

## PROGRAM

### Day I – 12 May 2015 r.

- 13:00 Registration  
14:00-15:00 Lunch  
15:00-15:30 **Welcome Ceremony**

15:30-18:25 **Tutorial**

#### **On- Load- Tape- Changers (OLTCs) – design, maintenance, diagnostic testing – selected issues**

Chairman: Ivo Pinkiewicz, Institute of Power Engineering

- 15:30-15:35 Presentation of the main topics of Tutorial  
*I. Pinkiewicz, Institute of Power Engineering*
- 15:35-16:05 **1. Introduction**
- 15:35-16:00 OLTC – purpose of use, design and operation, an idea of voltage regulation, parameters.  
OLTC installed in step-up transformers  
*M. Kaźmierski, Institute of Power Engineering*
- 16:00-16:05 OLTC specifications when ordering  
*I. Pinkiewicz, Institute of Power Engineering*
- 16:05-16:45 **2. Current trends in the construction of tap changer**
- 16:05-16:15 Introduction  
*M. Kaźmierski, Institute of Power Engineering*
- 16:15-16:45 Qualification of vacuum tap changers  
*L. Liden, ABB AB, Components*
- 16:45-16:55 Discussion
- 16:55-17:20** Coffee break
- 17:20-18:45 **3. Operation of OLTC**
- 17:20-17:25 Introduction  
*M. Kaźmierski, Institute of Power Engineering*
- 17:25-17:45 On-load tap changers diagnosis – an off-line method for detection of degradation effects and faults  
*J. Erbrink, R. Jongen, onsite hv solutions AG Lucerne/Switzerland, J. Parciak, Onsite hv solutions Central Europe Sp. z o.o.*
- 17:45-18:05 Vacuum tap changers  
*P. Kubat, Revos*
- 18:05-18:25 Discussion
- 18:25 End of the first day of the Conference
- 19:00 Dinner

## **Day II – 13 May 2015 r.**

- 6:30-9:00 Breakfast
- 9:00-10:00 **Tutorial cont'd. 4. National operational practice**
- 9:00-9:05 Introduction  
*M. Kaźmierski, Institute of Power Engineering*
- 9:05-9:20 Changes in the maintenance of OLTC in RWE Stoen Operator  
*W. Rachaus-Lewandowska, J. Jakubowski, RWE Stoen Operator Sp. z o.o.*
- 9:20-9:35 OLTC acoustic diagnosis-practical experiences  
*A. Cichoń, Opole University of Technology, P. Mański, PSE SA, S. Borucki, Opole University of Technology*
- 9:35-9:45 OLTC Monitoring  
*M. Kaźmierski, Institute of Power Engineering*
- 9:45-10:00 Discussion – End of Tutorial
- 10:00-10:20 Coffee break
- 10:20-11:40 **Session I – Monitoring of Power Transformers**
1. Development trends in on-line monitoring of power transformers  
*W. Gil, Mikronika*
  2. Monitoring, Diagnostics, Or Changing Condition ?  
*M. Tostrud, PE, B. Sparling, Dynamic Ratings Inc.*
  3. Transformer fleet monitoring & management  
*E. Steindl, Maschinenfabrik Reinhausen Automation & Control*
  4. Continuous condition monitoring and power grid protection of high voltage transformers by sensor monitoring of oil aging  
*M. Mauntz, cmc Instruments GmbH, U. Kuipers, South Westphalia University of Applied Sciences, J. Peuser, cmc Instruments GmbH*
- Discussion*
- 11:40-12:00 Coffee break
- 12:00-12:50 **Session II – Commercial**
- 12:50-13:00 Coffee break
- 13:00-14:00 **Session III – Wybrane zagadnienia metrologiczne**
5. The module for non-contact measurement of high voltage in power transformer on line monitoring system  
*K. Walczak, W. Sikorski, Poznan University of Technology*
  6. A comparison of PD measurement methods - acoustic, electric and UHF  
*A. Cichoń, J. Skubis, M. Kunicki, Opole University of Technology*
- Discussion*
- 14:00-15:30 Lunch
- 15:30-16:50 **Session IV – Service of Power Transformers**
7. Routine, type and special tests of transformers in the light of new Standards series PN-EN 60076 and Directive of the EU no. 548/2014  
*A. Krajewska, Instytut Energetyki*
  8. Use of the Duval's triangle method to interpret the measured concentrations of dissolved gases in transformer oil  
*T. Piotrowski, P. Różga, Lodz University of Technology*
  9. The influence of bushinh surface condition on the measurement results obtained using FDS method  
*J. Gielniak, Poznan University of Technology*
  10. The change of power transformers' technical parameters as a result of entering into force Directive of the European Parliament and of the Council 2009/125/WE with

regard to power transformers  
*A. Kapczyński, ABB Sp. z o.o.*

*Discussion*

16:50 End of the second day of the Conference  
19:00 Dinner

### **Day III – 14 May 2015 r.**

6:30-9:00 Breakfast

9:00-10:00 **Session V – Badania materiałowe**

11. Selected aspects of cooperation of solid insulation with dielectric liquids that are alternative for mineral oil  
*P. Różga, T. Piotrowski, Lodz University of Technology*
12. Water content in electroinsulating liquids with the use of capacitive probe  
*P. Przybyłek, K. Siodła, Poznan University of Technology*
13. Endothermic phenomenon accompanying bubble effect development  
*P. Przybyłek, H. Morańda, K. Walczak, H. Mościcka-Grzesiak, Poznan University of Technology*
14. Limitation of short-circuit currents in superconducting transformers  
*Ł. Woźniak, Enea Wytwarzanie SA.*

*Discussion*

10:00-10:40 Coffee break

10:40-11:40 **Session VI – Problemy eksploatacyjne**

15. Praca transformatora z występującą z nim asymetrią rezystancji uzwojeń  
*J. Łukaszewicz, Z. Załączny, PGE GiEK SA Oddział Elektrownia Bełchatów*
16. Voltage regulation problems in Medium voltage networks caused by integration of distributed generation and methods of solving them  
*W. Sobczak, ABB Sp. z o.o.*
17. Experiences from the realization of diagnostic testing program of power transformers 110 kV/MV, in Tauron Dystrybucja Joint-Stock Company  
*J. Frymus, TAURON Distribution SA*

*Discussion*

11:40-12:00 Summary

12:00 End of Conference

12:30 Lunch