

# **Nuclear Plant Chemistry Conference 2010**

**(NPC 2010)**

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Systems and 8th International Radiolysis, Electrochemistry and  
Materials Performance Workshop**

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#### Co-Chairs:

Derek H. Lister (University of New Brunswick)

Kenkichi Ishigure (Japan Radioisotope Association)

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Warren Mawhinney (New Brunswick Power Nuclear)

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Per-Olof Andersson (Vattenfall AB)

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Timo Saario (VTT Technical Research Centre of Finland)

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**Using of New Chemical Regime on Secondary Circuit in Nuclear Power Plant "Kozloduy" - Bulgaria**

*Katya Minkova, Zdravko Kalpakchiev, Stanimir Stanchev*.....1716

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*Kazutoshi Fujiwara, Masafumi Domae, K. Yoneda, F. Inada*.....1750

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*Keith Fruzzetti, Carly E. Anderson, Chuck R. Marks, Marc A. Kreider, P. Robert Walton, William Reeher, David Morey*.....1774

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**Surface Analytical and Electrochemical Characterization of Oxide Films Formed on Incoloy-800 and Carbon Steel in Simulated Secondary Water Chemistry Conditions of PHWRs**

*S. Rangarajan, Sinu Chandran, V. Balaji, S.V. Narasimhan*.....1802

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**Newly Developed Erosion-Corrosion Problems in Secondary Side of Paks Nuclear Power Plant Units**

*Gábor Patek, Janos Schunk, T. Pintér, P. Tilky, Á. Doma, János Osz*.....1817

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**Attachment of Iron Corrosion Products on Steam Generator Tube and Feed-Water Pump in PWRS Secondary System**

*Yasuhiko Shoda, Nobuo Ishihara, Hirokazu Miyata, Taku Ohira, Yoshifumi Watanabe, Yasuo Nonaka*.....1826

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**Corrosion Product Behavior in VVER Secondary Systems**

*Victor A. Yurmanov, E.V. Yurmanov, S.V. Velikopolsky*.....1836

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**Co-Chairs:**

Wendy Walker (Pall Corporation)

Victor Yurmanov (N.A. Dollezhal Research and Development Institute of Power Engineering (NIKIET))

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**Mitigation of Organically Bound Sulfate from Water Treatment Plants at Bruce NGS and Impact on Steam Generator Secondary Side Chemistry Control**

*Rod Nashiem, Ram Davloor, Kim Smith, Bill Harper, Claude Gauthier, Sandy Schexnaider* .....1848

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*Gyorgy Pátzay, L. Weiser, F. Feil, Janos Schunk, Gábor Patek, T. Pintér*.....1882

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*Narciso Fernández, Raúl Manera, Luis Ovando*.....1931

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**Experiences on Reduction of Reactor Water Silica and Fresh Resin Leaching Organics for Kuo-Sheng Nuclear Power Plant**

*Tung-Jen Wen, Chieh-Hsin Wang*.....1944

**Paper 7.06P**

**Improvement of Leaching Characteristics of TOC from Condensate Demineralizers by Advanced Resin Bed Arrangement Methods**

*Takeshi Izumi, T. Ino, T. Deguchi, Y. Egawa, M. Hagiwara, H. Saneshige, T. Sakurai, H. Hasegawa, M. Abe, M. Furuya*.....1955

**Paper 7.07P**

**Commissioning of the Water Demineralization Plant of Atucha II Nuclear Power Plant**

*Betina Schönbrod, Germán Grasso, Miguel Ormando, Mauricio Chocrón, Ivanna Rodríguez, Ana Ma. Lagamma*.....1964

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**Chemical Tracer Test to Identify Main Condenser Dogbone Seal Leakage at Peach Bottom Unit 3**

*Andrew D. Odell, R. Scholz, Joseph F. Giannelli, K.E. Russell*.....1976

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**Electrochemical Ion Exchanger in the Water Circuit to Measure Cation Conductivity**

*Bernt Bengtsson, Gustav Settervik, Anna Velin, Rolf Ingemarsson*.....1986

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**Biofouling Evaluation in the Seawater Cooling Circuit of an Operating Coastal Power Plant**

*P. Sriyutha Murthy, P. Veeramani, M.L. Mohamed Ershath, V.P. Venugopalan* .....1999

**Paper 7.11P**

**Comparative Efficacy of Chlorine and Chlorine Dioxide Regimes for Condenser Slime Control in Seawater Cooled Heat Exchangers**

*P. Sriyutha Murthy, P. Veeramani, M.L. Mohamed Ershath, R. Rajamohan, Y.V. Harinath, T.V.K. Mohan, V.P. Venugopalan*.....2008

**Paper 7.12P**

**Treatment of Arsenazo III Contaminated Heavy Water Stored at Darlington**

*Sriram Suryanarayan, Aamir Husain, Denny Williams*.....2017

**Paper 7.13P**

**Study for Highly Functional Resin (Macroporous Resin) Superior in Removing Micro Particles in PWR Primary Circuit: On-Site Test**

*Ryuji Umehara, Yuichi Shimizu, Noritaka Kogawa, Ayumu Itou, Keiichi Kondo, Yoshihide Kouzuma, Kunitaka Nagamine*.....2034

**Paper 7.14P**

**Remote Sampling and Analysis of Highly Radioactive Samples in Shielded Boxes**

*Igor V. Miroshnichenko, Oleg Yu. Pykhtev, D.A. Kirpikov*.....2047

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**Analytical Monitoring of Corrosive Impurities in NPP Coolant Water**

*Igor V. Miroshnichenko, Oleg Yu. Pykhtev, N. Ya. Vilkov, V.S. Gurski*.....2052

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**Emergency Core Cooling System Sump Chemical Effects on Strainer Head Loss**

*Matt K. Edwards, Liyan Qiu, David A. Guzonas*.....2059

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**Co-Chairs:**

John Krasznai (Kinectrics Inc)

Ivan Smiesko (Slovenske Elektrarne, NPP Bohunice)

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**Optimisation of Water Chemistry to Ensure Reliable Water Reactor Fuel Performance at High Burnup and in Ageing Plant (FUWAC): An International Atomic Energy Agency Coordinated Research Project**

*John Killeen, Francis Nordmann, Janos Schunk, Katérina Vonková*.....2073

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**Recent Developments of BOA Version 3**

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*T. Pintér, P. Németh, Á. Menyhárt, I. Buránszky, Janos Schunk, Gábor Patek.....*2284

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*Ivan Dobrevski, Neli Zaharieva.....*2290

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**Co-Chairs:**

Ian Hey (CANDU Owners Group)

Andy Rudge (British Energy – part of EDF Energy)

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*Katya Minkova, Susan M. Wozniak, John Balavage*.....

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*Michel Dupin, Christelle Cosse, D. Lepetit, Marine Pierre, A. Gacon*.....

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**Anion Analysis Using Capillary Electrophoresis in the Halden Reactor**

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**Safety Regulations Regarding to Water Chemistry in Russia's NPPs**

*Nataliya L. Kharitonova, R.B. Sharafutdinov, L.G. Denisova*.....

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*V.E. Kumanina, A.V. Yurmanova*.....

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*Pavel Kus, Rudolk Vsolak, Jan Kysela, Satoshi Hanawa, Takehiko Nakamura, Shunsuke Uchida*.....

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**Co-Chairs:**

David A. Guzonas (Atomic Energy of Canada Limited)

S.V. Narasimhan (BARC Facilities)

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<i>Kalmán Varga, B. Baja, K. Radó, Z. Németh, Gábor Patek, Janos Schunk, E. H. Deák, A. N. Szabó</i>	2564
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<i>V.S. Sathyaseelan, H. Subramanian, B. Anupkumar, A.L. Rufus, S. Velmurugan, S.V. Narasimhan</i>	2603
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## Session 11: Future Developments

### Co-Chairs:

John Roberts (Bruce Power - Retired)  
Jan Kysela (Nuclear Research Institute Rez plc)

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