

SYMKOM 2016 IMP²

October 17, 2016
17:00 – 19:00 – REGISTRATION HOTEL MERCURE GDAŃSK STARE MIASTO
October 18, 2016
8:00 – 19:00 - REGISTRATION 9:00 – 9:10 – Opening of Conference - Prof. Jan Kiciński 9:10–9:55 Invited I – Prof. Krzysztof Jóźwik – Radial fan controlled with impeller movable blades - CFD investigations 9:55–10:40 Invited II - Prof. Wojciech Nowak - Polish achievements in energy generation from coal
10:40–11:10 Coffee break
LARGE TURBINES OPERATION 11:10–13:10 Presentations (15 minutes + 5 minutes for discussion) - 6 papers 1. K. Dominiczak, M. Banaszkiwicz – A verification approach to thermoelastic steam turbine rotor analysis during transient operation 2. M. Banaszkiwicz, K. Dominiczak - A methodology for on-line rotor stress monitoring using equivalent Green's function and steam temperature model 3. Michal Hoznedl, Lukáš Bednář, Ladislav Tajč - Changes in Aerodynamic Parameters for 5-stage Steam Turbine during Warming and Gradual Start-up to Nominal Operating Parameters 4. J. Badur, T. Kowalczyk, P. Ziółkowski, P. Tokarczyk, M. Woźniak – Study on the effectiveness of the turbine condenser air extraction system using hydro ejectors 5. L. Piechowski, R. Rzadkowski, P. Troka, P. Piechowski, R. Szczepanik - Rotor blade vibration simulator of steam turbine with aliasing frequencies up to 25 Hz 6. T. Pałczyński - Resonant characteristics of flow pulsation in pipes due to swept sine constraint
13:15–14:15 Lunch
14:15–15:00 Invited III - Prof. Wojciech Cholewa - Ontology-driven diagnostic modeling YOUNG RESEARCHERS' AWARD COMPETITION 15:00–16:00 Presentations (15 minutes + 5 minutes for discussion) - 3 papers 1. A. Jaeschke, G. Liśkiewicz - Mathematical surge modelling based on the pressure oscillations in the stable operation range of the compressor 2. F. Grapow, G. Liśkiewicz - Compressor modelling using Greitzer model validated by pressure oscillations 3. A. Andrearczyk, G. Żywica - A concept of a test stand for the investigation of a 3d printed turbochargers and selected fluid flow machinery

16:00–16.30 Coffee break

YOUNG RESEARCHERS' AWARD COMPETITION cont'd

16:30–18:30 Presentations (15 minutes + 5 minutes for discussion) - 6 papers

4. A. Harutyunyan, K. Badyda, M. Wołowicz – The effect of parallel hot windbox repowering on 387 MW fossil fuel power plant
5. A. Szymański, S. Dykas, M. Majkut, M. Stozik - The assessment of the calculation method for determining the flow characteristics of one straight fin labyrinth seal
6. P. Bagiński, G. Żywica - The influence of temperature on dynamics of the rotor - foil bearing system
7. Ł. Breńkacz, G. Żywica - An experimental investigation in order to determine bearing dynamic coefficients of two hydrodynamic bearings from impulse responses
8. R. Rusanov, L. Jędrzejewski, P. Klonowicz, G. Żywica, P. Lampart, A. Rusanov - Design and performance study of a small-scale waste heat recovery turbine
9. D. Stępniaak, J. Surwiło, P. Lampart - The analysis of energy and emission indicators of piston combustion engine supplied by a mixture of biogas

19:15 - Dinner

October 19, 2016

9:00–9:45 **Invited IV** - Prof. Jan Kiciński - **Modern methods of analysis of the dynamic characteristics of rotating machines**

ENERGY STORAGE

9:45–10:45 Presentations (15 minutes + 5 minutes for discussion) - 3 papers

1. S. Sałyga, Ł. Szabłowski, K. Badyda - Energy analysis of underwater energy storage system based on compressed air
2. P. Klonowicz, Ł. Witanowski, Ł. Jędrzejewski – UWCAES systems – state of the art and prospects
3. D. Kądrowski, F. Grapow - GUST-Generative Urban Small wind Turbine

10:45–11:15 Coffee break

TURBOMACHINERY FLOW AND DYNAMICS

11.15–13.00 Presentations (15 minutes + 5 minutes for discussion) - 5 papers

1. A. Drózdź, W. Elsner D. Sikorski - Skin Friction Measurements by Thin-Oil Film Interferometry in Turbulent Boundary Layer with Pressure Gradient
2. S. Dykas, M. Majkut, K. Smółka, M. Stozik - Condensation wave identification in moist air transonic flows through nozzles
3. M. Kaniecki, Z. Krzemianowski - CFD analysis of high speed Francis hydraulic turbines
4. E. Tkacz, Z. Kozanecki, J. Łagodziński - Hybrid bearing development for high-speed turbomachinery in distributed energy systems
5. J. Łagodziński, P. Zielinski - A combined numerical - experimental model of airfoil bearing compliant structure

13:00–14:00 Lunch

COMPRESSOR FLOW AERODYNAMICS

14:00–15:20 Presentations (15 minutes + 5 minutes for discussion) - 4 papers

1. K. Kabalyk, W. Kryłłowicz - Numerical modelling of the performance of a centrifugal compressor impeller with low inlet flow coefficient
2. J. Chmielecki, G. Liśkiewicz, W. Kryłłowicz - Numerical study of surge predecessors in centrifugal blower - inlet recirculation
3. D. Garcia, G. Liśkiewicz - Stable or not stable? Recognizing surge based on the pressure signal
4. W. Kryłłowicz, Z. Kozanecki Jr, P. Świder, Z. Kozanecki – Modernization of a high pressure synthesis gas turbocompressor

15:20–15:50 Coffee break

ORC SYSTEMS

15:50–17:10 Presentations (15 minutes + 5 minutes for discussion) - 4 papers

1. T. Pałczyński - Concept for energy recovery in city buses based on ORC system
2. G. Żywica, T. Kaczmarczyk, E. Ihnatowicz - Expanders for dispersed power generation: maintenance and diagnostics problems
3. T. Z. Kaczmarczyk, G. Żywica, E. Ihnatowicz - Experimental investigation on a rotodynamic pump operating in the cogeneration system with a low-boiling working medium
4. M. Lackowski, H. Nowakowska - Electric field influence on a height of rise of a dielectric liquid between two parallel electrodes

YOUNG RESEARCHERS' AWARD COMPETITION – JURY DECISION

CLOSING OF CONFERENCE