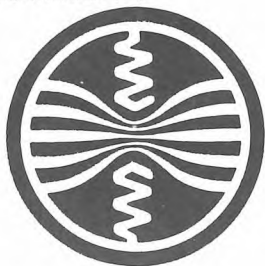


31 OCT 1988

THE BRITISH SOCIETY OF RHEOLOGY

BULLETIN



1988, Vol. 31 No. 3

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1988/89

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EDITORIAL

Perhaps G'day is the appropriate greeting for this issue of the Bulletin with members returning from 'down under'. A full report of the Sydney meeting will appear in the next issue.

The society's annual meeting held this year at Royal Holloway and New Bedford College proved to be a great success. At the meeting the BSR annual award was presented to David Binding and the first Scott Blair scholarship was awarded to Alex Speers.

Sadly we must report yet again of the death of a leading figure in rheology - G.V.Vinogradov. John Hutton recalls his contacts with a man who did much for East-West collaboration.

The Council have asked me to inform members of the possibility of a joint meeting of the British and Spanish societies to be held in Lisbon, Portugal in April, 1989. Details are yet to be worked out but more information will be available soon from either Steve Aldhouse or Harry Schimanski (see inside front cover)

Peter Townsend

Peter Townsend



G.V. VINOGRADOV - A Personal Memoir

I first met Vinogradov at the Third International Congress on Rheology in Bad Oeyenhausen in 1958. Tony Bramhall (dec.) and I had completed a study of wall-effect in grease viscometry and had just become aware of the work of G.V. Vinogradov and V.V. Sinitsyn which was published in the period 1953-56. I had made an arrangement to visit Vinogradov at his hotel. On arrival we were met by about six grim-faced Russians and the initial exchanges were very formal. However, when Vinogradov realised what it was we had come about, the atmosphere changed and we began a useful discussion on the grease-flow problem - just the three of us. From that day on, none of my many meetings with Vinogradov was restricted by formality, and we became good friends.

Vinogradov's early researches were in the field of lubricating oil additives: e.g. chemicals added to reduce oxidative degradation and to increase resistance to wear. He became a rheologist when he began the lubricating-grease project. He was working at the Petroleum Institute of the USSR Academy of Sciences, which later became the Institute of Petroleum Synthesis of that Academy and Vinogradov joined the Laboratory of Polymer Rheology in that Institute. He had become a polymer rheologist; in which role he is best known to the international community of rheologists.

It seemed to me that Vinogradov's main interests were in the viscous properties of polymer systems; including melts solutions and filled polymers. He systematised the various regions of the flow curve as he had done with greases. He also made a detailed study of instabilities in capillary flow; a set of phenomena that he named "elastic turbulence". This latter work forced him to pay greater attention to the elastic properties and their measurement. By this time he had built up a strong group which contained the skills necessary to achieve his objectives: A Ya Malkin was one member of this group.

But Vinogradov was a motivator and he was associated with many groups in other institutes; for example with Al Leonov on theoretical models and A.A. Tager on the experimental side. Despite his widespread influence he was unable to get all he wanted and complained to me about the impossibility of obtaining supplies of pure, well-characterised samples of polymer.

His industriousness was phenomenal. He wrote or co-authored a considerable number of papers and he was involved in the production of a number of more substantial works on greases and polymers. The book "Rheology of Polymers" by Vinogradov and Malkin (English translation, 1980) is deservedly well-known. As a final illustration of his enthusiasm I heard that only a year or so before his death he had written to the publisher of the Journal of Non-Newtonian Fluid Mechanics objecting to the suggestion that owing to ill-health he should, perhaps, step down from the editorial board.

Vinogradov had been ill for many years. In what was probably his last visit to the West - to the 7th ICR in Gothenberg in 1976 - the symptoms of Parkinson's Disease were already clearly visible.

I found Vinogradov a charming man. He was sociable and witty and he enjoyed the good things of life. I was pleased to be able to show him some of the glories of North Wales one weekend and thereafter he always recalled his trip to "Wels". I remember driving through the city in Norwich one sunny day in the so-called depression years of the early 1970s. It was a happy scene with people busily shopping and plenty in the shops. Vinogradov said to me, "You know, you cannot believe everything you read in the newspapers." And on another occasion we were listening to a paper being presented by a distinguished (USSR) Academician who got mixed-up over the numbering of his slides. At the risk of spoiling the story I refuse to put in print what Vinogradov whispered to me, but it had me chuckling for the rest of the paper and revealed the acidity in his wit. I often wonder what he was capable of in his own language.

Vinogradov was at the very centre of influence in Soviet rheology and he has had a not-inconsiderable impact internationally. He will not be readily replaced.

J.F.H.

SCOTT BLAIR SCHOLARSHIP 1988

The first Scholarship, in memory of the work and example of Dr. G.W. Scott Blair, *is awarded to*

Mr. Alex Speers
Department of Food Science
Faculty of Agricultural Sciences
University of British Columbia
248-2357 Main Mall,
Vancouver, British Columbia
Canada V6T 2A2

The award, of £500, is made in respect of research concerned with the colloidal properties of flocculent brewing yeast suspensions. During the course of his research Mr. Speers intends to examine the kinetics of yeast flocculation and the effect of colloidal forces on the rheology of flocculating yeast suspensions.

Mr. Speers completed his MSc in 1982 and has had a number of years working in industry before returning to University to carry out research under the supervision of Professor Powrie aimed at obtaining the degree of Doctor of Philosophy: he is currently in the second year of that programme.

Mr. Speers plans to attend the Conference on the "Rheology of Food, Pharmaceutical and Biological Materials" at Warwick next year.

BRITISH SOCIETY OF RHEOLOGY AWARD 1988

The 1988 Award is made to David Binding for his paper entitled "An Approximate Analysis for Contraction and Converging Flows" presented at the 1987 Conference at Canterbury. This paper is published in the Journal of Non-Newtonian Fluid Mechanics 27, 173-189 (1988).

David Michael Binding was born in the West Country in 1950 and graduated from the University College of Wales, Aberystwyth, in 1973 with honours in Applied Mathematics. Postgraduate studies into the rheology of lubricants, under the supervision of Professor Walters, were recognised with the award of a doctorate in 1976. The following year he took up a post as visiting lecturer in the Faculty of Engineering of the National Autonomous University of Mexico - a university with a quarter of a million students of whom ten thousand were in the Faculty of Engineering. There he taught courses ranging from undergraduate mathematics to post-graduate level courses in continuum mechanics. A talent for teaching was matched by an aptitude for administration recognised by his appointment as Head of Post-Graduate Section of Theoretical and Applied Mathematics. During his time in Mexico David became actively involved in the functions of the National Academy of Engineering. He was elected General Secretary in 1980 and took responsibility for several conferences including the Third International Convocation of Engineering Academics and Like Organisations (1981). He was also instrumental in launching the technical journal by the National Academy entitled "Revista de la Academia Nacional de Ingenieria" of which he was the first editor. As Secretary of the Mexican Society of Rheology he was involved in the planning stages for the IX International Congress on Rheology. Throughout this period of working for the benefit of others, time and facilities for research were limited but he maintained an active interest particularly in the area of squeezing flows.

In 1983 he returned to Aberystwyth to concentrate on research and he has been involved in various aspects of continuum mechanics of polymer solutions, melts and multicomponent materials.

Married with three children, David includes swimming, gardening and sport amongst his recreations. We wish him and his family every success in the future.

MINUTES OF THE 48TH ANNUAL GENERAL MEETING

The meeting was held in the lecture theatre of the Queens Building at the Royal Holloway and Bedford New College, Egham, Surrey, on Wednesday, September 7th, 1988.

The President, Mr. F.N. Cogswell, was in the Chair. Twenty nine members were present. The meeting began at 5.20 p.m.

1. Minutes of the 47th Annual General Meeting

The minutes of the 47th meeting had been published in the Bulletin (Vol.30, No.3). They were approved without alteration and were duly signed by the Chairman.

2. Matters Arising from the Minutes

There were no matters arising from the Minutes of the last Meeting.

3. Chairman's Remarks

Mr. Cogswell presented a report, which is printed elsewhere in this Bulletin.

4. Treasurer's Report

Dr. Evans distributed the audited accounts for the past year. These are printed elsewhere in this Bulletin. He said that there had been an excess of income over expenditure of approximately £1,300, and that the net assets of the Society had increased to over £28,000. The excess of income over expenditure had not been as high as the previous year primarily because of a very high return on the "Food Rheology" conference at Norwich in that previous year. The financial health of the Society was good, and Dr. Evans saw no cause to change the subscriptions.

Mr. Schimanski asked why a deficit was shown for a meeting held at Reading. Dr. Evans said that this was because the timing of the accounts had not allowed for the return of a float from the organisers, and that the Reading meeting in question had made a profit of £1161.

Dr. Ferguson proposed that the Treasurer's Report and the Accounts were accepted. This was seconded by Dr. Baker, and the motion was carried unanimously.

Dr. Tattershall moved that the Auditors be re-appointed for the coming year, and that their fees be fixed at a level no more than 10% higher than the present year. The motion was seconded by Mr. Schimanski, and the motion was carried unanimously.

5. Membership Secretary's Report

Mr. Schimanski distributed a report to the meeting, and this is reproduced elsewhere in this Bulletin. He reported that about 40 Members were in arrears with their subscriptions, and that he would be pressing these for payment. A healthy number of new Members (57) had been elected during the year.

Three hundred and seventy (370) Members were paying their subscriptions by Standing Order, and some of the remainder had paid for 4 years in advance. Overseas Members cannot pay by Standing Order, but some do pay several years in advance.

Mr. Tattershall noted that there was an application fee of £1, and asked if Members who were deleted had to pay the £1 again in order to rejoin. Mr. Schimanski confirmed that this was the case.

Mr. Tattershall asked when a new list of Members was to be published, and Mr. Schimanski replied that he hoped to issue an up-dated list by 1990.

With general assent, Mr. Cogswell thanked Mr. Schimanski for carrying out a time consuming job.

6. Bulletin Editor's Report

Professor Townsend had sent his apologies for not being able to attend the Meeting. Mr. Carter read out his report, which is published elsewhere in this issue. There were no questions.

7. Abstracts Editor's Report

Mr. Aldhouse read his report, which is printed in another part of this Bulletin. Mr. Cogswell remarked that the commercial rate charged to non-Members for the Abstracts is £85 per year, and thus that Members were getting excellent value for money.

8. Secretary's Report

Mr. Carter read out his report, which appears elsewhere in this issue. He laid particular stress on the need to attract some ideas for an educational and graphic display of the use of rheology for an exhibit which it was hoped the Science Museum could be persuaded to mount.

9. Election of Officers and Council

The President asked if there were any further nominations for the Officers of the Council, in addition to those published with the recent Bulletin. There being no nominations from the floor, the President declared the Officers elected.

Since there were eight nominations for six posts as Ordinary Members, a ballot was held. Dr. F.S. Baker and Mr. S.T.E. Aldhouse were appointed as Tellers.

The Council for 1988 - 1989 was elected as follows:-

President:	Dr. J. Ferguson
Honorary Secretary:	Mr. R.E. Carter
Honorary Treasurer:	Dr. A. Evans
Membership Secretary:	Mr. H. Schimanski
Bulletin Editor:	Prof. P. Townsend
Abstracts Editor:	Mr. S.T.E. Aldhouse
Ordinary Members:	Mr. P.C. Anderson
	Dr. P.F.G. Banfill
	Dr. R. Buscall
	Dr. D.J. Hourston
	Mrs. C.A. Moules
	Dr. D.R. Oliver

Mr. Cogswell proposed a Vote of Thanks to Dr. F.S. Baker for his four years service on the Council, and to Dr. G.J. Brownsey for his work on Council during the past year. Dr. A.A. Collyer was thanked in his absence for standing for election to the Council.

Dr. Ferguson proposed a Vote of Thanks to Mr. Cogswell, who was retiring after two years as President of the Society. Dr. Ferguson said that Mr. Cogswell's attributes of ability, urbanity and diplomacy had served the Society well over the years, and that it was due in great part to respect for Mr. Cogswell that the next meeting of European Rheologists would be combined with the Golden Jubilee Meeting in Edinburgh in 1990.

10. Any Other Business

Mr. Tattershall thanked all of the Officers and Council Members for their work. He said that he found the standing of the Society very pleasing.

Regarding the International Committee on Rheology (ICR), Mr. Schimanski asked if any costings had been carried out on the cost of permanent staff. Mr. Cogswell said that about £1 per Member per year would probably suffice. In response to questions about the functions of the ICR, Mr. Cogswell said that they organised four-yearly Congresses in Rheology,

they disseminated conference information to member Societies, and they agreed nomenclature in the field of rheology. Dr. Jones asked if there would be any impact on Rheology Abstracts, for example if there was any pressure to produce one international set of Abstracts. Mr. Cogswell replied that Germany had stopped publishing Dokumentation Rheologie, and that the UK published the only English-language abstracts. It was possible that Rheology Abstracts could become "International". Dr. Benbow was concerned, in that Rheology Abstracts provided valuable income for the Society.

Mr. Cogswell asked the Secretary to convey the feelings of the Meeting to the Council.

There being no other business

The meeting closed at 6.25 p.m.

OBSERVATIONS ON THE SOCIETY, ITS ACTIVITIES AND RHEOLOGY AT LARGE

Firstly this has been a year of sadness, when we have lost George Scott Blair, a figure respected internationally for his work in rheology and our founder and benefactor. One of the apocryphal stories of that energetic man comes from an early meeting of this Society held on the premises of the Institute of Physics, whose portals were reverberating to some animated debate, this prompted a visitor to enquire who those people were. The Secretary of that Institute, knowing that the word rheology would have no meaning to the enquirer, replied at once that they were George Scott Blair - an adequate explanation. It is by the spirit of our meetings that we remember him.

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This has been the year of the Xth International Congress on Rheology which was held at Sydney. As your delegate to the International Committee on Rheology there are two issues which I must bring to your attention.

The ICR is a loose federation of national societies: Professor Tschoegel, its Secretary for many years, has now retired and that baton has been passed to Professor James of Toronto. The federation continues to grow with China and Slovenia being the latest to join: the Soviet Union, Switzerland and Portugal are in the process of forming societies. Growth brings with it both opportunities and potential difficulties. In particular the issue which must be addressed is as follows: does the International Committee of Rheology, with its present informal, if highly informed, secretariat have the tools with which to serve its membership, or should it become a professionally staffed organisation? Such a professional organisation would carry with it the benefits of an increased co-ordination of our activities worldwide, and also an increased visibility for our discipline, which may help increase the level of priority given to our field within the scientific community. Most importantly such a professional secretariat would be able to expedite the dissemination of information. Such a course would bring with it the need for the ICR to become a financial body making a small levy on national societies and, if it were to be truly effective, it would also require some transfer of sovereignty to that body from the national societies.

On the technical side, the Xth International Congress was dominated by theoretical contributions. The opening address of the conference, presented by the Australian Defence Minister, Rosalyn Kelly, described rheology as "the theoretical basis for industrial processes". To some of us - to me at least - rheology is an overwhelming empirical experience and your present conference on "Unsolved

Problems in Rheology" defines that experience very well: here it is notable that a large proportion of the contributions come from industrial rheologists. I find it hard to believe that 85% of the significant advances in rheology over the last four years have been in the academic field, as reflected by the Xth ICR, while 60% of the unsolved problems remain rooted in the industrial sphere. If this is true it is a conundrum of the greatest significance.

I very much hope that these points will be addressed at the next International Congress to be held in Brussels in 1992. It is your views on these matters which must be heard at that meeting and I urge you to debate them in the Bulletin and in Council before that time.

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In respect to the activities of your Society, I have no intention to preempt the report of the Secretary, but there are two issues to which I particularly wish to draw your attention.

I begin with failure in that, during my term as President, the Society has not made the award of a Gold Medal. The responsibility for this omission rests with me since Council makes such awards at the recommendation of a sub-committee chaired by the President. It is my belief that such an award, for an outstanding contribution to our science, should reflect the strongest approbation of the membership. Despite the fact that calls for nominations for the Gold Medal Award have been repeatedly published in the Bulletin, I am sorry to have to report that I received no such nominations from the membership, and in those circumstances I had not felt able to make any recommendation to Council. Should you consider me remiss in this I urge you most strongly to communicate that opinion to my successor, together with the nomination, supported by an outline case for consideration by the sub-committee, of the work of one who you believe should receive the highest honour of this Society.

On a different matter, I am pleased to report that your Society has continued - indeed has expanded - those philanthropic activities which are commensurate with its status as a charitable body. In particular today we made the first Scholarship Award in the memory of our founder, to encourage post graduate level research in rheology. It is the intention of Council that this Scholarship will continue for a second year and that, in addition, a further new scholarship will be awarded each year. It is with even more pleasure that I report to you that this initiative by the Society has been followed by a parallel sponsorship from Pergamon to create a G.W. Scott Blair Biorheology Scholarship to be administered by the Society. I warmly applaud this action by Pergamon and would be delighted to think that it might set a precedent for other organisations associated with Rheology.

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Finally, a word about your Council: it is a blend of experience and new ideas energetically directed to forwarding our science. As last year we have an election for membership of that body, and I take it as a mark of good health that so many people are willing to come forward and selflessly offer to serve. Two years ago I thanked you for the honour which you bestowed upon me when you elected me your President; I would now like to thank Council for the privilege of sharing their deliberations and for the pleasure of working with them.

F.N. Cogswell
President

REPORT OF THE HONORARY SECRETARY, 1987-88

Dr. G.W. Scott Blair

The President has already reported upon the sad demise last September, of our Founder, Dr. George Scott Blair. The Society was represented at Dr. Scott Blair's Memorial Service by Mr. Harry Schimanski, our Membership Secretary.

Several means of commemorating Dr. Scott Blair were considered by your Council, and the Scott Blair Scholarship was founded in his memory. This Award was to be to a post-graduate student working in the field of rheology, and was to assist with attending European centres of rheology to further liaison between ourselves and Europe. The first Scholarship has been awarded at this meeting. Additionally, as reported by the President, Pergamon are sponsoring a G.W. Scott Blair Biorheology Scholarship, and it is hoped that the first of these awards will be made next year.

Prompted by the kind offer by Mrs. Scott Blair to loan the Society Dr. Scott Blair's Gold Medals, the Council considered that it could be appropriate to lobby the Science Museum to mount a display on rheology and its application. I have been in correspondence with the Science Museum, and, although there is a long way to go, they are receptive to ideas for educational and dynamic displays. Thus, we have a challenge to come up with some proposals for graphic ways of demonstrating rheology, and I invite Members to let me have any suggestions as soon as possible. My own feelings are to aim to show the importance of rheology in the many fields of industry. It has been suggested that the display could be launched at the Golden Jubilee meeting in Edinburgh in 1990, and, given their agreement, transferred afterwards to the Science Museum.

Annual Award

The Society's Annual Award is to be presented at this meeting to Dr. David Binding, in recognition of the splendid paper which he gave at last year's Annual Meeting.

Meetings

The Society has again had some successful Meetings in the past year. Last year's Annual Meeting was at Canterbury, on the topic of "Entrance and Exit Effects". The subject matter was of a very high standard, and of a diversity which encompassed both practice and theory, and the meeting of the two.

"Flow Processes in Composite Materials" was held at Brunel University in May, and was another well-received meeting. This was a joint meeting with the British Composites Society, and selected papers from the meeting will be published in the Journal, "Composites".

The Oldroyd Memorial Lecture was presented at three venues, Cambridge, Liverpool and Swansea, by Professor Ken Walters of UCW, Aberystwyth. Each presentation was well attended and well received.

The Tenth International Congress on Rheology was held in Sydney in August, and was attended by several Members of the Society. The meeting was reportedly well organised and contained many lively debates. A Report on the meeting will appear in the Bulletin in due course.

Regarding future meetings, preparations are well in hand on the organisation for the Golden Jubilee Meeting, to be held in Edinburgh in September, 1990. Provision has been made for accommodation for up to 500 delegates, and a more detailed report of preparations will be given at the next AGM.

A one-day meeting on the "Rheology of Latices" is being organised by Dr. Hourston for December, 1989, the venue being London.

Regarding a meeting next Spring, several options have been explored. We had hoped to take up an offer to provide a session of five papers at the US Society's meeting in Gainesville, but realised that there was insufficient time to organise this properly. A "teach-in" for newcomers to the field is being organised by Dr. Oliver and Mrs. Moules, to be held at the University of Birmingham.

A joint meeting in Lisbon in April 1989 with the Spanish Society to launch the Portuguese Society of Rheology is being considered. Tentative topics for the meeting are "Polymeric Additives in Lubricating Oils" and "Drag Reduction Phenomena".

With the help of Dr. Oliver, Dr. Brownsey, Professor Newton of the London School of Pharmacy and Professor Nienow of the University of Birmingham, I am organising the Annual Meeting for next year, which will be "The Rheology of Food, Pharmaceutical and Biological Materials", and will be held at the University of Warwick on 12th-15th September, 1989. A prime objective of the meeting is to bring together workers from different industries in order to compare and contrast rheological problems and solutions to them. There will also be a session on General Rheology. About a dozen papers have been submitted so far, and more are invited. I have discussed publishing the proceedings of this meeting with several publishers, and hope that we can generate sufficient papers to justify this. As a shameless enticement to contributors and delegates alike, the conference dinner will take the form of a mediaeval banquet in Warwick Castle.

Ties

We are keeping the price of our Society ties to £5.00, plus £0.50 postage where appropriate. The ties are available from myself with a navy blue or a mid-grey background.

Word Processor

The Society is now the proud owner of an Amstrad PCW 8512 word processor, which is doing sterling work for writing Minutes etc., and, indeed, this report.

Roy Carter
Honorary Secretary

MEMBERSHIP SECRETARY'S REPORT

Annual General Meeting, 6th September 1988

The membership of the British Society of Rheology at the end of July 1988 stood at 695. The table below summarises the changes during the past year.

	1987/88		1986/87	
	UK	Overseas	Total	Total
Membership July 1986	444	197	641	614
New Members	45	12	57	63
Resignations	1	0	1	8
Deletions (rule 4d)	0	0	0	28
Deaths	2	0	0	0
Net moves UK/Overseas	-2	-2	0	0
Nett Change	40	14	54	27
Membership July 1987	484	211	695	641

These figures look better than they really are because some members who are over due with their subs have not been presented to Council for deletion under rule 4d. I have required a lot more time to become familiar with the Database than I expected. I am pleased to announce that 317 Members are now paying by Standing Order at their Bank. I have encouraged a number of Overseas Members to pay a number of years in advance. Most people do not seem to mind this. The subscription for those people not paying by standing order is increased to £6.00 from 1st October 1988.

I am thoroughly enjoying the job of Membership Secretary. It is quite exciting to receive correspondence from far away places. I have also re-established contact with a number of old friends in the society.

Harry Schimanski

BRITISH SOCIETY OF RHEOLOGY

REVENUE ACCOUNT for the year ended 30th JUNE 1988

<u>Expenditure</u>	<u>1988</u>	<u>1987</u>
Council Expenses	1944	1992
Bulletin Production Costs	2845	2328
Expenditure by Officers :-		
Secretary	55	86
Treasurer	13	21
Membership Secretary & Circulation	<u>952</u>	<u>819</u>
	1020	926
Professional Fees	163	156
Insurance	64	58
Awards	320	675
Miscellaneous	20	60
Depreciation :-		
Word Processor	154	436
Scott Blair Collection costs	-	242
Memorial Lectures	991	679
Student Grants	-	2750
Purchase of Ties	<u>778</u>	<u>-</u>
	8299	10302
<u>Excess of Income over Expenditure</u>	<u>1303</u>	<u>3057</u>
	<u>£9602</u>	<u>£13359</u>

Income

Annual Subscriptions and Entrance Fees	2101	2743
Publisher - Rheology Abstracts	3707	3364
Advertising	1125	1650
Bulletin Subscriptions	220	300
Sale of Ties	114	164
Bank Deposit Interest	1906	2012
Conferences - Net surplus per account below	<u>429</u>	<u>3126</u>
	£9602	£13359

Conferences Account

Surplus or (Deficit) after expenses

Bath	145	(25)
Canterbury	435	(112)
Brunel	345	-
Egham	(496)	-
London	-	426
Reading	-	(60)
Leeds	-	659
Norwich	-	2238
	<u>£429</u>	<u>£3126</u>

BRITISH SOCIETY OF RHEOLOGY

BALANCE SHEET as at 30th JUNE 1988

<u>ASSETS</u>	<u>1988</u>	<u>1987</u>
<u>Fixed Assets</u>		
Word Processor at cost	618	-
<u>Less: Depreciation to date</u>	<u>154</u> 464	<u>-</u> -
<u>Current Assets</u>		
Cash at bank		
Special Deposit Account	23066	23066
Deposit Accounts	1078	1541
Current Account	<u>3006</u> 27150	<u>2678</u> 27285
Sundry Debtors	945	142
	<u>28559</u>	<u>27427</u>
<u>LIABILITIES</u>		
<u>Current Liabilities</u>		
Sundry Creditors	<u>288</u>	<u>459</u>
<u>NET ASSETS</u>	<u>£28271</u>	<u>£26968</u>
<u>Represented by :-</u>		
<u>GENERAL FUND</u>		
At 1st July 1987	26968	23948
<u>Less: Income Tax Refund overprovided</u> in previous year	-	37
	<u>26968</u>	<u>23911</u>
<u>Add: Excess of Income over</u> Expenditure in year	<u>1303</u>	<u>3057</u>
	<u>£28271</u>	<u>£26968</u>

ANTHONY EVANS

..... Hon.Treasurer

We have examined the books of account of the British Society of Rheology and report that to the best of our knowledge the above Balance Sheet and Revenue Account are in agreement therewith.

Chancery House
3 Hatchlands Road
REDHILL, RH1 6AA
12th August 1988

ALFRED SIMMONS & COMPANY
Chartered Accountants

BULLETIN EDITOR'S REPORT

The Bulletin has been published on four occasions since the last AGM, totalling over 120 pages of information for members. This has concentrated in the main on conference material including announcements and programmes for forthcoming conferences and reports of those already taken place. The volume of this information must be a healthy sign for the field of rheology.

One article was published describing the work of a member's research group. Ideally we'd like to publish more such articles but members seem reluctant to come forward and tell us what they are doing.

It has also been a sad year for the Bulletin with the announcement of the death of a number of leading figures in our field.

On a purely commercial front, the Bulletin continues to attract more advertising which this year totalled almost £2,000, a figure which is well on the way to covering production costs.

As a final point, the editor makes a plea to those who may, in the future, advertise meetings or courses in the Bulletin. Please send in the details as soon as they are known. Often information is received well in time for an event but out of phase with publication deadlines. These are the 15th of March, June, September and December. Although there was one hiccup last year as a result of 'hurricane' damage to the printers' premises, in general the Bulletin should reach members approximately four to six weeks after each deadline.

Peter Townsend.

ABSTRACT EDITOR'S REPORT

Coverage of several journals has been re-established, notably Polymer Engineering and Science and J. Applied Polymer Science. As a result, with Volume 31, no.3, now in preparation, 537 abstracts have been included so far this year, and I believe last years' total will be exceeded.

I must continue my appeal for members of the Society to offer their assistance in contributing abstracts. Although our coverage is now fairly good, some abstractors are doing more than their fair share, and others, in the normal course of events, may be moving on or retiring. If you have appreciated Rheology Abstracts in the past and wish to support its continued existence, please contact me at the address given inside the front cover of the Bulletin.

I am sure the Society's members will join me in thanking those who have contributed abstracts this year -

Mr. P.C. Anderson
Dr. P.F.G. Banfill
Dr. K.M. Beazley
Dr. J.J. Benbow
Dr. R. Buscall
Dr. C.E. Chaffey
Dr. R.A. Dawe
Dr. G.M. Downs
Dr. D.M. Heyes

Dr. K.G. Hutchison
Dr. T.C.B. McLeish
Dr. D.R. Oliver
Dr. S.M. Richardson
Prof. J.F. Steffe
Mr. T.A. Strivens
Dr. J. Vincent
Prof. I.M. Ward

and Dr. G.J. Brownsey for preparation of the index.

S.T.E. Aldhouse

MEMBERSHIP NEWS

The following applications for Membership of the British Society of Rheology have been received and were approved at the Council Meeting on the 1st July 1988.

Mr. S.R. Mitchell
Dussek Campbell Ltd.,
Thames Road,
Crayford,
Kent
DA1 4QJ

pea

Dr. A.G. Tanner
Gartferry Road,
Moodiesburn,
Chryston,
Glasgow.
G69 OJE

pea

Dr. W.Q. Gilmour,
3M UK plc.,
Ratcliffe Road,
Atherstone,
Warwickshire,
CV9 1PJ

pea

Dr. I. Walker,
Formulation Dev. Lab.,
Reckitt & Colman
Pharmaceutical Division,
Dansom Lane,
Hull.

pesa

Mr. J. Boyd
Merrell Dow
Rusham Park
Egham,
Surrey,
TW20 9NW

Not yet known

Mrs. C. Davies,
Merrell Dow,
Rusham Park,
Egham,
Surrey,
TW20 9NW

Not yet known

Mr. T.K. Roy,
University of Cambridge,
Pembroke Street,
Cambridge,
CB2 3RA

pts

The following applications for Membership of the British Society of Rheology have been received and were approved at the Council Meeting on the 6th September 1988.

Mr. J.R.I. Bury,
Synthetic Technology Ltd.,
4 Chapman Way,
Tunbridge Wells,
Kent.

fetsa

Dr. R. Addleman,
Rosand Precision Ltd.,
Unit 11,
Little Ridge,
Welwyn Garden City,
Herts.
AL7 2BH

feta

G. G. Zahler,
Rosand Precision Ltd.,
Unit 11,
Little Ridge,
Welwyn Garden City,
Herts,
AL7 2BH

feta

Dr. L. Rudzinski,
Technical University of Kielce,
25-314 Kielce,
Al Tysiaclecia PP3,
Poland.

fea

Mr. E.H. Williams,
Dept. of Haematology,
Hope Hospital,
Salford,
M6 8HD

petsa

Dr. M.W. Rampling,
Dept. of Physiology and Biophysics,
St. Marys Hospital Medical School,
London
W2 1PG
fesa

Miss P. Madhvi,
Warren Spring Laboratory,
Gunnels Wood Road,
Stevenage,
Herts.
feasa

Dr. G. Boardman,
British Gypsum Ltd.,
R&D Dept.,
East Leake,
Nr. Loughborough,
Leics.
feta

Mr. J. Lucas,
Servicised Ltd.,
Ajax Avenue,
Slough,
Berks.
SL1 4BH
peta

Dr. Helen R. Kerr,
F M B R A,
Chorleywood,
Herts.,
WD3 5SH
petsa

ANNUAL SUBSCRIPTION REMINDER

The annual membership subscription of £6.00 for the year 1988/89 falls due for payment on the 1st of October 1988. This figure is reduced to £5.00 for members who elect to pay by Banker's order. May I remind all members who have not paid in advance or who do not pay by Banker's standing order to send their payment now to:

**The Hon. Membership Secretary,
Mr. H. Schimanski,
Carri-Med Ltd.,
Glebelands Centre,
Vincent Lane,
Dorking,
Surrey RH4 3YX**

It would be very helpful if all those members who do not yet pay by Banker's standing order, could arrange so to do. It would save a great deal of time spent in sending out individual reminders. The order, to pay £5.00 each year on the 1st of October, should be made payable to the *British Society of Rheology Membership Dues account, number 0180985 at Lloyds Bank, 20 North Street, Leatherhead, Surrey. (Branch code number 30-94-94).* In addition please also notify me at the above address that you have so instructed your bank.

Overseas members, who pay their subscriptions in a currency other than Sterling, should add the equivalent of £3.00 to cover our exchange costs. A single payment may be used to pay for a number of years in advance and/or for any number of members to save exchange expenses. May I remind our North American members that a personal cheque in dollars has proved perfectly acceptable to our bank in the past. At present rates, \$7.50 (£5 x 1.5) per year per member plus \$4.50 per cheque is the amount to remit. For our European members, Eurocheques denominated in pounds sterling have proved acceptable. If used, please remember to write your card number on the back of the cheque, otherwise we do have to pay exchange expenses.

CONFERENCE DIARY

Date	Place	Details
Dec. 1988	Kyoto, Japan	'8th Rheology Course' The Society of Rheology, Japan: contact Professor T. Masuda, 1-101 Izumidono-cho, Yoshida, Sakyo-ku, Kyoto, 606 Japan.
31/1/89 - 2/2/89	Chicago, Illinois, U.S.A.	'ViscTech' conference/showcase on processing/handling of rheologically problematic materials, Cahners Exposition Group: contact A.S. Goldberg, P.O. Box 78, London NW11 OPG, U.K.
12-15/2/89	Gainesville, Florida, U.S.A.	'60th Annual Meeting' Society of Rheology: contact Dr. J.M. O'Reilly, Chemistry Division, Research Laboratories, Eastman Kodak Company, Rochester, NY 14650, U.S.A.
19-21/4/89	Darmstadt, Germany, (B.R.D.)	'Annual Meeting' Deutsche Rheologische Gesellschaft: contact Professor Dr. K. Kirschke, Deutsche Rheologische Gesellschaft, Unter den Eichen 87, D-1000 Berlin 45, German Federal Republic.
18-23/6/89	Nancy, France	'7th International Congress of Biorheology' contact: Lorraine Congres, Symposium INSERM, Palais des Congres, 1, rue de Grand Rabbin Haguenauer, 54000 Nancy, France.
29/8/89 - 1/9/89	Glasgow U.K.	'Bifurcation phenomena in solids' Euromech 252: contact Professor R.W. Ogden Dept. of Mathematics, University of Glasgow, Glasgow G12 8QW, Scotland, U.K.
4-8/9/89	Clermont- Ferrand, France	'Powders and Grains' International conference on micromechanics of granular media: contact R. Gourves, C.U.S.T., Laboratoire de Genie Civil, Universite Blaise Pascal de Clermont-Ferrand II, Rue des Meuniers, 63170 Aubiere, France.

12-15/9/89	Warwick U.K.	'Rheology of food, pharmaceutical and biological materials' British Society of Rheology: contact R. Carter, Royal Ordnance plc, Research and Development Centre, Sewardstone Road, Waltham Abbey, Essex EN9 1AY, U.K.
Sept. 1989	Krakow, Poland	'Applications of continuum damage mechanics' Euromech 251: contact Professor M. Chranowski, Politechnika Krakowska, ul. Warszawska 24, 31-155 Krakow, Poland.
Oct. 1989	Hamburg, Germany. (B.R.D.)	'The time-dependent behaviour of ice' Euromech 258: contact Professor O. Mahrenholz, Technische Universitat Hamburg-Harburg, Eissendorfer Strasse 38, 2100 Hamburg 90, German Federal Republic.
21-26/10/89	Montreal, Canada.	'First Inter-American Conference on Rheology' and '61st Annual Meeting, Society of Rheology' and 'First Annual Meeting of the Canadian Rheology Group': contact Dr. L.A. Utracki, NRCC/IMRI, 75 boul. de Mortagne, Boucherville, Quebec, Canada, J4B 6Y4.
31/10/89 - 2/11/89	Paderborn, Germany. (B.R.D.)	'Thermal effects in fracture of multiphase materials' Euromech 255: contact Professor Dr. K.P. Hermann, Laboratorium fur Technische Mechanik, Paderborn University, Pohlweg 47-49, 4790 Paderborn, German Federal Republic.
3-7/9/90	Edinburgh, Scotland, U.K.	'Third Conference of European Rheologists' and 'Golden Jubilee Meeting' British Society of Rheology' contact Dr. C.J.S. Petrie, Dept. of Engineering Mathematics, University of Newcastle upon Tyne, Newcastle upon Tyne, NE1 7 RU, U.K.
Oct. 1990	Albuquerque, New Mexico, U.S.A.	'62nd Annual Meeting' Society of Rheology: contact secretary (Professor D.G. Baird, Polymer Materials and Interfaces Laboratory, Virginia Polytechnic Institute and State University, Blacksburg, Virginia 24061-6496, U.S.A.

POLYMER RESEARCH IN THE UK

The Polymer Engineering Group of the BPF, in collaboration with the BRMA, has responded to an industry need for a consolidated data base on publically-funded research concerning plastics, rubber, polymeric composites and structural adhesives. Considerable assistance was given by the Polymer Engineering and other Secretariats of the Science and Engineering Research Council to this important project.

Published today, this first polymer research data base of its type has concentrated on consolidating, indexing and abstracting the 159 SERC supported Research Grants as well as around 100 Cooperative Awards in Science and Engineering and Teaching Company Schemes in this field. The data base also reports on EEC Commission, DTI, MOD and the Association of Independent Research and Technology Organisations public forum polymeric research in the UK.

Work will continue on the data base in order to enhance technology transfer to industry and to highlight the main thrusts of polymer-related R & D. In the longer term it will include expertise as well as project analysis for industry in both SERC and non-SERC funded polymer processing, engineering and science.

Covering some 180 double-sided A4 pages, the research data base is available at £50 a copy from the Polymer Engineering Group, 5 Belgrave Square, London SW1X 8PD, telephone 01-235-7286.

RHEOLOGY IN THE LABORATORY

One Day Meeting

A one-day meeting "Rheology in the Laboratory" will be held at Birmingham University in the week starting 3rd April 1989.

It is aimed at the many users of viscometers and rheometers who provide the data for our industrial products and their processes. Membership of the B.S.R. is not a necessity and one year's free subscription will be available to any non-member delegates.

To all line managers and senior chemists -

Please send your technicians or junior staff

Talks will include:-

1. Basic principles in rheology
2. The measurement and meaning of the flow curve
3. The use of computers in rheology

For further details please contact:-

**Mrs. C.A. Moules,
27 Alexander Road,
Stotfold,
HITCHIN,
Herts. SG5 4NA**

**Tel No: 0462-730048
or Business Tel.No: 01-519-5578**

CALL FOR PAPERS

"Rheology of Food, Pharmaceutical and Biological Materials"

University of Warwick, 12-15th September, 1989

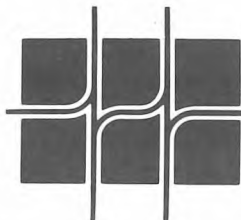
The Society's Annual Meeting for 1989 will be on the topic above. Additionally, papers will be considered for a session on "General Rheology". The aim of the conference will be especially to encourage workers in different fields to compare notes to their mutual benefit.

*Titles and abstracts of about 200 words should be sent
by December 31st, 1988 to:*

**Roy Carter,
Honorary Secretary,
The British Society of Rheology,
Royal Ordnance plc,
Research and Development Centre,
Sewardstone Road,
Waltham Abbey,
Essex EN9 1AY
England**

**Telephone and Fax: 0992-713030
Telex: 267455 ROC G
Telecom Gold (Home): 72:MAG31999**

Hopefully the conference proceedings will be published and delegates will receive a copy. The conference dinner will take the form of a Mediaeval Banquet in Warwick Castle.



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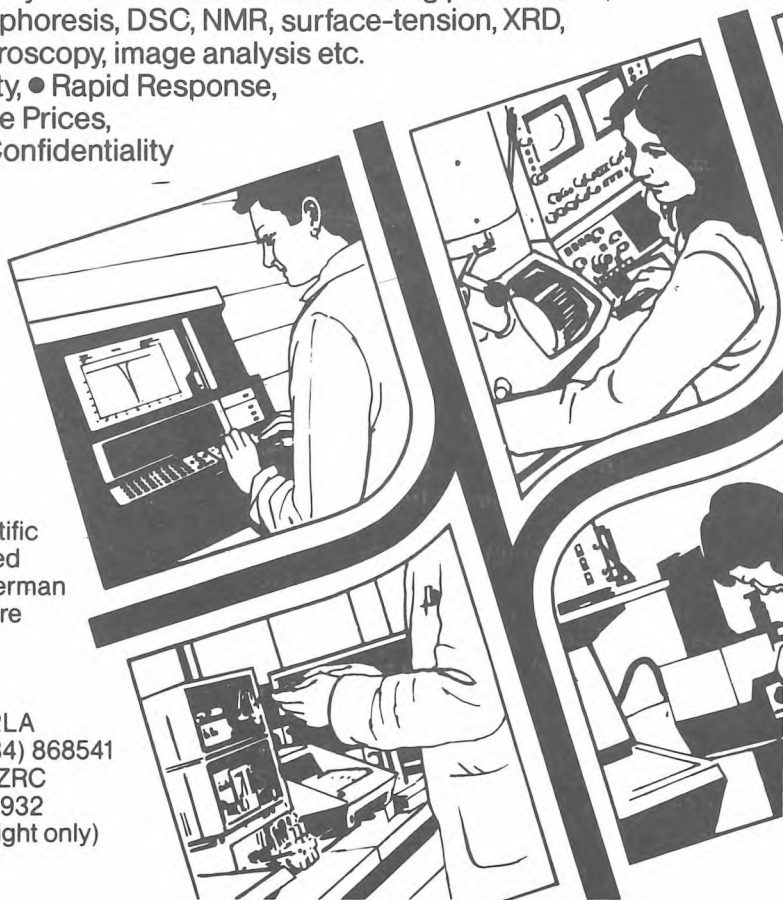
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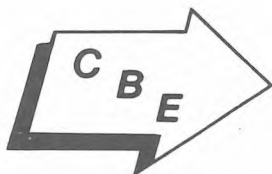
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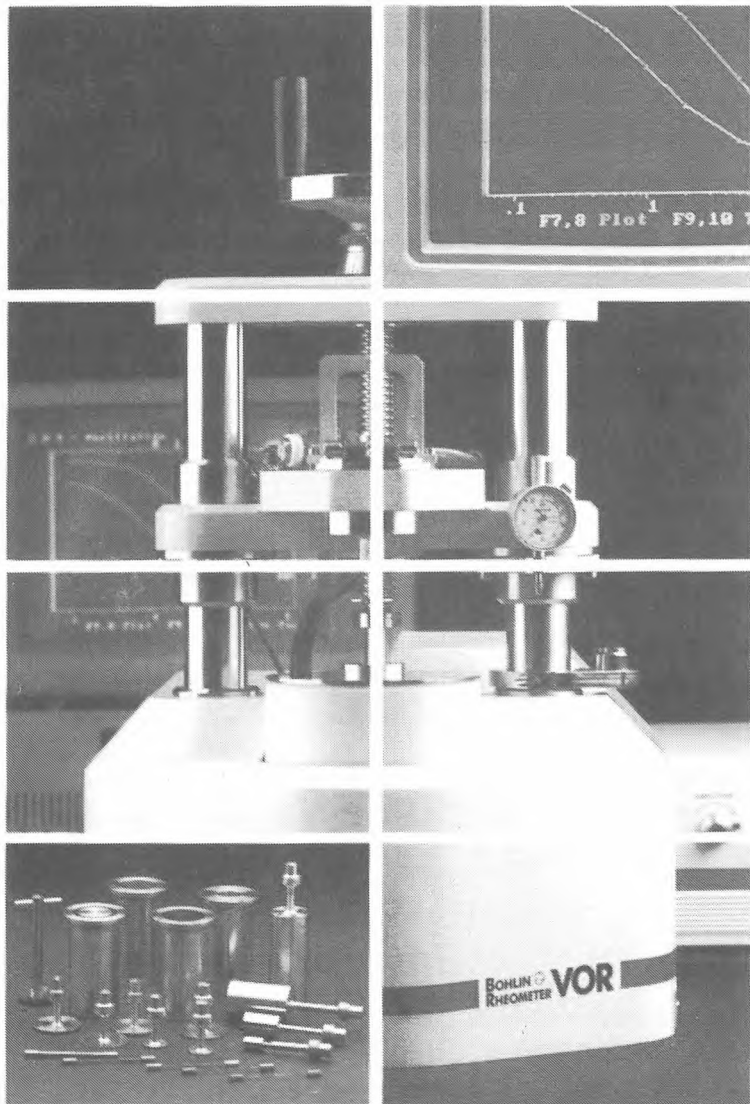
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