to: (1) Fundamental basis of rheology, (2) Measuring techniques, (3) Experimental results, and (4) Practical applications. The scope of the program is considered to include the entire field of deformation and flow of matter, including molecular interpretation and engineering applications, but not the classical theories of elasticity, aerodynamics, atomic processes (dislocations), etc., which are considered to be branches of applied mechanics. A discussion on nomenclature is planned, an exhibit of measuring equipment and apparatus is to be held, and a ladies' program will be arranged. Papers may be given in English, French, German or Russian, and manuscripts likewise submitted in these languages. It is planned to have the lectures which are delivered in Russian translated simultaneously into English, French and German.

Dr. R. S. Marvin has been in contact with the Congress Secretary, Dr. W. Meskat, and brochures may also be obtained from him, and attendance applications or manuscripts forwarded to Dr. Meskat through him, as well as through Dr. Willets, or directly to Dr. Meskat (Bahnhofstrasse 9, Dormagen bei Koln, Germany). Since numerous brochures are available, all members having even a slight interest in finding out more about the Congress are encouraged to write for one immediately.

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1958 ANNUAL MEETING

The Fall Annual Meeting for 1958 has been definitely set for Wednesday, Thursday and Friday, November 5, 6 and 7, and will be held at the Franklin Institute in Philadelphia.

Program Chairman for the meeting is Dr. Raymond R. Myers, Department of Chemistry, Lehigh University, Bethlehem, Pennsylvania. It is planned to group papers for the meeting around several symposia. One symposium will be on the subject of "Resonance and Relaxation Phenomena". Other topics under consideration are:

1. Viscoelasticity and flow mechanisms at high shear rates.
2. Adhesive and other properties of polyphase systems.
3. Formation and stabilization of foams, dispersions, and emulsions.
4. Mathematical aspects; computers; engineering rheology; mixing.
5. The use of models in rheology.
6. The application of thermodynamics to rheology; chemical structure.
7. General papers.

In addition it is planned to have an informal open meeting of the Committee on Communication Problems in Rheology (present chairman: Dr. Myers) which was organized a year ago by the Colloid Division of the A. C. S. and is now sponsored by several A. C. S. divisions, the A. S. T. M. and the Society of Rheology.

RHEOLOGY BULLETIN

R. D. Andrews, Jr., Editor
Physical Research Laboratory
The Dow Chemical Company
Midland, Michigan

Members wishing to submit papers for the Fall Meeting are encouraged to notify the Program Chairman as soon as possible regarding the general subject of their paper. A tentative deadline of August 15 has been set for receipt of abstracts which will be published in the Fall (Program) issue of the Rheology Bulletin.

RHEOLOGY IN JAPAN

A communication was received from B. Tamamushi, the Japanese Representative on the International Committee of Rheology, advising that the sixth annual Japanese Rheology Symposium was held in Tokyo on October 13-14, 1957 under the joint auspices of the Japanese Chemical Society, Physical Society, High Polymer Society and Rubber Producers' Association.

The following general lectures and original papers on the main theme of the discussion, Rheology of Natural and Synthetic Rubbers, were given at the meeting:

1. M. Yamamoto and Y. Sato (Kyoto University), The Present State of the Theory of Rubber Elasticity (general lecture).
2. R. Chujo (Kyoto University), Magnetic Absorption of Stretched Rubber.
3. S. Kambara (Tokyo Institute of Technology), On New Elastomers (general lecture).
4. S. Nohara (Osaka Industrial Research Laboratory), Rheological Aspects of Filler Effect.
5. S. Takahashi and Y. Yasufuku (Furukawa Electric Co.), Plasticity of Rubber-Filler Systems.
6. S. Shishido and Y. Ito (Niigata University), Spinnability of Rubber-Oil systems.
7. J. Furukawa (Kyoto University), What is Elastomer? (general lecture).
8. H. Tohara (National Railway Research Institute), Dynamic Properties of Vulcanized Rubber.
9. S. Urabe (Fujikura Rubber Manufacturing Co.), Some Rheological Problems in The Rubber Industry.
10. K. Nagamatsu, T. Takamoto and T. Yoshitomi (Kyushu University), Stress Relaxation of Polyfluoroethylenes.

11. K. Kamagata (Fujikura Rubber Manufacturing Co.), Y. Minoura and S. Kambara (Tokyo Institute of Technology), Stress Relaxation of Vulcanized Rubber.

At the close of the meeting Prof. B. Tamamushi gave a lecture on The Activity of Rheologists in European Countries.

NEW RHEOLOGICAL JOURNAL

A new German rheology journal, "Rheologica Acta", is soon to appear. It will be published by Dr. Dietrich Steinkopff in Darmstadt, and will serve as the medium of publication for the Proceedings of the Third International Rheology Congress.

MINUTES OF 1957 BUSINESS MEETING

Textile Research Institute - Princeton, N. J.
November 8, 1957

1. The meeting was called to order by President Dexter at 4:35 P.M. and adjourned at 5:40 P. M. Over 65 members were present, the largest attendance at a business meeting of the Society.
2. President Dexter extended the thanks of the Society to the Textile Research Institute and especially to Dr. J. H. Dillon, its Director, and Mr. Paul C. Alford, Jr., its Executive Secretary who had charge of the local arrangements. The thanks and appreciation of the Society were also extended to Dr. John P. Tordella, Program Chairman, to Dr. Joseph H. Dusenbury, Publicity Chairman, Dr. John T. Ferry, Bingham Award Chairman and Prof. Bryce Maxwell, Editor. The combined effort of all together with their committees was noted as resulting in the biggest Annual Meeting, the biggest Social Evening and the best-attended Business Meeting to-date.
3. Plans for holding the 1958 annual meeting at the Franklin Institute, Philadelphia, November 5, 6 and 7 (Wednesday through Friday) were announced. It was suggested that the week preceding might be more suitable but a show of hands supported the original proposal.
4. The success of the "Transactions" was noted with over 500 copies being sold in addition to the distribution to our membership. It will be helpful if manuscripts be submitted in the Journal of Polymer Science

format. Interscience Publishers is willing to continue this venture and will be advised that the Society is in agreement.

5. At the start of the Annual Meeting the Society had a total membership of 449 representing a slight increase over last year. However, during the meeting approximately 30 new members joined the Society.

6. The next International Rheology Congress will probably be held in Munster, Westphalia, West Germany, in September 1958.

7. Plans for revision of the Constitution and By-Laws of the American Institute of Physics were presented by President Dexter, who noted that the Associate Director of the A.I.P., Dr. Barton, was present and would be glad to answer questions. However, Mr. Dexter's summary sufficed and the Secretary-Treasurer then read a proposed motion which had been adopted by the Executive Committee at its November 1, 1957 meeting, as follows:

"MOVED that the amendment to the Constitution of the American Institute of Physics, Incorporated proposed by the Governing Board of the Institute at its meeting on October 21, 1957, be approved for adoption, and that the Secretary be instructed to notify the Institute of this action of the Society forthwith."

The motion was made by Markwood, seconded by Elliott and passed unanimously.

8. It was pointed out that the American Institute of Physics was not meeting with the hoped-for success in its drive for funds and members were asked to do their best along these lines. Approximately \$263,000 plus an additional ear-marked \$189,750 has been contributed against a goal of \$500,000. However, individual members have only contributed about \$43,000 which is a much poorer response than during the previous drive of some years past.

9. The new building of the A.I.P. is valued at about \$556,000 and the land at about \$200,000. The cost of moving, remodelling, etc. was about \$443,000. Particular mention was made of the fine efforts of Mr. Wallace Waterfall, the A.I.P. Executive Secretary, in bringing this project to a successful conclusion.

10. The Secretary-Treasurer presented his interim report which was accepted, and later handed it to the incoming Editor for publication in the Bulletin. It indicated that our balance at the beginning of 1959 will probably be less than at the beginning of 1958 because of increased costs all along the line.

11. As a result of the financial estimates the meeting was advised that the Executive Committee had proposed raising the dues for 1959 to \$6. The By-Laws provide they: "may be amended by a majority vote of the members returning a letter ballot after the members attending any regular meeting of the Society, or the Executive Committee, have voted to submit the proposed amendment to letter ballot". President Dexter pointed out that any motion at this time would be for submission to letter ballot. While the Executive Committee has the right itself to initiate such action its consensus was that the matter be presented to the Business Meeting for discussion. Discussion raised the question if the increase was sufficient, and the meeting was advised that it was so considered for the next few years. It was then moved by Elliott, seconded by Markovitz, and unanimously voted that the proposition of raising dues to \$6 per annum, starting with 1959, be submitted to letter ballot of the Society.

12. In accordance with the Constitution and By-Laws, the Secretary-Treasurer delivered the unopened election letter ballots to an Election Committee appointed by President Dexter consisting of Messrs. Marshall, Miller and Carey. The election report follows:

Total: 215 votes, 4 invalid

For President: J. H. Dillon - 203

For Vice-President: J. H. Elliott - 205

For Editor: R. D. Andrews - 202

For Secretary-Treasurer: W. R. Willets - 206

For members of the Executive Committee, those two nominees receiving the highest number of votes:

R. S. Marvin - 138

R. S. Rivlin - 97

J. T. Tordella - 95

J. T. Bergen - 75

In accordance with the By-Laws the incoming President, Dr. J. H. Dillon, becomes the Society's nominee for directorship on the Governing Board of A. I. P.

13. The incoming officers and other members of the Executive Committee, Messrs. Marvin, Rivlin and Dexter (as last Past-President of the Society) begin their terms November 9, 1957 in accordance with Article IV of the Constitution.

14. The incoming President, Dr. J. H. Dillon, noted he would make committee appointments as soon as possible.

15. The meeting adjourned with a rising vote of thanks to the out-going President, Mr. F. D. Dexter, and Editor, Prof. Bryce Maxwell.

Respectfully submitted:

W. R. WILLETS, *Secretary-Treasurer*

INTERIM REPORT OF SECRETARY-TREASURER

1. FINANCIAL STATEMENT

The tentative financial statement is appended. This includes available cash only and does not take into account the Series G Bonds (\$700) nor interest (\$198.95) in the Bingham Fund nor the Rheological Memoirs Fund (\$81.21).

At this date it appears as if we shall meet the Budget for 1957 calculated last year. This estimate was based on a total cash balance and receipts of \$4890.09 while actually the total to June 30, 1957 was \$5426.11. The estimated disbursements for 1957 were \$2370 and to date slightly over \$1900 has been spent. This lower figure resulted from our not publishing a Roster in 1957 and other economies, even though the "Transactions" cost \$1165 (approximately) instead of the estimated \$1000.

2. MEMBERSHIP

As of November 1, 1957 the Society had 413 personal members and 36 company and institutional members as compared to 399 and 40, respectively, at approximately the same date last year. As provided in the Constitution and By-Laws, all membership applications received after September 1 were again applied to the following year (1958). Over 25 new members joined, dating from the 1957 Annual Meeting.

3. PUBLICATIONS

Three issues of the Rheology Bulletin were published.

The new venture of publishing the "Transactions" was successful and the first volume met with approval not only from the membership, who received it gratis, but from others. Dr. Eric Proskauer advised on October 28, 1957 that 500 copies have been sold outside our membership and that he considers this very promising.

4. ELECTION

The election was held by letter ballot and in accordance with the Constitution and By-Laws. The letter ballots were delivered unopened to a Tellers Committee appointed by the President.

5. EXECUTIVE COMMITTEE

Meetings were held on November 1 and 8, 1957. No extra formal Executive Committee meetings were necessary as was the case in 1956, when Constitution revisions, publication of the "Transactions", etc., were undertaken.

6. RELATIONS WITH A. I. P.

As in the past, our accounts, and all monies received and disbursed are being handled by A. I. P.

A Committee of Society Treasurers was organized and met on July 22, 1957 at A. I. P. Headquarters. The new form of billing was approved.

Messrs. F. D. Dexter and D. I. Marshall were the Society's proxies at the Annual Meeting of A. I. P. on February 26, 1957.

7. CORRESPONDENCE

All correspondence, notices and membership applications have been handled as promptly as possible. Items of possible interest for publication in the Bulletin are sent to the Editor. Membership address cards, address changes, etc., are sent to the Secretary-Treasurer, President and Membership Chairman by A. I. P. as a matter of routine.

8. ACKNOWLEDGEMENTS

Again the Secretary-Treasurer wishes to express his appreciation for the continued help extended not only by the officers and members of the Society but especially for the cooperation of the staff of the American Institute of Physics.

Respectfully submitted at the
Business Meeting held at the
Textile Research Institute,
Princeton, N. J., November 8, 1957.
WILLIAM R. WILLETS
Secretary-Treasurer

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SOCIETY OF RHEOLOGY

Abridged Estimated Financial Statement for 1957 and Estimated Receipts and Disbursements for 1958

12-31-56	Cash on hand	\$4928.17
9-30-57	Collections since 12-31-56	549.94
	Total	\$5478.11
9-30-57	Disbursements since	
	12-31-56	\$2005.71
12-30-57	Estimated disbursements	
	from 10-11-57	260.00
	Bingham and Memoirs Funds	253.91
	Total	\$2519.62
1-1-58	Estimated cash balance	\$2958.49
12-30-58	Estimated income	
	including dues	1700.00
	Total	\$4658.49
1958	Estimated disbursements:	
	Bulletin	\$ 400.00
	Transactions	1500.00
	Membership committee	200.00
	AIP assessment and service	
	charges	375.00
	Misc. mailing charges	100.00
	Stationery, office supplies	50.00
	Meeting expenses	75.00
	Misc. contingencies	100.00
	Total	\$2800.00
12-30-58	Estimated balance	\$1858.49