



STUDY COMMITTEE A1



Rotating Electrical Machines

Quarterly Newsletter: Jan 2022

Dear Members and colleagues of Study Committee A1,
Welcome to the January 2022 edition of the CIGRE SC A1 Newsletter.

First of all, I would like to wish you all the very best for 2022 and I hope the year has started well so far.

Since September 2021, the CIGRE Symposium was held in Ljubljana, Slovenia, between 21st and 24th November as a hybrid event, and was supported by SC A1 with 4 submitted papers, and a tutorial. Two of the papers were selected for presentation. SC A1 chaired session 15 remotely on 23rd November with SC members also present locally in Ljubljana. On 21st November, Johnny Rocha presented a tutorial remotely on the “*Challenges in the Calculation and Design of Large Power Hydro Generators in the 21st Century*”.

We were also happy to find a new Convener for Working Group A1.63 on the subject of “*Turbo Generator Stator Winding Bushings...*”. We thank Jabulani Bembe for taking on this role and wish him success in re-establishing this working group. He will first review the scope of the WG and agree with the remaining WG members what scope is feasible – we will reach out later for renewed interest once that scope has been refined.

As we enter 2022, each Study Committee has to start submitting their Annual Report to Central Office for publication in *Electra* throughout the year. Since A1 is first alphabetically, then we must submit our report early in January. This has been done, so look out for the report in the first *Electra* edition due out soon.

Now we must return to the daily work of the study committee and focus on our 2022 priorities of clearing the backlog of working group reports and technical brochures and paving the way to progress the newer working groups and later generate new topics. I attach the current working group list in the Appendix for information.

Additionally, we look forward to the Paris Session 2022 which we hope will be closer to the full face-to-face meetings of the past, although we do expect attendance will still be challenging due to the dynamic COVID situation in various parts of the world. The format of the session is under review regarding potential remote participation, but no details are available as yet. Central Office will advise on this as the year progresses.

With my best regards for 2022,
Kevin MAYOR,
SC A1 Chair

Paris Session 2022

The Paris Session will take place between 28th August to 2nd September 2022. Last year we accepted 30 abstracts of papers for the session and submission of the full papers is in progress.

These will be formally assessed by a team of SC A1 reviewers in the following weeks using the ConfTool platform. Reviewing is expected to begin in February 2022.

The Special Report, which will pose the questions for the General Discussion meeting during the Paris Session, is planned to be published on 31 May 2022.

Working Group Status

The current active working group list is given in the appendix to this Newsletter.

We will give more details on progress in the next Newsletter in March 2022.

Link to SC website: [CIGRE Study Committee A1](https://www.cigre.org/study-committee-a1)

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Appendix: Active SC A1 Working Groups

WG Nr.	ADVISORY GROUP	WG TITLE	CONVENOR	STATUS
A1.33	AG-01	Guide For Cleanliness And Storage Of Generators	Kevin Mayor	TB+Electra abstract submitted
A1.42	AG-02	Influence of key requirements to optimize the value of hydro generators	Eduardo Guerra	TB to be reviewed under the 6-week rule
A1.43	AG-02	State of the art of rotor temperature measurement	Stjepan Tvoric	TB+Electra abstract to be finalized for submission
A1.44	AG-01	Guideline on Testing of Turbo and Hydrogenerators	Mladen SASIC	TB sent out for review under the 6-week rule
A1.45	AG-06	Guide for Determining the Health Index of Large Electric Motors	Dr Zhang Pinjia	Need more responses to the questionnaire - recirculate
A1.48	AG-01	Guidance on the Requirements for High Speed Balancing / Over-speed Testing of Turbine Generator Rotors Following Maintenance or Repair.	Ben Adams	TB+Electra abstract ready for submission
A1-C4.52	AG-05	Wind generators and frequency-active power control of power systems	Nick Miller	TB in preparation
A1.53	AG-06	Guide on Design Requirements of Motors for Variable Speed Drive Application	AK Gupta	In revision following 6-week rule feedback.
A1.54	AG-06	Impact of Flexible Operation on Large Motors	John Doyle	TB+Electra abstract ready for submission
A1.55	AG-02	Survey on Split Core Stators	Sun Yutian	Pending feedback from convener
A1.56	AG-02	Survey on Lap and Wave Winding and their Consequences on Maintenance and Performance	Richard Perers	TB prepared. To be sent for review under the 6-week rule
A1.58	AG-06	Selection of Copper Versus Aluminium Rotors for Induction Motors	Fredemar Runcos	Report in preparation
A1.59	AG-02	Survey on Industry Practices and Effects associated with the Cutting Out of Stator Coils in Hydrogenerators.	Charles Millet	TB+Electra abstract prepared. To be sent for review under the 6-week rule
A1.60	AG-02	Guide on economic evaluation for refurbishment or replacement decisions on hydro generators	Mark Bruintjies	In work. TB chapters defined & allocated. Needs more WG members.
A1.61	AG-06	Survey of Partial Discharge Monitoring in Large Motors	André Tomaz de Carvalho	Pending feedback from convener
A1.62	AG-02	Thrust Bearings for Hydropower - A Survey of Known Problems and Root Causes	Daniel Langmayr	Need more responses to the questionnaire - recirculate
A1.63	AG-01	Turbo Generator Stator Winding Bushings and Lead Connections – Field Experience, Failures and Design Improvements	Jabulani Bembe	Working Group being re-established
A1.64	AG-06	Guide for Evaluating the Repair / Replacement of Standard Efficiency Motors	Erl Ferreira Figueiredo	Report in preparation
A1/C4.66	AG-05	Guide on the Assessment, Specification and Design of Synchronous Condensers for Power Systems with Predominance of Low or Zero Inertia Generators	D.K. Chaturvedi	TB in final stages of preparation
A1.67	AG-02	State of the Art in methods, experience and limits in end winding corona testing for Hydro Generators	Hélio de Paiva Amorim Junior	Pending feedback from convener
A1.68	AG-06	Evaluating Quality Performance of Electric Motor Manufacturing and Repair Facilities	Kondra Nagesh	Needs more participation from manufacturers and responses.
A1.69	AG-02	Hydro-Generator Excitation Current Anomalies	J. Johnny Rocha E.	Team assembled. Work to start Q4 2021.
A1.70	AG-01	Dielectric Dissipation Factor Measurements on Stator Windings	Monique Krieg-Wezelenburg	Questionnaire and collection of information completed; Analysis to be started
A1.71	AG-02	Survey on damper-winding Concepts and its operational experience on hydro generators and motor-generators	Thomas Hildinger	Assembling team – start in 2022
A1.72	AG-02	Survey on multi-turn coils with dedicated turn insulation versus coils without dedicated turn insulation	Yoon Duk Seol	Assembling team – start in 2022
A1.73	AG-02	Customer Requirements for Qualification of Form Wound Stator Insulation Systems for Hydro Generators	Franz Ramsauer	Assembling team – start in 2022