Flow-accelerated Corrosion (FAC)
International Conference on Flow-accelerated Corrosion in Fossil, Combined Cycle/HRSG and Renewable Energy Plants
Tuesday, March 26, 2013 - Friday, March 29, 2013

Organizations Involved

Background
The 2013 International Conference to be held March 26-28, 2013 marks the second gathering of technical experts and end users to focus on all aspects of FAC and its occurrence in non-nuclear systems. (The 2013 FAC Conference, organized by Électricité de France, focuses on FAC in the nuclear power industry.) The Preliminary Technical Program includes 42 presentations and authors from 15 countries. The program includes a variety of topics and industries.

Who should attend the conference?
Anyone involved with FAC, including researchers, industry personnel (including engineers, chemists, operators and managers), and technical products and services organizations will benefit from attendance.

The FAC Expert Panel and Roundtable Discussion will be held on Friday, March 29. Conference attendees are encouraged to submit questions for discussion to Barry Dooley, bdooley@structint.com.

There will also be a Conference Exhibition for interested organizations such as engineering service companies, instrument manufacturers, chemical suppliers, etc. Sponsoring Opportunities are also available.

Register Now
www.facfossilhrsgconference.com
Preliminary Agenda

**INTERNATIONAL CONFERENCE ON FLOW-ACCELERATED CORROSION IN FOSSIL, COMBINED CYCLE/HRSG AND RENEWABLE ENERGY PLANTS**

**Tuesday, March 26, 2013 - Friday, March 29, 2013**

**Monday, March 25th, 2013**

6:00–8:00pm Early Registration

**Tuesday, March 26th, 2013**

7:00am Continental Breakfast and Registration. (Exhibition is Open)
8:00am Welcome and Introductory Remarks on FAC
   **B. Dooley**, Structural Integrity Associates, USA

SESSION 1: Fossil Plant FAC Experiences and Programs #1

8:20am Perpetuating a Successful FAC Program at Progress Energy.
   **C. Barbee**, E. Westberg and J. Preece, Progress Energy, USA

8:45am New Experiences within Eskom’s Flow-accelerated Corrosion Programme on Coal Fired Power Plants – Problems and Solutions.
   **A. Sewraj** and K. Northcott, Eskom, South Africa

9:10am RWE Npower’s Experience of Assessing and Managing the Risk of FAC in Water/Steam Circuits of Fossil Plant.
   **M. Conqueror**, RWE npower, UK

9:35am Experience and Management of FAC in Israel Electric Power Plants.
   **D. Zinemanas** and B. Erenburg, Israel Electric, Israel

10:00am Discussion on Session 1
10:10am Morning Coffee and Tea Break (Exhibition is Open)

SESSION 2: FAC in Air-cooled Condensers

10:40am FAC Assessment and Mitigation of an Air-Cooled Condenser.
   **A. Olszewski** and J. Barnett, Exelon Generation, USA

11:05am FAC in Air-cooled Condensers.
   **B. Dooley**, Structural Integrity Associates, USA, and A. Howell, Xcel Energy, USA

11:30am Discussion on Session 2
11:45am Lunch (Exhibition is Open)
SESSION 3: Combined Cycle/HRSG FAC Experiences and Programs #1  
1:00pm  Cycle Chemistry Refinement to Reduce FAC. Instrumentation Upgrades to Enhance Cycle Chemistry Monitoring.  
   S. Joki, Portlands Energy Center, Canada
1:25pm  Combined Cycle Power Plants (CCPP) with Once-through HRSGs – Is FAC here an Issue?  
   M. Rziha, Siemens Energy, Germany
1:50pm  Assessing FAC in Combined Cycle Plants with HRSGs.  
   J. Huhs, NRG Energy, USA and B. Dooley, Structural Integrity Associates, USA
2:15pm  Chemistry and Mechanical Field Assessment Actions for Effective Flow-accelerated Corrosion Minimization in Heat Recovery Steam Generators.  
   D. Addison, Thermal Chemistry, New Zealand and L. Stanley, HRST, USA
2:40pm  Discussion on Session 3
2:50pm  Afternoon Coffee and Tea Break.  (Exhibition is Open)

SESSION 4: FAC Codes and Modeling  
3:20pm  FAC Screening Analysis and Experience Feedback Gained from Fossil Fired Plants in Belgium.  
   H. Nopper, Areva, Erlangen, Germany, and C. Laire, Areva, Belgium
   P.M. Gotovtsev and V.N. Voronov, Moscow Power Institute, Russia
4:10pm  FAC surveillance at Le Havre Unit 4 using BRT-CICERO™.  
   Maintenance program, pipes & welds thickness measurements and alloy contents measurement.  
   P. Caylar, D. Delacoux, H. Adghar and S. Trévin, V. Cadinot and R. Masselin, Électricité de France, France
4:35pm  Discussion on Session 5
4:45pm  General Discussion on FAC.
5:30-7:00pm  Networking Reception.  (Exhibition is Open)

Wednesday, 27th March 2013  
7:00am  Continental Breakfast.  (Exhibition is Open)

SESSION 5: FAC in Renewable Energy Plants: Geothermal and Solar  
8:00am  Flow-accelerated Corrosion of Metals in Geothermal Flows.  
   G.V. Tomarov, JSC Geotherm-EM, Russia
   I. Richardson, Mighty River Power, New Zealand, D. Addison, Thermal Chemistry, New Zealand, and S. Addison, Mighty River Power, New Zealand
8:50am  Effect of Flowing Environment on Corrosion - Geothermal Environment.  
   J. Soltis and K.A. Lichti, Quest Integrity, New Zealand, and M.E. Inman, Faraday Technology, USA
R. Baier and R. Gamble, Areva, Germany
9:40am  Discussion on Session 5
9:45am  Morning Coffee and Tea Break.  (Exhibition is Open)

SESSION 6: NDE and Material Analysis for FAC #1
10:15am  An Overview of Present and Future NDE Technologies for FAC Detection and Monitoring.  
H. Queen, J. Van Velsor, J. Milligan, and O. Malinowski, Structural Integrity Associates, USA
10:40pm  Detection of Flow-accelerated Corrosion without Insulation Removal.  
L. Volkman, Applus RTD, USA and D. Sielski, Tennessee Valley Authority, USA
11:05am  Defect Imaging in Plate Structure using Ultrasonic Guided-wave Arrays.  
Y. Nagashima, M. Miki, M. Endo, Hitachi Research Laboratory, Japan, Y. Nonaka, Hitachi GE-Nuclear, Japan; and K. Asami, Hitachi Engineering Services, Japan
D. Delacoux, P. Caylar, and S. Trévin, Électricité de France, France
11:55pm  Discussion on Session 6
12:00pm  Lunch.  (Exhibition is Open)

SESSION 7: Cycle Chemistry Aspects and Control of FAC
1:15pm  The IAPWS Technical Guidance Documents - Internationally Acknowledged  
Documents helping to Reduce the FAC Risk.  
M. Rziha, Siemens Energy, Germany, and B. Dooley, Structural Integrity Associates, USA
D. Addison, Thermal Chemistry, New Zealand, and Members of IAPWS Task Group who Developed the TGD
R. Turner, Swan Analytical, USA, and M. Sigrist, Swan Systeme AG, Switzerland
2:30pm  The Effects of Amines on FAC in Steam-Water Systems.  
C. Lerksurasakda, P. Srisukvatananan, Lihui Liu, and Derek Lister, University of New Brunswick, Canada, and J. Mathews, Electric Power Research Institute, USA
2:55pm  Afternoon Coffee and Tea Break. Exhibition is Open

SESSION 8: FAC Mechanisms
3:25pm  Determination of High-Risk Zones for Local Wall Thinning due to Flow-accelerated Corrosion.  
S. Uchida, M.Naitoh, H. Okada and H. Suzuki, Institute of Applied Energy, Japan, S. Koshiduka, University of Tokyo, Japan, and D. Lister, University of New Brunswick, Canada
N. Fujisawa, T. Takano, T. Yamagata, and N. Kanatani, Niigata University, Japan
4:15pm  Surface Morphological Changes of Carbon Steel Corrosion Sensors Downstream from an Orifice.  
S.R. Mohd Kamarudin, Malaysian Nuclear Agency, Malaysia; Y.Tsujii, Department of Energy Engineering and Science, Japan; and Y.Utanohara, Institute of Nuclear Safety System, Japan
4:40pm  Pattern Formation in Single Phase FAC: A Stability Analysis of an Oxide Layer.  
D. Zinemanas and A. Herszage, Israel Electric, Israel
5:05pm  Discussion on Sessions 7 and 8 and General Discussion on FAC
Thursday, 28th March 2013

7:00am  Continental Breakfast. (Exhibition is Open)

SESSION 9: Combined Cycle/HRSG FAC Experiences and Programs #2

8:00am  Combined Cycles with Heller systems: Challenges and Solutions for Water Chemistry.
        **P. Honcoop**, NEM Energy bv, The Netherlands

8:25am  FAC: Facing and Challenging.

8:50am  Discussion on Session 9

SESSION 10: Fossil Plant FAC Experiences and Programs #2

9:00am  Managing FAC in a Diverse Fleet of Fossil Plants.
        **J. Huhs**, NRG Energy, USA; B. Dooley and K. Shields, Structural Integrity Associates, USA

9:25am  FAC Experience at New Madrid.
        **L. Braun**, Associated Electric Cooperative, Inc., USA

9:50am  Morning Coffee and Tea Break. (Exhibition is Open)

10:20am FAC at Jorge Lacerda Coal Fired Power Plant – Lessons Learned.
        **L. Felippe**, Tractebel Energia, GDF Suez, Brazil

10:45am Discussion of Session 10

SESSION 11: NDE and Material Analysis for FAC #2

10:50am  Practical Applications of Destructive and Non-Destructive Evaluation Techniques for FAC.
         **P. Waldrop**, PacifiCorp, USA

11:15am  Pulsed Eddy Current Non-Destructive Testing for FAC.
         **D.A. Bosko**, Intertek, USA

11:40am  Reliability Assessment of Pipe Wall Thinning Measurements using Electromagnetic Acoustic Transducer.
         **F. Kojima**, Kobe University, Japan, D. Kosaka, Polytechnic University, Japan, and H. Nakamoto, Kobe University, Japan

12:05pm  Lunch (Exhibition is Open)

1:20pm  Using RVI to Reveal, Gauge and Measure FAC.
         **J.J. Stadler**, GE Inspection Technologies, USA

1:45pm  Discussion of Session 11
SESSION 12: Fossil Plant FAC Experiences and Programs #3

1:55pm Ontario Power Generation’s Experience with FAC.
   J. Siracusa, Ontario Power Generation, Canada

2:20pm Use of Neutralizing Amines and Formation of Iron Oxide on Steel Surfaces of the Condenser Steamside.
   N.A. Parker and A. Howell, Xcel Energy, USA

2:35pm Flow Accelerated Condensate Corrosion in a Newly-Commissioned Plant.
   A. Howell, Xcel Energy, USA.

3:00pm Further Lessons Learned from Fossil Plant Assessments.
   B. Dooley, K. Shields and L. McQueen, Structural Integrity Associates, USA and Canada

3:25pm Discussion of Session 12

3:35pm Closing Remarks. Summary of Discussion and Key FAC Aspects

4:00pm Adjournment of Conference

Friday, 29th March 2013

7:30am Continental Breakfast

8:00am FAC Expert Panel and Round Table Discussion

10:00am Morning Coffee and Tea Break

12:00 noon Adjournment of Panel and Discussion

Conference International Advisory Group Members

David Addison, Thermal Chemistry, New Zealand
Bob Anderson, Competitive Power Resources, USA
Professor Albert Bursik, PowerPlant Chemistry, Germany
Andy Howell, Xcel Energy, USA
Gary Joy, CS Energy, Australia
Dr. Zhigang Li, TPRI, China
Professor Derek Lister, University New Brunswick, Canada
Des McInnes, Stanwell, Australia
Keith Northcott, Eskom, South Africa
Professor Tamara Petrova, Moscow Power Institute, Russia
Michael Rziha, Siemens, Germany
Professor Hiroshi Takaku, Shinshu University, Japan
Stephane Trevin, Électricité de France (EDF), France
Professor Shunshuke Uchida, JAERI, Japan
Stan Walker, EPRI, USA
Daniel Zinemanas, Israel Electric, Israel
Area Information
Arlington, Virginia is adjacent to Washington D.C., America’s capital. In Washington D.C., you will find the White House, the United States Capitol Buildings, and the National Mall—an open park area with The Washington Monument, Jefferson Memorial, Lincoln Memorial and other national landmarks. The Smithsonian Institution, The Library of Congress, National Archives and the National Gallery of Art are a few of the world-renowned institutions that attract tourists from around the world. Whatever your age or interests, Washington, D.C. is a memorable destination.

Weather
The weather during March can be chilly. Expect temperatures ranging from a high of 55 degrees (Fahrenheit) to a low of 33 degrees (Fahrenheit).

Air Travel
The Washington DC area is served by three major airports.

Washington Dulles International Airport (IAD). This airport is located 26 miles (42km) west of the city and 23 miles from the host hotel. It operates both domestic and international flights.

Baltimore/Washington International Airport (BWI). This airport is located 34 miles (55km) northeast of downtown Washington and 39 miles from the host hotel. It serves both domestic and international airlines.

Ronald Reagan National Airport (DCA). The airport is located 3 miles (5km) south of the city and 7 miles from the host hotel. It serves more than 60 domestic destinations and three Canadian/Caribbean ones.