

Corona Times

10th SEPTEMBER 2020
EDITION 11



empowering
networking
globalknow-how

CORONA: "a luminous, audible discharge brought on by the ionization of a fluid such as air surrounding a conductor that is electrically charged".



A FORTNIGHTLY NEWS-SHEET TO PROVIDE INFORMATION AND UPDATES TO CIGRE MEMBERS

TECH TALK

A series of links to CIGRE Technical documents

Understanding of geomagnetic storm environment for high voltage power grids - TB780

This Technical Brochure has collected and evaluated digitally measured magnetic field environments throughout the world, with emphasis on the larger geomagnetic storms that have occurred since 1989. This data collection effort emphasized 3 basic types of geomagnetic storm waveforms of direct interest to the electric power industry: Sudden Impulse (SI) waveforms, Electrojet waveforms, and Coronal Hole High Speed Stream (CHSS) waveforms.

Reliability analysis and design guidelines for LV DC auxiliary systems - TB777

The expansion of power systems around the world coupled with the increasing application of network automation, power electronics and smart grids, is resulting in a greater need than ever for reliable and secure DC auxiliary power systems (APS). This Technical Brochure addresses key design elements, aspects affecting system reliability, and brief introduction of new developments in the field of DC APS.

WEBINAR - FREE

Contemporary cost effective substation design

This tutorial provides a guide on the substation design process aimed at lowering the cost of substations for developing countries. The tutorial has been segregated into three distinct themes. The first theme explores the substation design philosophy and process. The second theme identifies engineering considerations for substation design. The third theme reflects on project management and commercial approaches intended to lower exposure to lifecycle cost.

NGN CORNER

News from our Young Engineer Group (U 35yo)

WEBINAR - FREE

OVERVIEW OF THE ROLE OF TELECOMMUNICATIONS NETWORK Friday, Sept. 18, 2020 12:00pm - 1:30pm

The CIGRE Next Generation Network (NGN) is proud to present Farshad Charmchi of TasNetworks to present on telecommunication network technologies and their role in the power industry.
ngn@cigreaustralia.org.au

CIGRE SCIENCE & ENGINEERING - CSE014

In this issue:

- Study Committee C2 – System operation and control power system restoration – World practices & future trends
- Study Committee C4 – System technical performance. The use of battery energy storage systems for system integrity protection schemes in South Australian power system
- An aggregate dynamic model for distributed energy resources for power system stability studies
- Wire displacement of AAAC overhead line conductors at wedge tension clamp
- And much more

CIGRE Reference Paper: The need for enhanced power system modelling techniques and simulation tools

The transition to a clean energy future requires thorough understanding of increasingly complex interactions between conventional generation, network equipment, variable renewable generation technologies (centralised and distributed), and demand response. Secure and reliable operation under such complex interactions requires the use of more advanced power system modelling and simulation tools and techniques. Conventional tools and techniques are reaching their limits to support such paradigm shifts.

KIWI COMMENTS

News from across the ditch

Watch out for TB810 which has been convened by our B5 New Zealand colleagues and will be in e-cigre later this week.



THIS WEEK IN 1956

IBM ships the first hard drive in the RAMAC 305 system. The drive holds 5MB of data at \$10,000 a megabyte. The system is as big as two refrigerators and uses 50 24-inch platters.



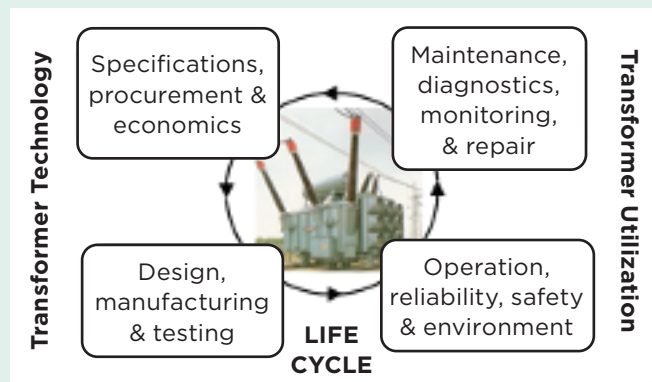
CORONA PANEL SNAPSHOT | AU-A2

Power Transformers and Reactors

Study Committee Chairman: Pascal Mueller (CH) | AU Panel Convener: Ross Willoughby (QLD)

Scope:

- All kinds of power transformers, including HVDC transformers converter and phase-shifting transformers;
- All kinds of reactors, including shunt reactors, series reactors, and HVDC smoothing reactors;
- All transformer components, including bushings, tapchangers, and other transformer accessories.



Panel Membership: 27, plus one NGN liaison member

Working Groups and Task Forces:

There are currently fourteen (14) active WGs and one (1) TF with eight (8) participants from Australia and New Zealand contributing as either full or corresponding members. A full listing of Working Groups can be provided on request.

SC A2 Green Book under development:

An Advisory Group (subset) of the SC are also preparing a CIGRE Green Book (text book) on power transformer and reactor procurement.

- The work would amalgamate and develop the existing material used in the trilogy TBs 528-529-530 for procurement process
- Adds the new work of TB 673 Transportation and WG A2.58 Installation, Pre-commissioning and Trial Operation

Recent Publications (2019):

SC A2 published five Technical Brochures, three of which are the result of joint work with SC D1:

Brochures published in 2019:

- [TB 755 - Transformer Bushing Reliability - February 2019](#)
- [TB 761 - Condition Assessment of Power Transformers - March 2019](#)
- [TB 771 - Advances in DGA Interpretation - July 2019](#)
- [TB 779 - Field Experience with Transformer Solid Insulation Ageing Markers - October 2019](#)
- [TB 783 - DGA Monitoring Systems - October 2019](#)

Imminent Brochure Publications (for 2020):

- Advances in Interpretation of Transformer Frequency Response Analysis
- Transformer Life Extension

A full list of TBs relating to A2 activities is available on the [e-cigre website](#) and is free for CIGRE members.

Upcoming A2 related events to be aware of:

The AU A2 panel was poised ready to deliver a [CIGRE 1 day interactive workshop on transformer reliability and performance](#). The event was to be held in association with the TechCon event in Melbourne scheduled for 25-27 March 2020 when COVID-19 intervened. The decision to POSTPONE the event was made in response to the directives from government agencies and to ensure the health and safety of all involved.

The CIGRE workshop event is now postponed to **Wednesday, 17 March 2021** (immediately before the postponed TechCon Aus-NZ event).

For information [click here](#) Registrations will open later in the year

KMS Tips & Tricks

Updating your contact details - Each User is responsible for maintaining their own details.

If you change your phone, email or other company details please update them in the user management system by following the procedure found [HERE](#).