

# TIC OPENING CEREMONY

*The official opening ceremony of TIC at the University of Queensland was held on 17th October 2018. The centre was officially established on 1st July 2017 with strong industry support and currently operating with 20 platinum members.*

The members are from Australian transmission and distribution companies, manufacturers of power transformers and key components with a global market, and national power industry associations, consultants and international technical publishers.

The opening ceremony was well attended by the both power industry and academic leaders and was opened by the director of TIC Prof. Tapan Saha. He has highlighted the achievements of TIC within one year of operation and has highly acknowledged the industry and university partnerships. Opening comments were given by the Prof. Michael Bruenig, Head of School of Information Technology and Electrical Engineering (ITEE). Mr Ed Wilson, Managing Director Wilson Transformer Company, Mr Peter Price, Head of Corporate Strategy, Executive General Manager Asset Safety and Performance, Energy Queensland, Dr Stewart Bell, Executive General Manager Delivery and Technical Solutions, Powerlink Queensland presented the industry perspective of TIC. University perspective of the centre was presented by Professor Mohan Krishnamoorthy, Pro-Vice-Chancellor (Research Partnerships), UQ. A plaque with the names of members and in kind contributors was unveiled by Professor Michael Bruenig to acknowledge the industry support.

After the vote of thanks given by Mr. Simon Bartlett, Chair, TIC Industry Advisory Steering Committee, the participants had the opportunity to visit TIC laboratory and UQ renewable energy laboratory.



*Prof. Michael Bruenig unveiling the plaque*



*Academic and industry leaders at TIC opening ceremony*

## POWER TRANSFORMER HV BUSHINGS - DESIGN, MAINTENANCE AND RISK MITIGATION

HELD ON 12-13 NOVEMBER 2018

*This was the second course of a series being delivered at the Transformer Innovation centre, which was conceived in conjunction with the centre's industrial partners to fulfil a gap in the training market.*

A unique feature was that, from the beginning, a balance between industry practicality and academic fundamental theoretical background was to be struck. This was considered necessary to bring the respective advantages of industrial experience with scientific understanding in a successful learning environment.



*Mr. Rob Milledge from ABB Australia is presenting at bushing course*

### PRACTICAL TRAINING ON TOPICS

Nine industry and university presenters took part in the two-day course, helping provide the desired balance. The course was sectioned into areas of HV bushing design, mechanisms of failure, maintenance, failure statistics, maintenance factory & site testing, maintenance, detection of failures using offline techniques, detection of bushing failures and condition using online techniques, implementation of life cycle oriented maintenance by transmission and distribution utilities. In addition, group sharing sessions amongst delegates was also facilitated over the two days. As this was the first advance CPD course of the centre, the goal was to provide practical training on topics which were aimed at procurement, maintenance, test, and asset management.

Twenty delegates attended this course.

100% of delegates said they would recommend this course to others.

### What delegates said:

- "Course is very relevant to industry personnel and practical techs"
- "Good chance to meet and greet industry personnel"
- "Good opportunity to share"
- "The topics covered were diverse, presenters' knowledge was great"



Mr. Mark Cotton from AusNet Services at bushing course



Attendees of bushing course

More courses are being scoped and developed at TIC to suit the requirements of industry and TIC members.



If you want to learn more about TIC and the benefits of becoming a member, visit: <http://www.itee.uq.edu.au/tic> or contact: Prof Tapan Saha, Director, Australasian Transformer Innovation Centre, University of Queensland - E: [saha@itee.uq.edu.au](mailto:saha@itee.uq.edu.au) M: 0422 001 378

## UPCOMING ADVANCED CPD COURSE 11-12 FEBRUARY 2019

### POWER TRANSFORMER MINERAL AND ESTER OILS – ANALYSIS AND MANAGEMENT

Power transformers are the most expensive plant in the electrical supply system of utilities, mining and industrial enterprises. Transformer oil is one of the four key components of a power transformer. Understanding transformer oils will enable the user to maximise the performance of their transformer assets and reduce maintenance costs.

Six presenters will deliver the two-day course, providing the desired balance between industry practicality and transformer oil scientific understanding:

- Philippe Reboul, General Manager Nynas Australia
- Chian Yaw, Head of Technical Development & Market Support for Asia Pacific, Nynas Singapore
- Tony Tuong Ngo, Manager Oil Testing Services, Powerlink Queensland
- Jayaram Baniya, Engineer Substation Asset Lifecycle Engineering, Energy Queensland
- Dr Russell Martin, Chief Scientist at M&I Materials, Manchester UK
- Antony Giacomini, Sales & Marketing Manager TJH2b Analytical Services Pty Ltd

The course will be sectioned into areas of mineral oils, natural and synthetic oils, utility analysis and management of oil assets, field and laboratory testing/analysis/interpretation and recommended actions.

#### KEY LEARNING OUTCOMES:

- Understanding the chemistry of mineral oils (paraffinic and naphthenic) and natural and synthetic esters.
- Learn the assessment of total cost of ownership, choosing the right type of transformer to suit your needs.
- Learn the importance of correct oil sampling techniques, and how to perform various oil tests in the field.
- Understand the key laboratory tests for transformers oils including DGA, oil quality, furans and particle analysis. Learn how to interpret the test results.
- What steps should to take after performing oil analysis?
- Understand oil diagnostics for tap changers, circuit breakers, RMUs.
- Learn how a leading distribution utility manages their transformer oil assets in transformers, tap changers, and instrument transformers
- Participate in group sharing activities and build your network of technical experts.

The full course details and program can be found on the TIC website.

#### HOW TO REGISTER

The online registration  
<http://www.itee.uq.edu.au/tic-cpd>  
or contact Ray Holzheimer, Manager,  
Australasian Transformer Innovation Centre,  
University of Queensland  
E: [r.holzheimer@uq.edu.au](mailto:r.holzheimer@uq.edu.au) M: 0417 629 684