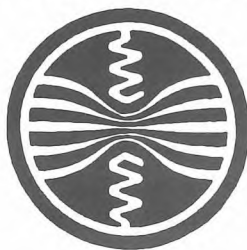


THE BRITISH SOCIETY OF RHEOLOGY

BULLETIN



May 1996

1996, Vol. 39, No. 1

CONTENTS

Officers and Members of Council	ii
Editorial	1
Commentary on 284th Council Meeting	1
New Council Member's Profile	4
European Society News	6
EFCE Working Party Meeting Report	8
Conference Announcement	10
Conference & Course Diaries	13
Membership News	18



Hon. Editor
Mr P.C.Anderson,
32 Queensway,
Feltham,
Middlesex,
TW13 7NS

ISSN-0045-3145

THE BRITISH SOCIETY OF RHEOLOGY

OFFICERS AND MEMBERS OF COUNCIL. 1995/96

- President:** Prof H.A.Barnes, Unilever Research Ltd, Port Sunlight Laboratory,
Quarry Road East, Bebington, Wirral, Merseyside, L63 3JW
Tel: 0151-471-3529 Fax: 0151-471-1829 E-Mail: barnes_h@urpsi.co.uk
- Secretary:** Dr G.J.Brownsey, Institute of Food Research, Norwich Laboratory,
Norwich Research Park, Colney, Norwich, NR4 7UA
Tel: 01603-255201 Fax: 01603-507723 E-Mail: brownsey@bbsrc.ac.uk
- Treasurer:** Dr M.F.Webster, Dept of Maths & Computer Science, University College
Swansea, Swansea, West Glamorgan, SA2 8PP
Tel: 0179-229-5656 Fax: 0179-229-5708 E-Mail: m.f.webster@swansea.ac.uk
- Membership Secretary:** Dr N.E.Hudson, Dept of Pure & Applied Chemistry,
University of Strathclyde, 295 Cathedral Street, Glasgow, G1 1XL
Tel: 0141-552-4400 Fax: 0141-552-5664 E-Mail: n.e.hudson@strath.ac.uk
- Abstracts Editor:** Dr G.H.Meeten, Schlumberger Cambridge Research Ltd,
High Cross, Madingley Road, Cambridge, CB3 0EL
Tel: 01223-325204 Fax: 01223-467004
E-Mail: meeten@cambridge.scr.slb.com
- Bulletin Editor:** Mr P.C.Anderson, 32 Queensway, Feltham, Middlesex, TW13 7NS
Tel: 0181-890-6586
- Ordinary Members:** Prof P.F.G.Banfill, Dept of Building Engineering & Surveying,
Heriot-Watt University, Riccarton, Edinburgh, EH14 4AS
Tel: 0131-449-5111 Fax: 0131-451-3161 Email: bdgpgfb@bonaly.hw.ac.uk
- Prof A.R.Davies, Dept of Mathematics, University of Wales,
Aberystwyth, Dyfed, SY23 3BZ
Tel: 01970-622755 Fax: 01970-622777 E-Mail: ard@aber.ac.uk
- Mr P.D.Doody, National Starch & Chemical Ltd,
Galvin Road, Slough, Berkshire, SL1 4DF
Tel: 01753-533494 Fax: 01753-577704 E-Mail: paul.doody@nssgb.co.uk
- Prof T. McLeish, IRC in Polymer Science & Technology,
University of Leeds, Leeds, W. Yorkshire, LS2 9JT
Tel: 01132-333845 Fax: 01132-333846
E-Mail: phy6tcbm@phys-irc.novell.leeds
- Mrs C.A.Moules, Camtel Sciences, 5 Carrington House,
37 Upper King Street, Royston, Herts, SG8 9AZ
Tel: 01763-244280 Fax: 01763-244298
- Mr S.L.Robinson, Bohlin Instruments, Unit 6, The Corinium Centre,
Cirencester, Glos., GL7 1YJ
Tel: 01285-644407 Fax: 01285-644314 Mobile: 0374-154471



EDITORIAL

In this first issue of 1996, we have further news that all of the Rheology Societies and Groups in the European Union have accepted the ESR constitution and will soon hold an inaugural meeting. There is a profile of the last of the new members who came onto Council at last year's AGM, Mike Webster, our Treasurer. Mike has been struggling to come to grips with our financial affairs, not helped by banks who now give no indication of the source of payments received by standing order. Proposals will be put to the AGM in September to streamline our affairs and ease the Treasurer's problems. Unfortunately it has still not been possible to present an audited set of accounts for 1994/95 here to our members. This is not Mike's fault.

The final copy date for the next issue, Volume 39 number 2, which has to reach members in early August, well before our AGM on September 4th, is June 7th, 1996.

COMMENTARY: COUNCIL MEETING MARCH 27TH 1996

"It used to be a transport cafe, this place. You could buy anything here, straight off the lorry." So said the taxi driver as we drove into the Hinckley Island Hotel on the A5 in Leicestershire for the Council Meeting on a bright March morning. There were no signs of such humble origins in the present-day brick and cast stone property, with its palm trees, its giant statue of Atlas supposedly supporting the roof in the foyer, its indoor and outdoor goldfish ponds and its 15 or more meeting rooms catering for the needs of today's clientele. The venue had been suggested by Carole Moules, having been used for one of her training courses, and was certainly convenient for the car-borne members, even if a bit inaccessible by public transport.

The meeting got underway amid comments that the same two-thirds of the Council were present as had been present at the previous meeting. Industrial members clearly find it increasingly difficult to find time to attend Council and the "missing industrialists" problem is not just confined to scientific meetings. It followed the usual brisk pattern established under Howard Barnes' presidency and was complete in about three hours.

Howard brought us up to date on developments with the European Society of Rheology. It has been agreed that its formation would be marked by an inaugural meeting in Brussels possibly linked with a small scientific workshop to discuss the possibility of setting up a Framework 5 research programme including rheology. This is Eurospeak for a managed collaborative programme in which institutions from two or more countries propose research to be funded by the European Union. Officers of the Society have to be nominated and after a bit of discussion we agreed to support the following nominations: Ken Walters to be President, Jean-Michel Piau to be Immediate Past President (a slight nonsense since the Society has not existed in the past), Manfred Wagner to be Secretary and Jan Mewis to be Treasurer. We noted with approval that all of these people are members of the BSR. We agreed that we would need to set up a channel of communication through our nominated (ordinary) delegate Jim Ferguson and pondered over a suitable mechanism, whether to Council or AGM or both.

Mike Webster then described our finances in his quarterly report. In the six months since taking over from Roy Carter he has been beset with teething troubles and we heard about his efforts to streamline operations. For instance, he has acquired a second credit card reader to facilitate the payment of members' subscriptions, and reported that some changes to the rules governing charities mean that it is no longer necessary to get our accounts audited. It is merely necessary to have them inspected by an independent examiner, who is preferably but not necessarily a chartered accountant. Since Mike is in touch with just such a person, who indeed brought the matter to his attention in the first place, we agreed that this would be a good thing, not only saving the costs of auditing but speeding up the process of getting the accounts prepared for the AGM. After a quick check through our Constitution, Mike was saddened to discover that this change would have to be approved by the next AGM, so we agreed to draft some amendments in time for the next meeting. We thanked Mike for the wholehearted enthusiasm with which he has taken on the job of Treasurer.

Under Secretary's business, Geoff Brownsey had only to report an application for a travel grant to enable a research student from University of Plymouth to attend a conference. We approved this, subject to the usual requirement of presenting his work at the forthcoming Young Rheologists' Meeting in September.

Nick Hudson has been continuing his membership drive and we approved a further batch of membership applications, from all over the world.

We discussed ways of encouraging new members, such as "introduce five and get yours free". Any notions of "free rheometer with every hundred members" unfortunately did not get a mention. We heard, yet again, about the problems with banks not recording the names of originators of standing order payments, which makes the job of identifying who has and has not paid their subscription impossible. Since Nick has the database of members, he also has the job of distributing both the Bulletin and Rheology Abstracts, and we discussed the possibility of appointing a "Publications Manager" and considered a draft job description and payment. Since there are implications for public liability in entering into a contract with a freelance manager, we agreed the idea in principle and will look into it in more detail.

Unfortunately neither Peter Anderson nor Gerry Meeten could attend the meeting so their reports were read out. While Rheology Abstracts is keeping to its schedule, Gerry reported that he was finding it increasingly difficult to make time for BSR business, and with forthcoming staffing changes at his employer, we felt decidedly gloomy about the future.

The meeting then cantered to a close past matters of the membership of Council next year, arrangements for future scientific meetings and a process rheology course to be offered by Strathclyde University at MSc level, all of which were discussed over lunch as well. We agreed that the proposed meeting to be held in September 1997 should have been finalised by now and therefore agreed that it should be held near Leeds, venue to be finalised soon. We offered our support to the MSc module, which is offered as part of the Integrated Graduate Development Scheme.

And so to lunch, in the underused dining room, at which lively individual discussions could be heard on such diverse matters as Teaching Quality Assessment in Universities, the EPSRC's Soft Solids research programme (nothing to do with the Apple Charlotte Russe on the menu), a rheological romance involving someone very close to a member of Council, a new look to the Bulletin and a possible link between mad cow disease and the behaviour of the waiter.

As always, it was a pleasure to meet with friends and colleagues to further the aims of our worthwhile Society, and we parted looking forward to the next meeting in a obscure part of the country.

Phil Banfill, April 1st 1996

PROFILE OF NEW COUNCIL MEMBER

Mike Webster

Dr Mike Webster is the Honorary Treasurer of the British Society of Rheology, following his election to this Council post at the Society's AGM in Aberystwyth in September 1995. He is currently taking on this mantle, streamlining the financial dealings of the Society. He is also the Honorary Secretary to the University of Wales, Institute of Non-Newtonian Fluid Mechanics.

Formal qualifications:

Dr M.F.Webster, AFIMA, Reader in Computer Science.

B.Sc. Mathematics II(i) (Manchester University 1974)

M.Sc. Numerical Analysis and Computing (Manchester University 1976)

Ph.D. Applied Mathematics (university of Wales, Aberystwyth, 1979).

Dr Webster is a family man with a Welsh wife and three young children. He is an active person who enjoys travel and has a keen interest in sports of most types. He participates in both 5-a-side and 11-a-side football teams, and enjoys the outdoor environment offered by the attractive Gower peninsula location.

Dr Webster commenced his studies at the University of Manchester in 1971, where he read for a BSc. degree in mathematics and subsequently an MSc. degree in numerical analysis. His early research career was developed under Professor Walters FRS, and Professor Davies at University of Wales, Aberystwyth, culminating in a Doctorate in applied mathematics on the numerical simulation of rheological flows. He travelled to Australia in 1982 to work with Professor Tanner as a research fellow at the University of Sydney. On returning to the UK in 1983, he took a senior research officer appointment in the Institute of Computational Fluid Dynamics at University of Reading, where he worked with Professor Morton and Dr Baines. In 1986, Dr Webster took a full time lectureship at University of Wales Swansea, collaborating with Professor Townsend on the numerical simulation of non-Newtonian flows. At this time, the Computational Rheology and Flow Visualisation research group in the Department of Computer Science was formed.

During the past ten years at Swansea, Dr Webster has been promoted, first to Senior Lecturer in 1991, and subsequently to Reader in 1995. With colleagues he presently leads two research groups, one in non-Newtonian flow computation flow and a second in applied parallel processing. Dr Webster has established an international reputation through his contributions to the subject of computational rheology that spans a twenty year period in research, seventy five publications, and twenty four separate sources of funding. Financial support has been provided by industry, government research councils, the European Commission, Nuffield foundation, Welsh Office, Welsh Development Agency, University of Wales and Higher Education Funding Council for Wales, that amounts to over one million pounds.

Dr Webster is the Honorary Secretary to the University of Wales, Institute of Non-Newtonian Fluid Mechanics and is a driving force behind its endeavours. This body is a recognised 'Welsh Development Agency - Centre of Expertise' that works at the academe-industry interface. It operates an industrial club for sponsors and holds regular workshops, seminars, mini-symposia and conferences. It publishes an Institute report series and an annual newsletter. Additionally, Dr Webster acts as a referee to a number of international journals and on research grant proposals to various funding councils.

EUROPEAN SOCIETY NEWS

Last quarter we reported that six European societies had approved the draft constitution of the proposed European Society of Rheology (ESR) and had agreed to join the ESR as founder members. We are pleased to report that we have heard from Prof. Gianni Astarita, the Acting President of the Italian Rheology Society, which has also now accepted the constitution and has agreed to join the ESR as a founding member. The Italian Society of Rheology has gone through a period of difficulty and was, for a time, officially disbanded, but has now been resurrected, with just some red tape to be finalised relating to its reorganisation.

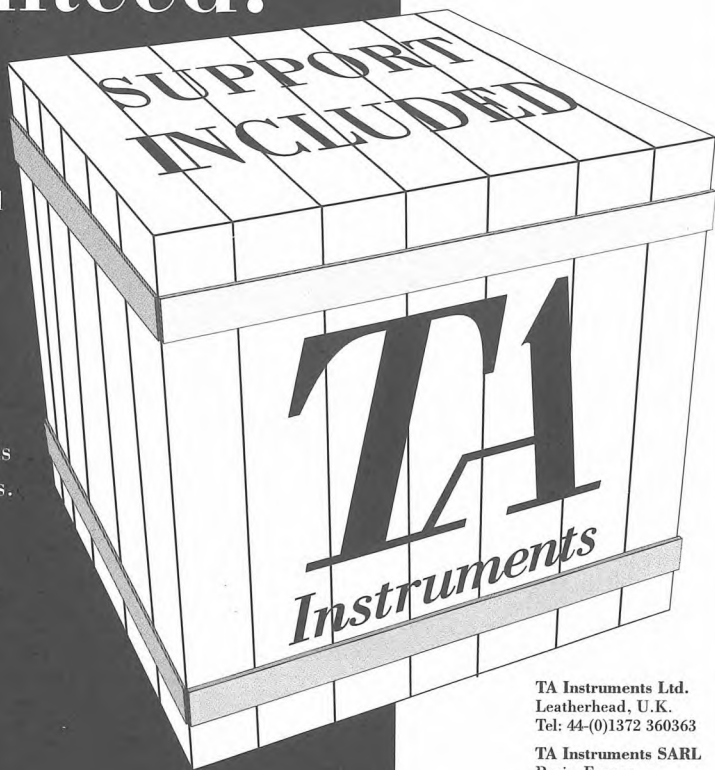
Prof. Gianni Astarita may be contacted at:
University of Naples "Federico II",
Department of Materials and Production Engineering,
Piazzale Tecchio - 80125 Naples, Italy
Tel: (39 81) 768 2268, Fax: (39 81) 768 2404
E-mail: astarita@ds.unina.it

Howard Barnes, the Founding Chairman of the ESR reported to the BSR Council on developments with the European Society of Rheology. In addition to the Italian Society, he had also heard that the Societies or Groups in Belgium, Portugal and the Nordic countries had accepted the proposed constitution. It has been agreed that the formation of the ESR would be marked by an inaugural meeting in Brussels. The following Officers of the Society have been nominated by the member societies: Prof. Ken Walters to be President, Prof. Jean-Michel Piau to be Immediate Past President, Prof. Manfred Wagner to be Secretary and Prof. Jan Mewis to be Treasurer. For the BSR, Prof. Jim Ferguson has been proposed as our representative to the ESR and he will act as our formal channel of communication, reporting to Council and, if necessary to the AGM.

Innovation Guaranteed!

TA Instruments manufactures, sells and supports the market leading range of Thermal Analysis/Rheology instruments world wide. Our reputation for innovation is based on many years experience developing products to suit the needs of Materials Characterisation Scientists.

Our continuing program of innovation guarantees the latest specification and performance standards. At the same time these instruments include a valuable support package including training, applications support, and after-sales service to maximise the benefits of the instrument you purchase.



*For more information
contact your local
TA Instruments Office
or call +44 (1372) 360363.*

TA Instruments Ltd.
Leatherhead, U.K.
Tel: 44-(0)1372 360363

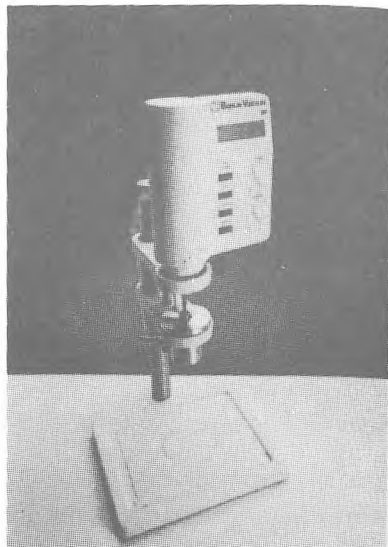
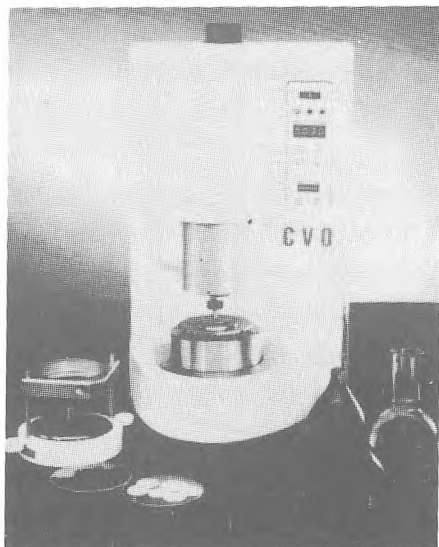
TA Instruments SARL
Paris, France
Tel: 33-(1) 30.48.94.60

TA Instruments
Benelux
Gent, Belgium
Tel: 32-9-220 79 89

TA Instruments GmbH
Alzenau, Germany
Tel: 49-6023 30044

RHEOLOGY OR VISCOSITY ?

**BOHLIN INSTRUMENTS HAVE THE
ANSWERS**



**.....TO ALL YOUR RHEOLOGICAL
APPLICATIONS**

**Bohlin Instruments Ltd
Unit 6, The Corinium Centre
Cirencester
Gloucestershire, GL7 1YJ**

**Telephone 01285 644407
Fax 01285 644314**

CZECH GROUP OF RHEOLOGY

In reply to a recent request, the following complete list of the governing body of the Czech Group of Rheology has been kindly supplied by Prof. Jirí Sesták.

Prof. Ing. Jirí Sesták, DrSc, CVUT Faculty of Mechanical Engineering, Office of the Vice-Dean for International Relations, Technická 4, 166 07 Prague 6, Czech Republic.

Chairman of the CGR and delegate to the ICR.

Doc. Ing. Václav Sobolík, CSc, UCHP AV CR, Rozvojová 135, 165 02 Praha 6
Secretary of the CGR.

Ing. Otakar Bartos, CSc, Tr.SNB 4543, blok 14, 76005 ZLÍN - JIZNÍ SVAHY.

Ing. Milan Houska, CSc, Hradecká 7, 130 00 Praha 3.

Prof. Ing. Ivan Machac, CSc, Valčíkova 327, 53 009 Pardubice.

RNDr. Miroslav Raab, CSc, UMCH AV CR Heyrovského nám. 2, 162 06 Praha 6.

Prof. Ing. Frantisek Rieger, DrSc, Nad Sárkou 27/2068, 160 00 Praha 6.

The CGR meets approximately four times in a year on plenary sessions devoted to lectures held by distinguished rheologists from the Czech Republic or from abroad. Every four years a conference is held, either separately, or in the frame of the International CHISA (Chemical Engineering, Process Design and Automation) Congress. At present the CGR has about 100 registered members. Most, but not all, activities are associated with industrial rheology. The Group hopes to be able to send as many rheologists as possible to the International Congress in Quebec and is concentrating on raising finances for this purpose.

**REPORT ON THE EFCE WORKING PARTY
MEETING HELD AT UCL, 19/3/96**

The first proper meeting of the European Federation of Chemical Engineers (EFCE) Working Party in Industrial Rheology was held recently at University College London's Department of Chemical Engineering, following its inaugural meeting held on Capri last September. The working Group is chaired by Prof. G. Astarita of Naples University and the British representatives present were Prof. H.A. Barnes (Unilever Research) and Dr P. Shamlou (University College London). The treasurer is Dr Raphaela Ocone who has recently moved from Naples to Nottingham University Department of Chemical Engineering. The working group is compiling an inventory of problems in industrial rheology across Europe and academic activity in the area in European universities. They are planning a one-day meeting in France in September of this year, as well as committing themselves to providing some lectures at the European Chemical Engineering Conference in Florence in May 1997 based on progress to date in compiling their inventories. They also hope to organise a full European meeting in their area for 1998 along the lines of the well-known European Mixing Conferences.

Prof. H.A. Barnes (Unilever Research)



Delegates at the Polymer Melt Rheology Conference at Aberystwyth, 3-6 September 1995.
They are obviously enjoying themselves at the Reception prior to the Conference Dinner.

CONFERENCE ANNOUNCEMENT

**Second BSR Young Rheologists' Day
and
Controlled Stress Rheometry Meeting
Wed, 4th & Thurs, 5th September 1996
at the
De Vere Hotel, Coventry, CV1 5RP**

Following the success of the last Young Rheologists' Day in 1994, the Society intends to hold a second meeting devoted to short presentations on all aspects of Rheology and invites contributions from research students, industrialists, and other young rheologists. We anticipate that talks will be given by recipients of travel or study grants and by holders of the BSR's Scott Blair Scholarships. There will be awards for the best presentations, as judged by a panel.

The presentations will be followed in the evening by a conference dinner and the **BSR's Annual General Meeting**.

The following day there will be a one-day meeting on controlled stress rheology with short lectures, demonstrations, and exhibitions from a number of key manufacturers. This was arranged following feedback from a number of members who thought that an introduction to this important set of techniques would be invaluable.

Details of venue, together with information on costs and a booking form for this event, follow on the next page.

For those people wishing to present a paper at the Young Rheologists Day, please send the title and a short summary of the paper to:

Paul Doody, National Starch & Chemical, Galvin Road, Slough, SL1 4DF.

Attendance Options & Summary of prices:

A	Attendance at Young Rheologists' Day (includes morning coffee, lunch & afternoon tea)	BSR Member £40
		Non Member £55
		Student £35
B	Attendance at Controlled Stress Rheometry Day (includes morning coffee, lunch & afternoon tea)	BSR Member £40
		Non Member £55
		Student £35
C	Attendance for both days (includes coffee, lunch & tea on both days, overnight accommodation and the AGM Dinner)	BSR Member £165
		Non Member £195
		Student £155
D	Attendance at Young Rheologists' Day and the AGM Dinner	BSR Member £55
		Non Member £70
		Student £50

Prices are per Person

 Booking Form (may be photocopied if preferred)

Please return by 31st July, 1996

Delegate's Name:

Title	Initials	Preferred Name	Surname
.....			

Company/University/Affiliation

Address

.....Post Code.....

Telephone No: Fax No:

Fees: I/We enclose a cheque to cover the following options:

..... persons for option A @ £..... each = £.....

..... persons for option B @ £..... each = £.....

..... persons for option C @ £..... each = £.....

..... persons for option D @ £..... each = £.....

Total £..... (Cheques payable to BSR)

Return to: Dr Paul Doody, National Starch & Chemical Ltd., Galvin Road,
Slough, Berkshire, SL1 4DF. Tel: 01753-501242 Fax: 01753-577704Special Requirements: Please inform Paul if you have any special dietary
or other needs.

University of Strathclyde, Department of Pure and Applied Chemistry

COURSE ON PROCESS RHEOLOGY

Monday, 4th to Friday, 8th November, 1996

A short intensive course on Process Rheology will take place at the University of Strathclyde in Glasgow, Scotland, from Monday, 4th to Friday, 8th November, 1996. The course, to be held each year, is aimed specifically at the application of rheological techniques to the processing of non-Newtonian fluids, such as polymer melts and solutions, suspensions and emulsions, biological fluids and foods, oils, etc. The participants will include rheologists from industry as well as post graduate research students and university lecturers. The course is designed to provide, ultimately, trained manpower in a subject area dealt with, up to now, only at a superficial level in universities and colleges. Therefore, one of the aims of the Course is to train a number of academics who will themselves eventually teach rheology at their own institutions. To this end, it is being partially funded by the EPSRC, and is supported by the British Society of Rheology. It will be recognised as a qualifying module for an MSc, and is being assessed and accredited by the University of Strathclyde. Although the course is set at MSc level, it will be open to anyone involved in handling non-Newtonian fluids in the process industries and in research laboratories. Care has been taken to ensure that the basics of rheology will be introduced to those who have no experience in this area, and a computer assisted learning package has been specifically developed for this purpose. Course contents will include the principles of rheology, both in general and for specific fluids, and the molecular and structural parameters governing non-Newtonian flow. In addition to measurement techniques, both in the laboratory and in line, the application of the concepts to process plant design and to process fluids will be emphasised. The objectives of the course are to provide a thorough understanding of the mechanisms of flow encountered in processing non-Newtonian fluids, the techniques available for characterising these fluids, and the consequences of fluid rheology in the design of process machinery and the performance of the final product. Practical methods in using rheological characterisation to model stages in processing will be demonstrated. The latest methods for describing the rheology of these materials will also be discussed. The use of constitutive equations in quality control and process control applications will be addressed. Representatives of several instrument manufacturers will be present with a range of equipment.

For further information, and for enrolment form, please contact Prof. Ferguson or Dr N.E.Hudson at the University of Strathclyde, 295 Cathedral Street, Glasgow, G1 1XL or phone, fax or E-mail to them on:
Tel: +44 (0) 141-552-4400 ext 2161/2. Fax: +44 (0) 141-552-5664.
E-mail: j.ferguson or n.e.hudson@strath.ac.uk

CONFERENCE DIARY

DATE	PLACE	DETAILS
8/1-22/6/96	Cambridge, UK	6 month Workshop on 'Dynamics in Complex Fluids' . For further details, see page 35, Vol. 38, No.1
24/4/96	St Albans, Herts UK	Full Day 'Seminar for Viscometer Users' Contact: Mark Finch, Rheology UK Ltd., 6 Livingstone Circus, Gillingham, Kent, ME7 4HA Tel: 01634 575488 Fax: 01634 280531
24/4/96	Univ. Twente Enschede The Netherlands	Dutch Society of Rheology (NRV) meeting 'Rheology of Colloidal Solutions'
14 - 15/5/96	Cambridge, UK	'Rheology/Chain Structure Relationships in Polymers' Isaac Newton Institute. DSM Research Symposium Contact: Ms Anne Cartwright Isaac Newton Institute for Mathematical Sciences. 20 Clarkson Rd., Cambridge, CB3 0EH Tel: +44 (0) 1233 335981 Fax: +44 (0) 1233 330508 email: a.cartwright@newton.cam.ac.uk
15/5/96	Manchester UK	Full Day 'Seminar for Viscometer Users' Contact: Mark Finch, Rheology UK Ltd., 6 Livingstone Circus, Gillingham, Kent, ME7 4HA Tel: 01634 575488 Fax: 01634 280531
27-31/5/96	Sorrento, Italy	The Polymer Processing Society, 12th Annual Meeting Contact: Prof. José M. Kenny, Dept of Materials & Production Chemistry, University of Naples - P. Tecchio, 80125 Naples, Italy Tax: +39-81-768 2404 E-Mail: kenny@unipg.it
3-5/6/96	Glasgow, Scotland	'Production Methods and Workability of Concrete & 4th Concrete - Scotland Exhibition' . Contact: Carol MacDonald, Technology & Business Centre, University of Paisley, Paisley, PA1 2BE, Scotland Tel: 0141 848 3734 Fax: 0141 848 3739

Travel grants are available to help students attend any of these meetings.
Applications to the BSR Secretary supported by a letter from supervisor.

DATE	PLACE	DETAILS
24-28/6/96	Cambridge, UK	The Royal Society - Unilever Indo-UK Forum on 'The Dynamics of Complex Fluids' Contact: Mrs M.E.Staff, Polymer & Colloids Group, Cavendish Laboratory, Madingley Laboratory, Cambridge, CB3 0HE, England. Tel: 01223 337007 Fax: 01223 337000
18-23/8/96	Quebec City, Canada	'XIIth International Congress on Rheology' , Canadian Rheology Group / Groupe Canadien de Rhéologie, Chairman: Prof. D.DeKee, Dept of Chemical Engineering, University of Sherbrooke, Sherbrooke, Québec, J1K 2R1. Canada Congress Secretary: Dr M. Dumoulin, National Research Council - Canada Industrial Materials Institute, 75, de Mortagne, Boucherville (Québec), Canada, J4B 6Y4 Fax: 1-514-641-5103
4-5/9/96	Coventry, UK	Annual BSR Meeting and AGM 'Young Rheologists Day' & 'Controlled Stress Rheometry' Contact: Dr Paul Doody, National Starch & Chemical Ltd, Galvin Rd., Slough, Berkshire, SL1 4DF Tel: 01753-533494 Fax: 01753-577704 email: paul.doody@nssgb.co.uk
9-11/9/96	Aberystwyth, Wales	'4th International Conference on Flow Processes in Composite Materials (FPCM '96)' Contact: Dr R.S.Jones, Dept of Mathematics, University of Wales, Penglais, Aberystwyth, Dyfed, SY23 3BZ, UK Tel: +44(0)1970-622762 Fax: +44(0)1970-622777
17-18/9/96	Cirencester, UK	BOHLIN Instruments Limited 'Rheology User Group Meeting, 1996' Contact: Trevor Gregory, Bohlin Instruments Ltd., Unit 6, Corinium Centre, Cirencester, Glou., GL7 1YJ, UK Tel: +44 (0) 1285 644407 Fax: +44 (0) 1285 644314
29/9-4/10/1996	Karacharovo Russia	Vinogradov Society of Rheology, '18th Symposium on Rheology' Contact: Prof V.G.Kulichikhin, A.V.Topchiev Institute of Petrochemical Synthesis, Russian Academy of Sciences, 29 Leninsky Pr., Moscow 117912, Russia. Tel: (095) 955-4388 Fax: 7-(095)-230-22-24

Travel grants are available to help students attend any of these meetings.
Applications to the BSR Secretary supported by a letter from supervisor.

THE QUALITY TEAM



**DV-1+ FOR CONTINUOUS
SENSING & DISPLAY**



**DV-II+ FOR SIMULTANEOUS MEASUREMENT
OF VISCOSITY & TEMPERATURE**



**DV-III PROGRAMMABLE
FOR SAMPLE TESTING & DATA
ANALYSIS**

Brookfield offers a range of modern, digital instruments designed to provide reliable, reproducible viscosity measurement for effective quality control.

Easy to use, Brookfield instruments provide fast, accurate readings and, with the range of models available, there is a product to suit every QC application.

To test the performance of the Brookfield Quality Team, call (01279) 451774 and arrange a demonstration.



Certificate No. 94/4295

BROOKFIELD

Brookfield Viscometers Ltd
1 Whitehall Estate, Flex Meadow, Pinnacles West,
Harlow, Essex CM19 5TJ.

Tel: (01279) 451774 . Fax: (01279) 451775



One Source

For all your Thermal Analysis & Rheological Instruments

Including

DSC

The DSC+ is the most advanced heat flux instrument available. A wide temperature range of -160°C to $+770^{\circ}\text{C}$ is offered. Other models include DSC Gold for highest sensitivity work and the DSC-QC for Quality Control work.

DMTA

The DMTA offers unrivalled versatility in choice of deformation modes as well as highly automated operation. Frequency range 0.01 to 200 Hz. Temperature range -150°C to 500°C

STA

The Simultaneous Thermal Analyser series offers simultaneous DSC and TGA studies on a single sample. The advanced and versatile instruments cover the temperature range -125°C to 1640°C in four models.

DYNAMIC ANALYSER

The RDAII tests liquids, melts and solids and can accommodate materials ranging in shear modulus from 10 to 10^{11} Pascals, making it an ideal instrument for evaluating polymeric materials.

STRESS RHEOMETER

The SR200 and SR500 are the most advanced controlled stress instruments available. Fast and accurate creep, creep recovery and dynamic measurements are facilitated in small, easy to use instruments.

Further information from

Rheometric Scientific Ltd

**Surrey Business Park, Weston Road, Kiln Lane, Epsom,
Surrey, KT17 1JF, UK. Tel: 01372 743386 Fax: 01372 727102**



DATE	PLACE	DETAILS
28-30/10/96	Metz, France	Joint Meeting of French and German Rheologists 31^{ème} Colloque Annuel du GFR, 'Rheology and Structure' Contact: Prof R.Gressely, L.P.L.1., Groupe RhéoPhysique des Colloïdes, 1, Bd Arago, F-57078, Metz Cedex 03, France. Fax: (33) 87 31 58 01 E-mail: makh@ipc.univ-metz.fr or Dr M.Kröger, Technische Universität Berlin, Institut für Theoretische Physik, Hardenbergstr. 36, Sekt. PN 107, D-10623, Berlin, Germany Tel: 49 30 314 25225 Fax: 49 30 314 21130 E-mail: mk@polly.physik.TU-Berlin.de
11-14/11/96	Chicago, USA	'American Institute of Chemical Engineers Annual Meeting and Polymer Processing Society Meeting for the Americas First Joint Topical Conference on 'Processing, Structure and Properties of Polymeric Materials' Contact: Prof. I. Manas-Zloczower, Case Western Reserve University, Dept of Macromolecular Science, Kent Hale Smith Building, Cleveland, OH 44106. USA. Tel: (216) 368-3596 Fax: (216) 368-4202 E-Mail: ixm@po.cwru.edu
16-20/2/1997	Galveston, TX, USA	'68th Annual Meeting of the Society of Rheology.'
27-31/7/1997	Melbourne, Australia	'Second Pacific Rim Conference on Rheology' Conference Organiser: David V. Boger, Univ of Melbourne. Conference Secretary: Leong Yeow, Univ of Melbourne. Technical Programme: Carlos Tiu, Monash University. Local Arrangements: Sati Bhattacharya, RMIT. Contact: Christine Collis, Dept of Chemical Engineering, The University of Melbourne, Parkville, Victoria 3052, Australia. Tel: 61 3 9344 7440 Fax: 61 3 9344 4153 E-mail: prcr2@unimelb.edu.au

Travel grants are available to help students attend any of these meetings.
Applications to the BSR Secretary supported by a letter from supervisor.

COURSE DIARY

DATE	PLACE	DETAILS
15-19/4/96	Bristol, UK	'Spring School in Surface Chemistry & Colloids' Contact: Dr Susan Pringle, Dept for Continuing Education, University of Bristol, 8/10 Berkeley Square, Clifton, Bristol, BS8 1HR, UK Tel: 0117 928 7122 Fax: 0117 925 4975
25/4/96 30/5/96 27/6/96 26/9/96 24/10/96 28/11/96	Cirencester, UK	One Day Rheology Workshops at BOHLIN INSTRUMENTS LIMITED 'Dispersion Rheology' 'Cosmetics & Toiletries Rheology' 'Food Rheology' 'Paint Rheology' 'Pharmaceuticals Rheology' 'Polymer Rheology' Contact: Trevor Gregory, Bohlin Instruments Ltd., Unit 6, Corinium Centre, Cirencester, Glou., GL7 1YJ, UK Tel: +44 (0) 1285 644407 Fax: +44 (0) 1285 644314
22/5/96	AEA, Harwell, Oxfordshire	'Additive Control of Rheology Course' Course Organiser: Dr Neil Alderman. Contact: Mrs Margaret McCulloch, AEA Technology, 404 Harwell, Didcot, Oxfordshire, OX11 0RA, UK Tel: 01235 434626 Fax: 01235 432313
28-31/5/96	Univ of Strathclyde, Scotland	One Week Course: 'Theoretical, Experimental and Industrial Aspects of Rheology.' Contact: Dr N.E.Hudson, Dept of Pure & Applied Chemistry, University of Strathclyde, 295 Cathedral St., Glasgow, G1 1XL. Tel: +44 (0) 141 552 4400 X 2162 Fax: +44 (0) 141 552 5664 Email: n.e.hudson@strath.ac.uk
5-6/6/96	AEA, Harwell, Oxfordshire	'Foundation Course in Rheology' Course Organiser: Dr Neil Alderman. Contact: Mrs Margaret McCulloch, AEA Technology, 404 Harwell, Didcot, Oxfordshire, OX11 0RA, UK Tel: 01235 434626 Fax: 01235 432313

DATE	PLACE	DETAILS
3-5/7/96	Bristol Univ., UK	'Rheology for Technologists' Course organised by the Bristol Colloid Centre. Contact: Mrs M. Knights, Bristol Colloid Centre, School of Chemistry, University of Bristol, Bristol, BS8 1TS Tel & Fax: 0117-929-8388, E-mail: bcc@bristol.ac.uk
5-9/8/96	Minneapolis Minnesota, USA	21st Annual Short Course on 'Rheological Measurements: Applications to Polymers, Suspensions and Processing.' Directed by Christopher W. Macosko. Contact: Susan Burke, Professional Development and Conference Services, University of Minnesota, 204 Nolte Center, 315 Pillsbury Drive S.E., Minneapolis, MN 55455-0139 Tel: (612) 625-3530, Fax: (612) 626-1632 E-mail: sburke@mail.cee.umn.edu
21-25/10/96	Hinckley, UK	School of Industrial Rheology - SIR '96 this year offers an optional Starter Day which can be taken on its own or added to the 4 day course below. Optional 'Back to Basics' day SIR '96 Venue: Hinckley Island Hotel, Hinckley. Sponsored by TA Instruments, Leatherhead, Surrey. Contact: Nicola Moules, Camtel Ltd, 5 Carrington House, 37 Upper King St., Royston, Herts, SG8 9AZ. Tel: 01763-244280 Fax: 01763-244298
21/10/96 22-25/10/96		
4-8/11/96	Univ of Strathclyde, Scotland	One Week Course: 'Process Rheology.' Contact: Prof J. Ferguson or Dr N.E.Hudson, Dept of Pure & Applied Chemistry, University of Strathclyde, 295 Cathedral St., Glasgow, G1 1XL. Tel: +44 (0) 141 552 4400 X 2161/2 Fax: +44 (0) 141 552 5664 E-mail: j.ferguson or n.e.hudson@strath.ac.uk

MEMBERSHIP NEWS

The following applications for membership were approved at the Council meeting on March 27th, 1996.

Dr M.Mehmet Ak,
Kimya-Metal. Fak.,
Istanbul Teknik Universitesi,
Gida Müh. Bolomu,
80626 Maslak - Istanbul
Türkiye

(fetsa FGHL)

Mr C.Bower,
Dept of Chem. Engineering,
University of Cambridge,
Pembroke Street,
Cambridge, CB2 3RA
(fetsa FGHL)

Dr U.Cartalos,
21 rue V.Hugo,
92400 Courbevoie Cedex,
France

(fetsa BFG)

Dr H. Corey,
Monsanto,
601 East Kensington Rd.,
Mt Prospect,
IL 60056-1300, USA
(pea EGLM)

Dr J. Davies,
BPB Gypsum Ltd.,
Group R&D Dept.,
East Leake, Loughborough,
Leicester, LE12 6JS
(fesa BEFGHIK)

Prof Dr H-W. Bewersdorff,
FH Lausitz, Fachbereich
Chemieingenieurwesen/
Verfahrenstechnik,
Großenhainer Str. 57,
D-01968 Senftenberg,
Germany
(pesa DGO)

Dr C. Bregni,
L.N. Alem 710,
1852 Burzaco,
Argentina,

(feta FGM)

Prof H.Y. Choi,
Dept of Polymer Science & Eng,
Inha University,
253 Yonghyun-Dong,
Inchon 402-751, Korea
(fetsa DGN)

Dr P. D'Antona,
Eniricerche SpA,
via Maritano 26,
20097 S Donato Milanese,
Milan, Italy
(fetsa CFGHM)

Dr J.A. Deiber,
INTEC (CONICET-UNL),
Ghermes 3450,
3000 Sante Fe,
Argentina
(fetsa DFGHLM)

Dr F.M.N.T. de Pinho ,
 Dept de Eng. Mecânica,
 Faculdade de Engenharia,
 Rua dos Bragos,
 4099 Porto Codex, Portugal
 (fetsa DGM)

Prof C. Gallegos,
 Dept de Ingeniería Química,
 Universidad de Sevilla,
 c/ P.García González s/n,
 41012 Seville, Spain
 (feta FGJKL)

Miss J.M. Gladman,
 Vinamul Ltd.,
 Mill Lane,
 Carshalton,
 Surrey,
 (fetsa CDFG)

Dr G.W. Grossman,
 Dept of Mathematics,
 Central Michigan University,
 Mt Pleasant,
 MI 48859, USA
 (fetsa DFGN)

Mrs R.A. Needham,
 Physiotherapy Dept.,
 Dept of Medicine for the Elderly
 Worcester Royal Infirmary,
 Newtown Road,
 Worcester, WR5 1JP
 (petsa M)

Prof H.C. Öttinger,
 Institut für Polymere,
 ETH Zentrum,
 CH-8092 Zurich,
 Switzerland
 (fets DN)

Prof J. Dunwoody,
 Dept of App. Maths & Th. Physics,
 The Queen's University,
 Belfast,
 BT7 1NN
 (fts CDN)

Dr E. Gao,
 Schlumberger Dowell Ltd.,
 Westhill Industrial Estate,
 Westhill, Skene,
 Aberdeen, AB32 6TQ
 (fetsa DFG)

Dr A.D. Gotsis,
 Delft University of Technology,
 Polymer Technology Dept.,
 Julianalaan 136,
 2628 BL Delft, The Netherlands
 (fetsa DO)

Dr G. McKenna,
 Polymers Division,
 Nat. Inst. of Standards & Techn.,
 Gaithersburg,
 MD 20899, USA
 (fetsa BCDIO)

Mr W.H. Needham,
 Midland Pulsair,
 45 Cannon Street,
 Worcester,
 WR5 2JP

(fea GJL)

Mr K.W. Raybuck,
 The Lubrizol Corp.,
 29400 Lakeland Blvd.,
 Wickliffe,
 OH 44092, USA
 (pea DFGJ)

Dr M.P. Ryan,
Fkuids & Rheology Laboratory,
MS 959 - US Geological Survey,
12201 Sunrise Valley Drive,
Reston,
VA 22092, USA
(fets FGI)

Ms A. Schiavi,
Isoclima SpA,
via A. Volta 14,
I-35042 Este (Padova),
Italy

(feta CIK)

Mr C. Teran,
Petroindustrial,
PO Box 17-03-4716,
Quito,
Ecuador
(fea FJ)

Mr S. Uppuluri,
Michigan Molecular Institute,
1910 West St Andrews Road,
Midland,
MI 48640, USA
(fesa CDG)

Prof. A. Wlochowicz,
ul Willowa 2,
43-309 Bielsko-Biala,
Poland

Mr K.A. Wolske,
Aristech Chemical Corporation,
1000 Tech Center Drive,
Monroeville,
PA 15146, USA
(petsa D)

(fetsa BCD)

The following cease to be members under rule 4(d):

W.A. Craig, K.E. Fielden, H.L. Jalink, O. Kramer, M.N. Layec-Raphelen,
T.G. Mathia, J.B. Pedley, J-M. Pierrard, H.P. Ronningsen, R.E. Smith,
A.E Terentyev, T.G. Trail, P.B. Wheeler, F.D. Zhao.

A Short Note from the Membership Secretary.

Included with this issue of the Bulletin are amendment sheets for your 1995 Membership List. These show a consolidated list of all members by region (UK, Europe, Rest of World) and any changes of address, telephone numbers or interests. The next full copy of the List is scheduled for Summer 1996, so please keep sending details of any changes that you would like to see publicised.

Subscriptions for the year 1996/7 will be due in October. It is our intention to phase out payment by standing order (since the service given by all banks appears to be unreliable) and replace it with direct debit (still at £10). Remember that you also have the choice of paying by cheque (£15) or credit card (£10), and mandate forms will be sent out with the next Bulletin.

**Where for others rheology may stop,
for us it only really begins.**

We take pride in co-operation with customers to achieve solutions in all sectors of rheology.

This information is being passed on to you by the events listed opposite.

Complete the coupon to receive your own regular information from:

PHYSICA

Physica Division,
Paar Scientific Ltd.,
594 Kingston Road,
Raynes Park,
London. SW20 8DN
Tel 0181 540 8553
Fax 0181 543 8727

**Applications
Notes**

SEMINARS

**Latest
Software**

**NEW
Instruments**

Name

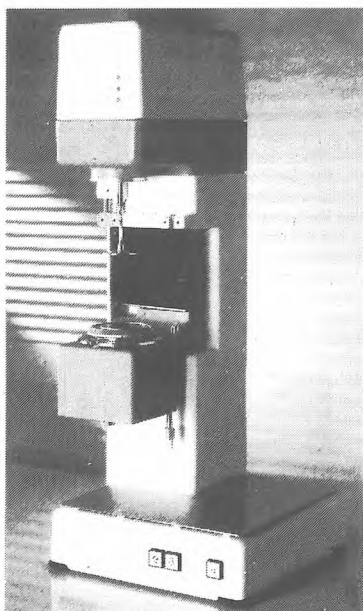
Address

.....

.....

..... Tel. No.

MADE TO MEASURE RHEOLOGY



RHEOSTRESS RS50

- Budget priced, controlled stress QC workhorse rheometer uses proven rheometer technology
- High torque sensitivity to 5×10^6 Nm while robust and easy to use even when unattended with Jobstream
- Automatic gap setting with position control during measurement
- Wide range of precise temperature control options including electrical heating and fast Peltier
- Extensive range of cones, plates, co-axial cylinder sensors and other geometries

HAAKE

HAAKE (UK),
Sussex Manor Park, Gatwick Road,
Crawley, Sussex. RH10 2QQ
Tel: (01293) 561323
Fax: (01293) 516823

*Simply more
accurate*