POLYMER SOCIETY ANNUAL REPORT FOR 2018

1. Board membership

Another year of change with Mr Stuart Patrick taking over as Interim Chair and, due to illness or work commitments, the resignations of Mr J. Czerski, Mr G McNally and Dr A. Gill.

However, over the year, we also welcomed new members, Dr Arthur Wilkinson (University of Manchester), Dr Sally Beken (Polymer Plastics and Elastomer KTN), Dr Patrick Fairclough (University of Sheffield) and Prof Ton Peijs (University of Warwick).

In addition to the above, Board members, fifteen in total, include Mr M Bennett (Artis), Prof J Busfield (QMUL), Prof P D Coates (University of Bradford), Mr J Dorken (BRPPA), Dr Farai Carter (CPI Durham), Ms M Ingle (Sandberg), Mr P Law (BPF), Dr I Robinson (Lucite International), Ms K Satterthwaite (Roskill Information Services) and Dr A Tinker. In addition, Mr S Taylor continues as corresponding member representing the IOM3 Southern Africa.

Mr Stuart Preston continues as Divisional Co-ordinator, with the Board volunteers continuing to take on the administrative role of minutes recording etc.

2. Board meetings

We continued to have three meetings in the year.
- 14th February 2018 at IOM3 London – 50 % attendance.
- 12th June 2018 by Conference Call – 69% attendance.
- 17th October 2018 at IOM3 London – 57% attendance.

Clearly the Conference Call approach is preferred and will be used regularly in future where appropriate.

3. Activities during 2018 and planning for 2019

3.1. Technical programme

After 2017 efforts, the Society still continued to have an active technical programme during 2018.

Professor James Busfield, Chair of the Rubber in Engineering Group, reports that the RIEG has organised a vibrant and dynamic programme of afternoon technical discussion meetings (ATDMs) as well as a factory visit and a 1 day conference in collaboration with the Manchester Polymer Group in 2018. Most of their events had free registration as a consequence of the continued generous sponsorship of our technical programme by ARTIS.
The committee has grown to a total of 19 active members. This includes 7 researchers working for UK universities or research centres with 11 of the membership working either working directly for the UK rubber industry or its supplier or customer base.

On the 23 Mar 2018 the group ran an ATDM event on the “Biomedical Applications of Elastomers” at IOM3 HQ in London. This event had 6 speakers of whom 5 were female. The event was well attended with 55 delegates.

On the 16th May 2018 the group ran a 1 day conference in collaboration with the Manchester Polymer Group on “Lifetime prediction and Durability” at Old Trafford Cricket Ground in Manchester. The event attracted an audience in excess of 100 for the first time.

On the 29th June 2018 the group ran an ATDM on the use of Elastomers in transport at Warwick University. This event had 5 speakers and was also well attended with 65 delegates.

On the 21st September 2018 the group visited Clwyd Compounders new facility in Wrexham. The hosts gave a very interesting tour to a total of 25 participants.

On the 14th December 2018 the group ran an ATDM on the Processing of Elastomers again back at IOM3 HQ in London. This event included four speakers, all of whom were female. The event attracted a total of 45 visitors.

Looking ahead the RIEG will run 3 ATDMs throughout the year on Filler Reinforcement of Elastomers on the 22nd March, Elastomers in Sport on 28th June and Elastomer Use in the Oil and Gas industry on the 13th December. The RIEG will also assist in the delivery of the International Rubber Conference that is to be hosted in the UK for the first time in 18 years in September 2019. The RIEG will assist the International Technical Committee in developing a programme that is both international in outlook and that can showcase the best of the innovations that are taking place in our industry here in the UK.

Please see their website https://www.iom3.org/rubber-engineering-group for full details of their previous events and future programme.

The Polymer Society also supported P70, a 3-day event at Bradford University in July, which was a great success. There had been no charge to attendees, though there had been some limited sponsorship. Out of it had come a number of new exchanges with China, with some backed by EPSRC funding. More specifically Polymer Engineering International had been launched. This is a global network, with its own website, designed to strengthen ties within the polymer engineering community with the aim of better connecting researchers within the discipline with the objective, for example, of mounting joint bids for funding or developing programmes for conferences.

The Society also contributed, by way of organisation, providing some speakers and promotion, to the successful ‘Materials Protecting Society series - Environment in February and People in November.

On the less successful side, the Plastics Afternoon Technical Discussions (PATD), which embraced the successful RIEG format of free to attend afternoon meetings in London had not been progressed in 2018 due to the fact that there did not seem to be the level of engagement to support a regular programme, even on Friday afternoons.
Leading up to the 2019 programme

In addition to IRC 2019 (International Rubber Congress) in September already covered above and following on from a successful PPE 17, PPE 19 (Polymer Processing and Engineering) is planned again for July at the University of Bradford.

In cooperation with MPG, a plastics sustainability conference is also being planned for September/October.

3.2. Web-site developments

The Polymer Society (at 9th position) and the RIEG (at 6th position) continue to maintain a high position in the league table of unique home page views of all the technical divisions and committees. Our other committees are much lower as they are more dependent on conference activity.

3.3. Engagement with technical community and/or local societies,

As has already been shown, good links are maintained with the only two remaining active polymer based local societies in Manchester and Scotland, but we need to do more with other materials based local societies. We also have a good liaison with the Packaging Society.

Good links continue to be maintained with the relevant KTN directly through the Polymer, Plastics and Elastomers KTN.

Mr Law, Director General of the British Plastics Federation maintains regular contact, particularly via their newsletter.

The Society published two newsletters in the year but responses/comments/feedback from our members is almost nil, despite repeated requests.

3.4. Contributions to IOM3 house and professional journals

Materials World
Our feature article on Dealing with Plastics Waste, intended to bring a non-biased and scientific evaluation to the table, was published in July. Following a member’s request to the Editor, the differences between biodegradability, compostability etc were explained in a How we talk about Plastics feature in November.

An article about the Polymer Society has also been prepared for the MW 150th IOM3 Anniversary edition planned for May 2019.

Plastics, Rubber and Composites: Macromolecular Engineering
Now in its 47th volume, working with Taylor and Francis has certainly improved the professional handling of the journal and its processes. Invitations have been made to various leading polymer people around the globe to join the Editorial Board, and to contribute to activities, including possible signpost papers.
The number of submissions continues to rise, 44% increase on 2017, whilst tightening the scope of the journal, to focus on its core polymer and polymer composites emphasis.

3.5. Other

- Representation on multidisciplinary groups

Stuart Patrick continues to represent us on the SDG and is also their webmaster. Marion Ingle is involved with the Construction Materials and Materials Failure Analysis Groups. IOM3, through Construction Materials, is now included on a working group led by the Engineering Council to report into the Hackitt enquiry concerning professional evaluation of construction materials and the Polymer Society will expect to be involved at some point.

- Awards and Prizes

Of particular concern is that the Prince Philip has not been awarded since 2015. We have now made it clearer that, to meet the requirements ‘For polymers in the service of mankind’ it is probable that only groups or teams are likely to meet this criterion. We have now promoted the Prince Philip to secure nominations for 2019.

Awards in 2018 included:

*Hancock Medal*
Awarded to Dr Alan Muhr CEng from TARRC

*Swinburne Medal and Prize*
Awarded to Professor C.W.M. Bastiaansen, QMUL who also delivered the Swinburne Lecture, ‘Static & Responsive Chain-Extended Macromolecules’ on 17th October at IOM3 Euston Road

*James S Walker Award*
This Award is giving for a specific project on the study of polymers and in 2018 was awarded to Tabitha Jones from the University of Oxford, Department of Materials.

*Alan Glanvill Award*
To M Pittol, D Tomacheski, D N Simões, V Ferreira, R R Marlene & C Santana for ‘Evaluation of commercial Mg(OH)2, Al(OH)3 and TiO2 as antimicrobial additives in thermoplastic elastomers’
Published Plastics, Rubber and Composites, 46:5, 223-230, DOI: 10.1080/14658011.2017.1314412

- Student Design Innovation in Plastics (DIP)

The Worshipful Company of Horners and IOM3 continue to jointly sponsor the annual DIP Award with the focus of encouraging plastics design innovation and best practice in future product designers in the UK and Ireland. Established in 1985, Design Innovation in Plastics is the longest running student plastics design award in Europe. In 2018 the theme was Branching Out - Design for Garden Innovation which received 324 registrations from 23 universities and colleges. The winner was, Alex Roquero, Brunel University with his ‘Hook’ Shelf - a
cleverly designed shelf which can fit on any type of railing and which carry anything from a plant to a bottle of wine.

The 2019 competition with the brief ‘Healthy Body - Healthy World. The Benefits of Plastics in the Modern World’ is currently underway.

- PVC Reuse Competition

The current educational project supported by the British Plastics Federation’s (BPF) VinylPlus UK group and facilitated through the Materials and Design Exchange (MaDE) is a design competition - PVC Reuse - which aims to engage the design community to come up with innovative ideas for reuse of PVC construction products. By bridging the gap between the design and construction industries, it is hoped to ensure products are installed with intelligent design, so that, at end of life, they can be extracted and reused in innovative ways.

- Polymer Study Tours

In 2018 the Horners, with support from IOM3, BPF and a significant number of sponsors, were only able to run the Edinburgh Napier Tour with 10 student teachers. Manchester had to be cancelled and London never got off the ground.

It has proved impossible to get teachers released from schools for 3 days. The current very negative perception of plastics may also have had an effect. Consequently, the decision was taken to abandon plans for 2019 Tours using the current format. However, it is believed essential that the Tour will be continued in a revised shorter format.

- Education in the Plastics and Elastomer Industries

Specific examples of training development within the Institute:

It has now been agreed to go ahead with the course on rubber technology under the auspices of IOM3. It is essentially the course that has been run by Charanjit Chodha for the last 3-4 years but has been formalised to fit the requirements of accreditation and certification. The qualification will be entitled: ‘IOM3 Diploma in Rubber Science and Technology’. It has been assessed at level 5. With the 2019 course fully subscribed, it is intended that the course should start in its new guise in 2020 on a timetable that best suits the needs of the industry.

The previously reported PIABC partnership with Solutions for Polymers and West Anglia College that launched a Level 3 qualification Polymer Processing continues but the lack of uptake generally in all apprenticeships is affecting numbers on the course.

4. Strategy and Objectives for 2019 and Beyond

4.1 Opportunities and constraints

The main constraint still remains the need for improved ongoing contact between the Institute and the industries in the plastics sector. Essentially, involvement in a professional body is not seen as a priority in today’s very busy schedule.
This does not seem to be an issue with the rubber sector.

Significant developments have taken place this year regarding training provision, but this needs to continue in order to ensure that they become robust and sustainable.

4.2 Specific targets for 2019

- 2019 will see the continued development of the educational provision for the polymer industries and the close linking of this with the Institute. There are considerable synergies to be had in developing courses for the plastics and rubber industries and hopefully these can be exploited to save on resources in developing new courses.

- International Rubber Conference (IRC) 2019, ‘Innovations in Elastomer Materials and Products’. Planning is well underway for this large conference. The Scientific Committee plans to run three concurrent sessions. Sponsorship is virtually sold out with space for 50 exhibition stands which can be doubled if required.

- Start to implement where appropriate, the new IOM3 Sustainability Policy

- Maintain Newsletters at two per year

- Monitor membership retention and growth

- Establish good links with the new Technical Communities Board

4.3 Specific targets for the 3 years beyond 2019

Outline plans for the following four years would include:

- Facilitate and promote the PVC 2020 Conference move to the new venue in Scotland.
- Maintain conference and meeting activities to ensure the revenue stream into the Institute.
- Progress the training agenda which is under development and attempt to link this closely with the Institute.
- Maintain and develop closer links with other Divisions within the Institute.
- Attempt to develop closer links with local material societies.

Report compiled by Stuart Patrick 4th March 2019