Sunday, October 21, 2007

8:00 am – 4:00 pm  SESSION 1  
St. John’s  
Bleach Plant Workshop  
Presenters: Thomas McDonough, IPST @ Georgia Tech; Richard Berry, FPIInnovations, Paprican; Doug Pryke, Alliance for Environmental Technology; Bill Miller, Andritz; Andy Garner, Andrew Garner & Assoc.

Monday, October 22, 2007

7:00 am – 9:00 am  COFFEE BREAK  
Outside Ballrooms 6-8

8:30 am – 10:00 am  SESSION 2  
Ballrooms 6-7  
Opening Session, Awards & Keynote Address  
Keynote - Innovation and Sustainability for the Forest Based Industries  
Miles Drake, CTO/Sr. VP of Technology, Weyerhaeuser Co.

10:00 am – 10:30 am  COFFEE BREAK  
Ballroom 5

10:30 am – Noon  SESSION 3  
Ballroom 7  
State of the Industry Report  
Presenter: Jacquelyn D. McNutt, CPBIS

10:30 am – 11:30 am  SESSION 4  
Ballroom 8  
Advances in Chemical Pulping  
Session Chair: Calvin (Cal) Clark, BE&K Engineering Co.

4-1  10:30 Effect of Sulfite, Sulfide and Hydroxide Concentrations in Mini Sulfide Sulfite Anthraquinone Pulping  
Ved Naithani, Mathias Lindstrom, Adrianna Kirkman and Hasan Jameel  
North Carolina State University

4-2  11:00 How Does Hydroxyethylidene Diphosphonic Acid (HEDP) Accelerate Kraft Pulping?  
Richard Berry, Yujun Sun and Corinne Luthe, FP Innovations, Paprican

10:30 am – Noon  SESSION 5  
St. John’s Mill Engineering Panel Session: Challenges Mill Engineers Face  
Panel Moderator: Steve Dowe, Jacobs Engineering Group

Panelists:  
Byron Alvey, Weyerhaeuser Co.  
Andy Norris, Georgia-Pacific Corp.  
Charles L. Gustafso, Jacobs Engineering Group Inc.

10:30 am – Noon  SESSION 6  
Clearwater  
Improvements in Mechanical Pulping  
Session Chair: Stephen F. Robinson, Premier Chemicals LLC

6-1  10:30 Shive Content Modeling and Simulation in Chemi-Thermo-Mechanical Pulping  
Manne Tervaskanto and T. Ahvenlampi, University of Oulu  
T. Harju, Metso Automation
Synergistic Effects Between Chemical Mechanical Pulps and Chemical Pulps from Hardwoods
Eric C. Xu, Andritz Inc.

The Study on Contamination Characteristic and Decolourization Method of Chemi-thermomechanical Pulp Effluent
Zhijun Hu and Kaitang Hu, Zhejiang University of Science and Technology
Youming Li, South China University of Technology

The Effect of Seasonal Variation in Wood Moisture Content on Chip Size and Kraft Pulping
William F. Watson, CEM Machine, Inc.
Randy Stevenson, Georgia-Pacific Corp.

Effects of Specific Gravity and Lignin Content on the Pulp Yield of Loblolly Pine
David E. White, Charles E. Courchene and Thomas J. McDonough, IPST @ Georgia Tech
Laurie Schimleck and David Jones, University of Georgia
Gary Peter, University of Florida
Robert Purnell and Gopal C. Goyal, International Paper Co.

Evaluation of the SuperBatch™ Pulping Process for Pinus taeda
Fernando Soares Ribeiro de Vasconcelos, Klabin S.A
Francides Gomes da Silva Júnior, University of São Paulo

Hydrogen Peroxide—An Environmentally Friendly but Dangerous Bleaching Chemical
Alan W. Rudie, USDA Forest Products Laboratory
Peter W. Hart, MeadWestvaco Corp

Safety Considerations in the use of Chlorate and Chlorine Dioxide in Pulp Bleaching Processes
Jim J. Hopmans, ERCO Worldwide

Update on Work Being Done on Chlorate and Chlorine Dioxide by a Subcommittee of AET
Douglas C. Pryke, AET
1:30 pm – 3:00 pm  SESSION 10
Ballroom 8
Wastewater Treatment and Analysis
Session Chair: Michael H. Foster, EBS Environmental

10-1  1:30
Changes in Wastewater Pollutant Loading Associated with Closure of Recycled Fiber Processing
Curtis W. Bryant, Weyerhaeuser Co. and Diane Hardison, Domtar Inc.

10-2  2:00
Nutrient, COD and Solids Mass Balances for Pulp & Paper Activated Sludge Wastewater Treatment Plants: The Practical Benefits for a TMP Mill
Lucy E. Cotter, Jean-Martin Brault and Paul R. Stuart, Ecole Polytechnique Daniel Lemire and Sylvain Bussière, White Birch Papers

1:30 pm – 3:00 pm  SESSION 11
St. John’s
New Asset Management Approaches
Session Chair: Jerry D. Kahn, JK Consulting

11-1  1:30
The Partnership Organization
H. Christer S. Idhammer, IDCON Inc.

11-2  2:00
Managing Assets Using Performance Supervision
Michel Ruel, TOP Control Inc.

11-3  2:30
The Potential for Improved Paper Quality and Machine Run-Ability through Machine Cleanliness
Wade Parks, WP Associates

3:00 pm – 3:30 pm  COFFEE BREAK
Ballroom 5

3:30 pm – 5:00 pm  SESSION 12
Ballroom 6
Simulation Software Workshop
The apiMAX System,
Felipe Perez-Paton, American Process Inc.

3:30 pm – 5:00 pm  SESSION 13
Ballroom 7
Bleaching with Oxygen and Peroxide
Session Chair: Richard M. Berry, FP Innovations, Paprican

13-1  3:30
Modern Approaches to the Design of Environmentally Benign Stabilizers of Peroxy Compounds in Pulp Bleaching
Reijo Aksela, Ilkka Renvall, and Hannu Hämäläinen, Kemira Oyj

13-2  4:00
Effect of Pulp Delignification Degree and Bleaching Process on an Eucalyptus Fiber Line Performance and Economics
Jorge L. Colodette, Jarrod Tucker, Richard Phillips, Hasan Jameel and José L. Gomide, Federal University of Viçosa

13-3  4:30
TAED Activator for Peroxide Bleaching of Recycled Pulp
Jeffery S. Hsieh, Yong Zou, and Chhaya Agrawal, Georgia Institute of Technology
Jane Matthews, Warwick International Group Limited
3:30 pm – 5:00 pm  SESSION 14
Ballroom 8  Sulfur Emissions from Wastewater Treatment
Session Chair: Robert M. Stein, Aware Environmental Inc.

14-1  3:30 Reduced Sulfur Compound Emissions from Kraft Mill Wastewater Treatment Plants
Ashok K. Jain, NCASI

14-2  4:15 Group Discussion
Approaches Used to Control Sulfur Emissions’ Problems in Mill Effluent Streams
Ashok K. Jain, NCASI
Robert M. Stein, Aware Environmental Inc.

3:30 pm – 5:00 pm  SESSION 15
St. John’s  Bill Babbington Maintenance Roundtable
Session Chair: Jerry D. Kahn, JK Consulting

Tuesday, October 23, 2007

6:45 am – 8:30 am  SESSION 16
Daytona  Hot Topics Breakfast
Group discussions of latest technical/production developments and operating problems

8:30 am – 10:00 am  SESSION 17
Ballroom 6  Advances in ECF Bleaching
Session Chair: Jorge L. Colodette, Federal University of Viçosa

17-1  8:30 Comparison of Various Hardwood Kraft Pulp Pre-Beaching Techniques
Dale E. Nutter, MeadWestvaco Corp.
Kelley Spence and Jarrod Tucker, North Carolina State University
Peter W. Hart, North Carolina State University and MeadWestvaco Corp.

17-2  9:00 The Chemistry of Aldehyde Enhanced Bleaching
Richard Berry, Waleed Wafa Al-Dajani, Zhi-Hua Jiang and Barbara van Lierop, FP Innovations, Paprican

17-3  9:30 Optimization of ECF Bleaching of Kraft Pulp: II Effects of Acid Prehydrolysis on Hardwood Pulp Bleachability
Thomas J. McDonough and Charles E. Courchene, IPST @ Georgia Tech
Shunichiro Uno, Nippon Paper Industries
Alan W. Rudie, USDA Forest Products Laboratory

8:30 am – 10:00 am  SESSION 18
Ballroom 7  Biorefinery Tutorial - A Review of Alternatives for Forest-Based Biorefineries
William J. Frederick, Kristiina Iisa and Art Ragauskas, Georgia Institute of Technology
Steve Kelley, North Carolina State University

8:30 am – 10:00 am  SESSION 19
Ballroom 8  Measuring the Paper Business
Session Chair: Colleen C. Walker, CPBIS
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<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Speaker/Authors</th>
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<tbody>
<tr>
<td>9:30</td>
<td>Market Dynamics in Timber Procurement</td>
<td>Kendra C. Taylor, Booz-Allen-Hamilton, Paul M. Griffin, and Joel S. Sokol, Georgia Institute of Technology</td>
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<tr>
<td>8:30 am – 10:00 am</td>
<td>SESSION 20 St. John’s Optimizing Chemical Recovery</td>
<td>Session Chair: Christopher T. Dietel, DTE Energy Services</td>
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<td>8:30</td>
<td>Effects of Chloride, Potassium and Sulfate on the Causticizing Reaction in the Kraft Recovery Process</td>
<td>Honghi Tran, Sona Saeid and Vladimiro G. Papangelakis, University of Toronto</td>
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<td>9:00</td>
<td>Combustion by Design - Practical Kiln Optimization</td>
<td>Richard P. Manning, Cliff J. Rennie and Chris Sansom, Kiln Flame Systems Ltd.</td>
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<td>8:30 am – 10:00 am</td>
<td>SESSION 21 Clearwater Workshop on Lower Furnace Corrosion—Part I</td>
<td>Session Chair: Douglas L. Singbeil, FPInnovations, Paprican</td>
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<td>10:00 am – 10:30 am</td>
<td>COFFEE BREAK Ballroom 5</td>
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<td>10:30 am – Noon</td>
<td>SESSION 22 Ballroom 6 Pretreatments to Enhance Bleaching</td>
<td>Session Chair: Brian N. Brogdon</td>
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<td>10:30</td>
<td>Reduction of Soda Usage for Acacia Kraft Pulp by Mechanical Pretreatment</td>
<td>Jeffery S. Hsieh and Arthur J. Ragauskas, Georgia Institute of Technology W. Widiatmoko, IPST @ Georgia Tech</td>
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<td>11:00</td>
<td>New Technology Tools Discover Enzyme Products to Enhance Pulp Bleaching</td>
<td>Bill Hancock and Ali R. Esteghalian, Verenium Corporation</td>
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<td>11:30</td>
<td>Extractive Removal and Selectivity Improvement by Various Pretreatment Methods Prior to Oxygen Delignification for Acacia mangium and Mixed Hardwood Kraft Pulps</td>
<td>Jeffery S. Hsieh and Arthur J. Ragauskas, Georgia Institute of Technology W. Widiatmoko, IPST @ Georgia Tech</td>
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<td>10:30 am –</td>
<td>SESSION 23</td>
<td>Determining the Effects of Wood Pretreatments</td>
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<td>Ballroom 7</td>
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<td>23-1 10:30</td>
<td>Acid Prehydrolysis of Wood</td>
<td>Alan W. Rudie, USDA Forest Products Laboratory</td>
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<td>23-2 11:00</td>
<td>Alkaline Extraction of Hemicelluloses from</td>
<td>Waleed Wafa Al-Dajani, FPInnovations, Paprican</td>
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<td>Aspen Chips and Its Impact on Subsequent</td>
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<td>Kraft Pulping</td>
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<td>23-3 11:30</td>
<td>Kraft Pulping Kinetics of Hot-Water</td>
<td>Gangesh Mishra, State University of New York</td>
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<td>Extracted Eucalyptus Wood Chips Part I: An</td>
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<td>Experimental Study</td>
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<td>10:30 am –</td>
<td>SESSION 24</td>
<td>Workshop on Lower Furnace Corrosion-Part II</td>
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<td>Noon</td>
<td>Clearwater</td>
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<td>to Our Bio-Future and the Range of Product</td>
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<td>Possibilities</td>
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<td>25-2 11:00</td>
<td>Short-Column Ion-Exchange Technologies for</td>
<td>Jon Foan, NORAM Engineering, Naceur Jemaa, FPInnovations, Paprican and Mike Sheedy, Eco-Tec Inc.</td>
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<td>Kraft Pulp Mill Chemical Cost Reduction</td>
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<td>Noon</td>
<td>St. John’s</td>
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<td>26-1 10:30</td>
<td>Pursuing Sustainability</td>
<td>Dale K. Phenicie, Environmental Affairs Consulting</td>
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<td>26-2 11:00</td>
<td>Sustainability and Forest Products - Concepts</td>
<td>Sergio F. Galeano, Georgia-Pacific Corp.</td>
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<td>Application and Challenges</td>
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<td>26-3 11:30</td>
<td>A review of programs for characterizing the</td>
<td>Reid A. Miner, NCASI</td>
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<td>environmental friendliness of paper products</td>
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<td>1:30 pm –</td>
<td>SESSION 26</td>
<td>Environmental Management - Sustainability Panel</td>
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<td>3:00 pm</td>
<td>Ballroom 8</td>
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<td>27-1 1:30</td>
<td>Session Introduction: Evaporator Panel</td>
<td>Christopher L. Verrill, International Paper Co.</td>
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<td>Panel Moderator: Christopher L. Verrill,</td>
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<td>International Paper Co.</td>
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<td>2:00</td>
<td>27-2</td>
<td>Pulp and Paper Industry Energy Bandwidth Study</td>
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<td>3:00</td>
<td>27-4</td>
<td>Membrane Technology for Pre-Evaporation</td>
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<td>1:30 pm – 3:00 pm</td>
<td>SESSION 28</td>
<td>Non-Metal Corrosion Issues – Cause and Effect</td>
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<td>28-1</td>
<td>1:30</td>
<td>Corrosion Problems are Solved with Fiberglass that is Tougher than Ever</td>
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<td>28-2</td>
<td>2:00</td>
<td>Peroxide Resistance of Felts, Fabrics and Roll Covers</td>
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<td>28-3</td>
<td>2:30</td>
<td>TIP 0402-28 Best Practice for Inspecting FRP Equipment – Understanding the Damage Mechanisms and Specifying Damage Criteria Improves Inspection Value</td>
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<td>1:30 pm – 3:00 pm</td>
<td>SESSION 29</td>
<td>Advancing the Biorefinery for Non-Woods</td>
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<td>29-1</td>
<td>1:30</td>
<td>Nonwood Fiber Raw Materials and the Biorefinery</td>
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<td>29-2</td>
<td>2:00</td>
<td>A Biorefinery Process Suitable for Non-Wood Fibers</td>
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<td>29-3</td>
<td>2:30</td>
<td>Non-Wood Biorefinery Developments Outside North America</td>
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<td>1:30 pm – 3:00 pm</td>
<td>SESSION 30</td>
<td>Boiler Water Treatment Workshop</td>
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<td>30-1</td>
<td>1:30</td>
<td>Condensate Treatment and System Monitoring and Control</td>
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<td>30-2</td>
<td>2:00</td>
<td>Recovery Boiler Waterside Inspections</td>
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<td>30-3</td>
<td>2:30</td>
<td>Boiler Chemical Cleaning Frequency</td>
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<td>1:30 pm – 3:00 pm</td>
<td>SESSION 31</td>
<td>Climate Change</td>
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31-1  1:30  Climate Change Policy and Regulatory Developments  
  Rhea Hale, AF&PA  
  Tom Rosser, Forest Products Assn. of Canada  
  Pertti Laine, Finnish Forest Industries Federation  
  Sarah B. King, DuPont

3:00 pm – 3:30 pm  COFFEE BREAK  
  Pre-function Area

3:30 pm – 5:00 pm  SESSION 32  
  Ballroom 6  
  Bandwidth Follow-Up Part II: Dewatering/Drying  
  Panel Moderator: Timothy F. Patterson, IPST @ Georgia Tech

Panelists:  
  David E. White, IPST @ Georgia Tech  
  Robert B. Kinstrey, Jacobs Engineering Group Inc.  
  John Nuen – Albany International  
  Paul McCarten – Voith Paper  
  Steve Metzler - MeadWestvaco Corporation  
  Marc Foulger – GL&V

3:30 pm – 5:00 pm  SESSION 33  
  Ballroom 7  
  Boiler Operations  
  Session Chair: Chris Suggs, Sonoco Products Co. Inc.

33-1  3:30  The Application of Automatic Port Rodding and High Efficiency Sootblowing to Improve Recovery Boiler Run Time  
  Philip S. McAllister, Simon Youssef and Jason Adams, Diamond Power International  
  Dan Young and Nick Wildey, Glatfelter

33-2  3:50  Optimizing CO and NOx Emissions from Hog Fuel Boilers  
  Allan R. Walsh, Jansen Combustion and Boiler Technologies, Inc.

33-3  4:10  Induction Heat Tube Extraction for Generating Bank Re-Tubing: Technology Update  
  Wade P. Blaser, Babcock & Wilcox Co.

33-4  4:30  Solubility and Solid Phase Composition in Boiling-Temperature Na2CO3–Na2SO4 Solutions – A Modeling Approach  
  Nikolai DeMartini, IPST @ Georgia Tech  
  Marta A. Bialik, Hans Theliander and Peter Sedin, Chalmers University of Technology  
  Christopher L. Verrill, International Paper Co.

3:30 pm – 5:00 pm  SESSION 34  
  Ballroom 8  
  Kraft Liquor Corrosion—Reports from the Front Line  
  Session Chair: Stephen J. Lukezich, Diamond Power International

34-1  3:30  Susceptibility of Duplex Stainless Steels to Corrosion and Stress Corrosion Cracking in Pulping Liquors  
  Ananya Bhattacharyya, Jamshed Mahmood and Preet M. Singh, Georgia Institute of Technology

34-2  4:00  Corrosion of Stainless Steel in High Solids Black Liquor
Margaret Gorog, Weyerhaeuser Co.

34-3  4:30  Cracking of Pin-Studded Carbon Steel Waterwall Boiler Tubes
        Joseph R. Kish, FP Innovations, Paprican

3:30 pm – 5:00 pm  SESSION 35
St. John’s
Advancing the Biorefinery for Wood
Session Chair: Lucian A. Lucia, North Carolina State University

35-1  3:30  A Biorefinery Approach: Non-Sulfur Pulping with Partial Lignin Recovery
        Conversion
        Todd S. Bolton, R. C. Francis and Thomas E. Amidon, State University of New York

35-2  4:00  Evaluation of Wood-Based Biorefinery Options for Pulp and Paper Mills
        Theodora Retsina and Vesa Pylkkanen, American Process Energy Recovery

35-3  4:30  Biorefinery Discussion
        Todd Bolton, State University of New York
        Theodora Retsina, American Process Inc.
        Lucian A. Lucia, North Carolina State University

3:30 pm – 5:00 pm  SESSION 36
Clearwater
Current Issues in Air
Session Chair: Daniel S. Diehl, Bowater Inc.

36-1  3:30  New Source Review Reform—The Challenges Ahead
        Tammy Wyles, Georgia-Pacific Corp.

36-2  3:50  Bucksport Environmental Innovative Partnership Project
        Marc A. Cone, Maine Department of Environmental Protection
        Kenneth Gallant, Verso Paper

36-3  4:10  Case Study: PSD Permitting for Petcoke Fuel in a Lime Kiln
        Phil Cobb, Golder Associates.

36-4  4:30  BART Exemption and Control Evaluation Modeling Analyses Conducted for the Pulp & Paper Industry
        Steven R. Marks and Sal K. Mohammad, Golder Associates

Wednesday, October 24, 2007

6:45 am – 8:00 am  SESSION 37
Daytona
Hot Topics Breakfast
Group discussions of the latest technical/production developments and operating problems

8:30 am – 10:00 am  SESSION 38
Ballroom 5
Advances in Eucalyptus Pulping
Session Chair: Gail A. Sherson, FP Innovations, Paprican

38-1  8:30  Mixtures of Eucalyptus Grandis x Eucalyptus Urophylla and Pinus Taeda Woodchip for the Production of Kraft Pulping Using the Lo-Solids Process
8:30 am – 10:00 am  SESSION 39
Ballroom 6  Advances in Non-Wood Processing – Part I
Session Chair: Jairo H. Lora, GreenValue SA

39-1  8:30  Complete Hydrolysis of Bamboo Fibers in Formic Acid
Shijie Liu, State University of New York
Yong Sun, Lu Lin, Chunsheng Pan, Haibo Deng, Hong Peng, Jiazhe Li,
Runchang Sun and Beihai He, South China University of Technology

39-2  9:00  Steam Explosion Pre-Treatment on Alkali-Oxygen Pulping of Bamboo
Wikhan Anapanurak, Nikhom Laemsak, Teera Veenin and Rusamee
Boonpradit, Kasetsart University
Pensri tiwannapat, Royal Forest Department, Bangkok

39-3  9:30  Research on Cotton Bast Pulping Using Alkaline Peroxide BIVIS Pulp Method
Zhijun Hu and Kaitang Hu, Zhejiang University of Science and Technology
Xunzai Nie, Hubei University of Technology
Youming Li, South China University of Technology

8:30 am – 10:00 am  SESSION 40
Ballroom 7  Advances in Chemical Recovery
Session Chair: James A. Dickinson, Babcock & Wilcox Co.

40-1  8:30  Prediction of the Solubility of Recovery Boiler Precipitator Ash
Daniel M. Saturnino and Honghi Tran, University of Toronto

40-2  9:00  The Effect of Dead Load Chemicals in the Kraft Pulping and Recovery System
Thomas M. Grace, T.M. Grace Co.
Honghi Tran, University of Toronto

40-3  9:30  Update of the American Forest & Paper Association Recovery Boiler Program
Thomas J. Grant, AF&PA

8:30 am – 10:00 am  SESSION 41
Ballroom 8  Details, Details, Details – Specifying Quality into Your Process Plant
Session Chair: Alex D. Nadezhdin, Norbord

41-1  8:30  Post-Fabrication Cleaning of Stainless Steel in the Pulp and Paper Industry
Elisabeth Torsner and Chris Baxter, Outokumpu Stainless Inc.
Anders Bornmyr, Avesta Finishing Chemicals AB
Ralph Davison, Technical Marketing Resources Inc.
41-2 9:00 Welding of Duplex Stainless Steels
Ralph M. Davison, Technical Marketing Resources Inc.

41-3 9:30 Understanding How Changes in Pressure Vessel Codes May Impact Pressure Vessel Performance
Patrick J. Sullivan, Highlander Engineering Services PLLC

8:30 am – 10:00 am SESSION 42
Clearwater Water Issues
Session Chair: William M. Jernigan, Georgia-Pacific Corp.

42-1 8:30 Water Consumption at Pulp and Paper Mills
Barry Malmberg, NCASI

42-2 9:00 Sheldon Mill Closure: From ESA to NFA
Nicole A. Roy, Abitibi-Consolidated
C. Hunter Nolen, Camp Dresser & McKee

Hiroshi Araki, Akiko Nakamura, Katsuyuki Kishi, and Yasunori Nanri, Japan Pulp and Paper Research Institute, Inc.
Norio Onikura, Kyushu University

10:00 am – 10:30 pm COFFEE BREAK
Prefunction Area

10:30 am – Noon SESSION 43
Ballroom 6 Advances in Non-Wood Processing –Part II
Session Chair: E. Kendall Pye, Lignol Innovations Ltd.

43-1 10:30 Pulp and Paper Produced Using from EFB Using a Semichemical Process
Alberto Gonzalo and J.L. Sanchez, University of Zaragoza
E. Escudero, F. Marin and R. Fuertes, Straw Pulping Engineering S.L.

43-2 11:00 Characterization and Evaluation of Dhaincha (Sesbania aculeata) as Papermaking Fiber
M. Sarwar Jahan, D.A. Nasima Chowdhury, and M. Khalidul Islam, BCSIR Laboratories

43-3 11:30 Wastewater Treatment of Papermaking Tobacco Leaf with Anaerobic Granular Sludge
Hou Yi, Li Youming and Hu Songqing, South China University of Technology

10:30 am – Noon SESSION 44
Ballroom 5 Measurement Techniques for Effective Pulping
Session Chair: Michael H. Schofield, Hercules Inc.

44-1 10:30 Improved Methods for Measuring Residual Effective Alkali in Kraft Black Liquors - Part 1: Absolute Measurement by Capillary Electrophoresis
Joseph L. Sullivan, Theodore Radiotis and Maurice Douek, FP Innovations, Paprican
<table>
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<th>Time</th>
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| 44-2  | 11:00 Improved Methods for Measuring Residual Effective Alkali in Kraft Black Liquors - Part 2: Comparison of Titration Methods  
*Theodore Radiotis, Joseph L. Sullivan, Martin MacLeod, Saima Syed and Tim O'Hagan, FP Innovations, Paprican* |
| 44-3  | 11:30 Single Fiber Lignin Distributions Based on the Density Gradient Column Method  
*Alan W. Rudie, USDA Forest Products Lab* |
| 10:30 am – Noon |  **SESSION 45**  
ballroom 7 |  **Green Power Panel Session**  
Panel Moderator: Ed Smith, SP Newsprint  
A special panel comprised of a green power generator, marketer/purchaser, certifier, and user explore what green power is specifically, its sources, types, RECs, etc., and looks at how the markets for RECs work, what the buyer requires after the sale, what the potential value is, etc. |
| 10:30 am – Noon |  **SESSION 46**  
ballroom 8 |  **Data Reconciliation**  
Session Chair: Luc Laperrière, CIPP at UQTR  
46-1 10:30 Data Reconciliation 101- Challenges and Benefits  
*Luc Laperrière, CIPP at UQTR*  
46-2 11:00 Mill Information System Uses Dynamic Data Reconciliation for Accurate Energy Accounting  
*Larry Wasik, Aurel Systems*  
*Dave Tannar, Catalyst Paper*  
*Dave Alexander, 3Sigma*  
46-3 11:30 Process and Business Data Reconciliation in the Pulp and Paper Industry  
*Milan Korbel and Paul R. Stuart, Ecole Polytechnique De Montreal*  
*Laurent Garriques, OSISoft Canada* |
| 1:30 pm – 3:00 pm |  **SESSION 47**  
ballroom 5 |  **Dealing with Black Liquor**  
Session Chair: Joseph Wilson, StarChem LLC  
47-1 1:30 Influence of Kraft Black Liquor Components on the Performance of Silicone Foam Control Agents  
*Sung-Hsuen Chao and Laurent Vermeire, Dow Corning*  
*Torolf Laxen, SciTech-Service Oy Ltd.*  
47-2 2:00 Improving Washing Efficiencies in the Kraft Pulp Mill with New Defoamer Technology  
*Mark Schroen, Buckman Laboratories Inc.*  
*Philip M. Hoekstra, Buckman Laboratories Inc.* |
| 1:30 pm – 3:00 pm |  **SESSION 48**  
ballroom 8 |  **Semichemical Processing**  
Session Chair: Leon A. Livingstone, Neill & Gunter Ltd.  
48-1 1:30 Condensate Chemistry in NSSC Evaporators  
*Douglas Wynn and Bett Antes, Smurfit-Stone Container Corp.* |
48-2 2:00 Sulfur Dioxide Removal Efficiency Optimization in a Sulfite Recovery Boiler Scrubber/Absorber  
Leon A. Livingstone, Neill and Gunter, Design and Consulting Engineers  
James P. Henderson, Rayonier Performance Fibers

1:30 pm – 3:00 pm SESSION 49  
Ballroom 7  
Improving Pulp Processing  
Session Chair: Deni Barton, Hercules Inc.

49-1 1:30 Dynamic Steam Heating - Efficient Use of Low-Temperature and Low-Pressure Steam for Heating Different Media by Dynamic Steam Blending  
Ludwig Michal and Christian Wallner, Andritz AG

49-2 2:00 No-Load Characterization of a Low-Consistency Disc Refiner for an Effective Application of Refining Theories  
Ruben Bordin, Jean-Claude Roux and Jean-Francis Bloch, Tembec R&D Kraft

1:30 pm – 3:00 pm SESSION 50  
Ballroom 6  
Advances in Non-Wood Processing - III  
Session Chair: Robert W. Hurter, HurterConsult Inc.

50-1 1:30 Novel Feedstocks—Future Revolutions in Papermaking?  
Keijo J.E. Hytönen and Juha P. Tanskanen, University of Oulu  
Päivi P. Rousu, Lappeenranta University of Technology  
Pasi P. Rousu, Chempolis Oy

50-2 1:50 Fines Study in the Bleached Pulp from the Sugar Cane Bagasse  
Juan Carlos Sadovnik, Propal S.A.  
Luis Andrés Betancourt, Jairo Ramos and Fred Alban, Universidad del Valle

50-3 2:10 The Role of Nonwood Fines Constituents on Pulp and Paper Properties  
Päivi P. Rousu, Lappeenranta University of Technology  
Keijo J.E. Hytönen, Chempolis Oy

1:30 pm – 3:00 pm SESSION 51  
Clearwater  
Gains in Energy Efficiency  
Session Chair: Gregory A. Burns, MeadWestvaco Corp.

51-1 1:30 A Tool for Simulating Energy Efficient Evaporation Using Excess Heat in Kraft Pulp Mills  
Marcus R. Olsson and Thore Berntsson, Chalmers University of Technology

51-2 1:50 Process Control: Energy, Water, and Chemical Savings through Optimization and Improved Control of Existing Equipment  
Carol Pullen, Hach Co.

51-3 2:10 Achieving High Efficiency Thermocompressor Operation  
Ken Hill, Jim Maggard and Jerry Timm, Kadant Johnson Inc.

51-4 2:30 Prevention of Elements Leaching from Coal Ash by Adding Fixation Chemicals
Makoto Iwasaki, Kaori Inoue and Kazuya Ikeshima, Oji Paper Co.