

PROGRAM

September 18 – September 20, 2017, Vienna, Austria

1. Day, Monday 18th, September 2017
House of Engineers - Ceremony Hall
2nd floor, Eschenbachgasse 9, 1010 Wien OVE

TIME		TOPIC	SPEAKER, COUNTRY
08:00	09:00	Colloquium Registration	
09:00	09:30	Opening & Welcome	SC-A1: Nico Smit, South Africa Peter Wiehe, Australia Franz Ramsauer, Austria OVE: Peter Reichel, Austria CIGRE Austria: Gerhard Christiner, Austria
1. New Developments			
1.1 - Part 1: New Developments and latest Designs in Rotating Electrical Machines used in Conventional, Renewable and Dispersed Generation (Design, Insulation, Cooling, Materials, Monitoring)			
09:30	09:55	Calculation and Analysis of Influence Factors of Damper Winding Current for Generator/Motor	Tao Dajum, China
09:55	10:20	Measurement of Magnetic Properties of Non Oriented Electrical Steel Sheets up to High Flux Density for Magnetic Field Analysis of Generators **	Koji Fujiwara, Japan
10:20	10:50	Coffee Break	
1.1 - Part 2: New Developments and latest Designs in Rotating Electrical Machines used in Conventional, Renewable and Dispersed Generation (Design, Insulation, Cooling, Materials, Monitoring)			
10:50	11:15	Seasonal Pumped-Storage Plants: An Integrated Approach for Hydropower, Water Management and Energy Storage	Julian Hunt, Austria
11:15	11:40	Percolation and Resistivity Behaviour of Silicon Carbide Composites for End Corona Protection Systems of Rotating High Voltage Machines	Senn Florian, Austria
11:40	12:05	Electronic Gas Turbine: Hybridizing with Battery Energy Storage	Nicholas W. Miller, United States
12:05	12:30	Tuning the Electrical Properties of Field Grading Materials by using tailored Semiconducting Particels	Simone Viola Radl, Austria
12:30	13:30	Lunch	
1.1 - Part 3: New Developments and latest Designs in Rotating Electrical Machines used in Conventional, Renewable and Dispersed Generation (Design, Insulation, Cooling, Materials, Monitoring)			
13:30	13:55	Design of Bulb-type Generator as Replacement of existing Straflo® Units	Mario Brčić, Croatia
13:55	14:20	Epoxy-Anhydride based Thermosets Reinforced by Inorganic Nanoparticles: Effects in Shelf-Lifetime, Thermal and Thermo-mechanical Properties **	Andrea J. Wanner, Austria
1.2 High Capacity (>100MW) Air-Cooled Generators (Design, Life Expectancy, Aging, Operation and Maintenance Issues)			

TIME		TOPIC	SPEAKER, COUNTRY
14:20	14:45	Electrical and Thermal Analysis of the Stress Grading System of a Large Hydro Generator	Christian Staubach, Germany
14:45	15:15	Coffee Break	
1.3 Grid Connection Aspects and Issues (Design Standards, Grid Codes, Testing)			
15:15	15:40	Reactive Power Capability of Hydro Generators versus European Grid Code Requirements	Luis Rouco Rodríguez, Spain
15:40	16:05	Grid Compliance of Low Inertia Hydro Turbines	Alois Lechner, Austria
16:05	16:30	Stress Reduced Short Circuit Clearing **	Christian Kreischer, Germany
16:30	16:55	Diagnostic Measurements at very old Hydro Generators for Predicting the Condition * **	Christof Sumereder, Austria
16:55	17:05	Closure - Colloquium 1st Day	Chair: Nico Smit

* ... Presentation from PS 2.2 - Asset Management

2. Day, Tuesday 19th, September 2017
House of Engineers - Ceremony Hall
2nd floor, Eschenbachgasse 9, 1010 Wien OVE

TIME		TOPIC	SPEAKER, COUNTRY
09:00	09:10	Opening Colloquium - Day 2	Nico Smit
2. Operational Experience			
2.1 Experience with Monitoring, Diagnosis, Prognosis and Maintenance in Electrical Rotating Machines used for Renewable and Dispersed Generation			
09:10	09:35	An Investigation Regarding the Impulse Propagation of Partial Discharge in a Small Hydro Generator	Fabian Öttl, Austria
09:35	10:00	Endwinding Vibration Monitoring of Air Cooled Turbine Generators	John Letal, Canada
10:00	10:25	Finite Element based Quantitative and Qualitative Impact Assessment of Interturn Short Circuits in Large Hydro Generators	Olivier Kokoko, Canada
10:25	10:50	A Device to Monitor Health of Large Motors and Active Operational History	K. Nagesh, India
10:50	11:20	Coffee Break	
2.2 - Part 1: Asset Management: Assessment of Rotating Electrical Machines - Condition Monitoring and Assessment, Assessment Criteria, Refurbishment, Upgrading, Risk Management, Methods for Predicting the Remaining Life of Aged Generators, Efficiency Improvements			
11:20	11:45	Lifetime of Stator winding Insulation - Theory and Measurement	Jürgen Plesch, Austria
11:45	12:10	Various Types of Fiber Optic Sensors Applied at Turbine Generators to Improve Validation Tests and Reliability of Long Term Operation	Juergen R. Weidner, Germany
12:10	12:35	The Measurement of Rotor Values by using an Energy Harvesting System **	Stjepan Tvorčić, Croatia
12:35	13:45	Lunch	

TIME		TOPIC	SPEAKER, COUNTRY
2.2 - Part 2: Asset Management: Assessment of Rotating Electrical Machines - Condition Monitoring and Assessment, Assessment Criteria, Refurbishment, Upgrading, Risk Management, Methods for Predicting the Remaining Life of Aged Generators, Efficiency Improvements			
13:45	14:10	Specific Aging Processes in Two-Pole, Air-Cooled, High-Voltage Rotating Machines **	Aleksandr Khazanov, USA
14:10	14:35	Intersperse Stator Winding to Reduce Vibration **	Vincent Fernagut, France
14:35	15:00	Condition Assessment of Form Wound Stator Windings of Rotating Electrical Machines by PD Analysis - Possibilities and Limits	Werner Ladstaetter, Austria
15:00	15:30	Coffee Break	
2.3 The Effects of a Renewable fed Grid on Conventional Turbo and Hydro-Generator Fleet			
15:30	15:55	Electromagnetic Forces in Stators of Electric Machines Operating with Inverter	Mikhail Roytgarts, Russia
15:55	16:20	Test Circuits for Repetitive Impulse Testing of HV Winding Bars with Different Winding Fitting Systems	Alexander Pirker, Austria
16:20	16:50	Discussion and Summary	Chair: Nico Smit
16:50	17:00	Closure - Oral Colloquium Sessions	Chair: Nico Smit

3. Day, Wednesday 20th, September 2017
Tutorials and Poster Session
OVE, 2nd floor, Eschenbachgasse 9, 1010 Wien

TIME		Topic	SPEAKER, COUNTRY
08:30	08:40	Opening Tutorial and Poster Session	Chair: Nico Smit
SC-A1 Working Group Tutorials			
08:40	09:20	Tutorial 1 - CIGRE WG A1.29 Guide on New Generator-Grid Interaction Requirements	Luis Rouco, Spain
09:20	10:00	Tutorial 2 - CIGRE WG A1.47 Technological Feasibility Studies for Super IE4 and Ultra Premium IE5 Efficient Motors	Do-Hyun Kang, Rep. of Korea
10:00	10:15	Coffee Break	
10:15	10:55	Tutorial 3 - CIGRE WG A1.46 Guide on Use of Premium Efficiency IE3 (IEC 60034-30) Motors & Determining Benefits of Green House Gas Emission Reduction	D.K.Chaturvedi, India
10:55	11:35	Tutorial 4 - CIGRE WG A1.49 Revisiting the Fundamentals of Magnetic Saturation in Salient Pole Synchronous Generators	Johnny Rocha, Brazil
11:35	11:50	Coffee Break	
Poster Session			
11:50	12:50	1. New Developments New Developments and latest Designs in Rotating Electrical Machines used in Conventional, Renewable and Dispersed Generation (Design, Insulation, Cooling, Materials, Monitoring)	

TIME		TOPIC	SPEAKER, COUNTRY
		Electromagnetic Field Computation of Electrical Machines in Advanced Multi-Physics and System Simulation, with an Industrial Focus	Aron Szucs, Finland
		Effects of Moisture on the Properties of Uncured and Cured Epoxy-Anhydride Based Thermosets	Andrea J. Wanner, Austria
		Fluid Structure Interaction Simulation of Tilted Thrust Bearings: Geometrical Case Studies	Daniel Langmayr, Austria
		The Anti-Corona Design in Generator Stator Windings	Xiaolei Wu, Cina
		Measurement of Magnetic Properties of Non Oriented Electrical Steel Sheets up to High Flux Density for Magnetic Field Analysis of Generator **	Koji Fujiwara, Japan
		Epoxy-Anhydride Based Thermosets Reinforced by Inorganic Nanoparticles: Effects in Shelf-Lifetime, Thermal and Thermo-Mechanical Properties **	Andrea J. Wanner, Austria
		Grid Connection Apects and Issues (Design Standards, Grid Codes, Testing)	
		Stress Reduced Short Circuit Clearing **	Christian Kreischer, Germany
		2. Operational Experience	
		Asset Management: Assessment of Rotating Electrical Machines - Condition Monitoring and Assessment, Assessment Criteria, Refurbishment, Upgrading, Risk Management, Methods for Predicting the Remaining Life of aged Generators, Efficiency Improvements	
		Continuous Monitoring of Multiple Channels of the Partial Discharges in Electrical Generator with Transmission of the Electrical Signals by Optical Fiber Low-Cost Monoring System	Helio Amorím, Brazil
		Diagnostic Measurements at very old Hydro Generators for Predicting the Condition **	Christof Sumeder, Austria
		Intersperse Stator Winding to Reduce Vibration **	Vincent Fernagut, France
		The Measurement of Rotor Values by Using an Energy Harvesting System	Stjepan Tvorčić, Croatia
		Specific Aging Processes in Two-Pole, Air-Cooled, High-Voltage Rotating Machines **	Aleksandr Khazanov, USA
		Effects of Inverter based Systems on Generators	
		Turbogenerator Retaining Ring Replacement of Nuclear Plant in Angra 1 - Brazil	Marcio Rezende Siniscalchi, Brazil
		Generator Termination Bus-Bar Arrangement - Design Requirements	Dhananjay Kr Chaturvedi, India
12:50	13:00	Colloquium Closure	
		Chair: Nico Smit	

* ... Presentation from PS 2.2 - Asset Management - moved two 1. Colloquium Day

** ... Contribution presented as Oral Presentation and as Poster