

Chair: Mr. M. Sparrey, ABB Ltd., Oldends Lane, Stonehouse, Gloucestershire, UK
Vice-Chair: vacant
Secretary: Dr M. Robson, RWE npower, Laboratory Building, TSG Ferrybridge, Knottingley, UK
Treasurer: Mr H.W. Lloyd, UK

BIAPWS ANNUAL REPORT 2018

1 INTRODUCTION

The British and Irish Association for the Properties of Water and Steam (BIAPWS) is the UK and Ireland national committee of the International Association for the Properties of Water and Steam (IAPWS) and the representative body for Power Plant Chemistry in the UK and Ireland. BIAPWS is a not for profit organisation. This is the annual report of the activities of BIAPWS for the period from August 2017 to July 2018. A list of publications by BIAPWS members during this period is included in Appendix A. If you would like to know more about BIAPWS, please feel free to visit our web site www.biapws.org or e-mail BIAPWS at contact.us@biapws.co.uk.

2 BIAPWS MEMBERSHIP AND MEETINGS

BIAPWS membership remains strong, with current support provided by twenty-three industrial sponsors, six honorary members, five ordinary members and eleven corresponding members.

BIAPWS committee meetings are held three times a year and attendance at these continues to be good, typically with around thirty people present. A recent change has been to expand the technical sessions at BIAPWS committee meetings to add value to meeting attendance. Industrial member's representatives are able to bring a colleague to the meetings to benefit from and contribute to the discussions.

3 BIAPWS POWER PLANT CHEMISTRY SYMPOSIUM

Each year, BIAPWS organises an annual symposia on power plant chemistry and water treatment. The 19th in this series of symposia was held at the University of Warwick, Coventry, on 26 – 27 June 2018. The symposium consists of introductory sessions on the fundamentals of power plant chemistry and water treatment, followed by more detailed technical presentations. The event remains well supported, with around 80 delegates and 11 exhibition spaces taken up in 2018. A copy of the symposium programme is included in Appendix B. A paper summarising the proceedings of the 2018 event has been published in Power Plant Chemistry journal.

4 IAPWS ACTIVITIES

BIAPWS has continued to support IAPWS through its formal membership and participation in IAPWS activities. A number of BIAPWS committee members are represented on IAPWS working groups. At the 2018 IAPWS annual meeting in Kyoto, Japan, BIAPWS will be represented by M. Sparrey and Adam Caswell of EDF and Paul McCann of Uniper. In addition, BIAPWS is represented on the executive committee of IAPWS.

5 BIAPWS AWARDS

BIAPWS offers selected sponsorship opportunities for student placements and schools events that aim to raise the awareness and generate new interest amongst students in the areas of science and technology relevant to the properties of water and steam, including power plant chemistry. This initiative has in the past proven highly successful, with many previous winners of the BIAPWS Student Award going on to full time employment in power generation.

Over the last 12 months, BIAPWS received no opportunities for sponsorship in 2017

.

6 BIAPWS WEBSITE

The public facing pages aim to promote a better understanding of what BIAPWS and IAPWS are and what our activities include. The member's area now includes a library of technical information for our members from BIAPWS meetings and symposia. Further developments are planned to include training resources.

7 BSI REPRESENTATION

BIAPWS is currently represented on the three British Standards and Euro Norm Committees listed below of relevance to power plant chemistry and water treatment. However, there have not been any significant developments in recent years.

- PVE/2: Water Tube and Shell Boilers. The UK standards committee has responsibility for BS EN 12952-12:2003: "Water-tube Boilers and Auxiliary Installations - Requirements for Boiler Feedwater and Boiler Water Quality" and BS EN 12953-10:2003: "Shell Boilers - Requirements for Feedwater and Boiler Water Quality".
- CII/62: Treatment of water for boilers. The UK standards committee also has responsibility for BS 2486:1997: "Recommendations for Treatment of Water for Steam Boilers and Water Heaters".
- EH/3/6: Water quality - sampling. The UK standards committee is responsible for BS 6068-6.7:1994 (ISO 5667-7:1993): "Guidance on Sampling of Water and Steam in Boiler Plants".

8 INTERACTION WITH PROFESSIONAL ORGANISATIONS

BIAPWS maintains correspondence with a number of professional bodies with the aim of sharing information and closer working.

- BIAPWS is represented on the Energy Sector Interest Group of the Royal Society of Chemistry by John Greene;
- BIAPWS is also represented on the Water Science Forum of the Royal Society of Chemistry by Eric Huff;
- Richard Hill, who is a committee member of the Institution of Chemical Engineers (IChemE) Water Subject Group, is also a Corresponding Member of BIAPWS.

Mike Sparrey
Chair, British & Irish Association for the Properties of Water and Steam
August 2018

APPENDIX A:

LIST OF UK AND IRELAND ORIGINATED REFERENCE PAPERS IN AREAS OF INTEREST.

1/. USE OF CONTROL CHARTS IN MONITORING WATER-STEAMCYCLE CHEMISTRY

AUTHOR: ADRIAN DENNEHY – ESB INTERNATIONAL

POWER PLANT CHEMISTRY – NOVEMBER/DECEMBER 2017.

2/. SMITH, B., MCCANN, P., MORI, S., UCHIDA, K., HATER, W., JASPER, J., POWERPLANT CHEMISTRY 2017, 19(3)129.

APPENDIX B:

**BRITISH AND IRISH ASSOCIATION FOR
THE PROPERTIES OF WATER AND STEAM**

A Member of the International Association for
the Properties of Water and Steam

BIAPWS

www.biapws.org

PROGRAMME AND REGISTRATION INFORMATION

**19th BIAPWS POWER PLANT CHEMISTRY SYMPOSIUM
TUESDAY 26TH AND WEDNESDAY 27TH JUNE 2018**

WARWICK CONFERENCES

**Scarman Meeting and Conference Centre, Scarman Road, The University
of Warwick, Coventry, CV4 7SH, UK
(see map at end)**

PROGRAMME

TUESDAY 26TH JUNE 2018, 12:00 – 17:00

INTRODUCTIONS TO POWER PLANT CHEMISTRY

12:00 Registration and Lunch - Vendor exhibitions open

13:20 Welcome and introduction

Mike Sparrey, Chair, BIAPWS

13:30 Session 1: Water Treatment by Electrochemical Deionisation (EDI)

Presenter: Steve Willis (Evoqua Water Technologies Ltd.)

15:00 Break

15:30 Session 2: Film Forming Amines / Products – Power Plant Experience and Use

Presenters: Andrew Mosley (RWE Generation, Staythorpe Power Station)
Wolfgang Hater (Kurita Europe GmbH, Marchwood Power Station)
Bill Smith (Uniper UK, Connah's Quay Power Station)

Afternoon Chair: John Greene, Consultant

17:00 Close

19:30 Evening meal, Warwick Conferences

**BRITISH AND IRISH ASSOCIATION FOR
THE PROPERTIES OF WATER AND STEAM**

A Member of the International Association for
the Properties of Water and Steam

BIAPWS

www.biapws.org

WEDNESDAY 27TH JUNE 2018, 09:00 – 16:00

POWER PLANT CHEMISTRY AND CORROSION

08:30	Registration and Coffee	
09:00	Welcome and introduction	Mike Sparrey, Chair, BIAPWS
09:05	Exhibitor introductions	Mike Sparrey, Chair, BIAPWS
	Session 1	Chair: Ian Woolsey, Consultant
09:20	Doosan International Experience with Plant Chemistry	Burkhard Zohm, Doosan Power Systems
09:50	Coriolis and Steam	Colin Cheeseman, KROHNE Group
10:20	Break	
10:50	Corrosion Film Solubility and Suspended Particle Behaviour of Corroding SS316L Surfaces in Simulated Nuclear Plant Coolant	Dr Brian Connolly (University of Manchester) and John Hewett (University of Birmingham)
11:20	A Case Study of Copper Accelerated Off-Load Corrosion of Mild Steel Pipework	Matt Griggs and Adam Caswell (EDF Energy Generation)
11:50	Open Discussion Session	
12:00	Lunch	
	Session 2	Chair: Amy South, Ecolab
13:00	Fireside Corrosion in Biomass and Waste-to-Energy Plants	Colin Davis, Uniper Technologies Limited
13:30	Waste-to-Energy Water Treatment Plant - Design, Maintenance and Monitoring Considerations	Joe Woolley, Watercare International Limited
14:00	Break	
14:30	Deciding on Outsourcing or Capital Water Treatment Choices in Today's Power Market	Bill Haas, Ecolutia Services
15:00	Water-Steam Cycle Clean-Up After A Condenser Leak With Estuarine Cooling Water	Griff Tilley, Triton Power, Saltend Power Station
15:30	Open Discussion Session	
15:55	Closing Remarks	Mike Sparrey, Chair, BIAPWS
16:00	Close	