



## PROGRAM TRACKS

Career Development ✓	Engineering, Reliability, Corrosion & Materials	Energy, Recovery, Lime Kiln and Recast	Environmental
Nonwood	Pulping & Bleaching	Recycling Forum	Sustainability
IBBC Conference			

## PROGRAM

*AS OF 10/22/19 ( SUBJECT TO CHANGE)*

Sunday, October 27, 2019	
7:00AM – 6:30PM	Registration Open
7:30AM – 4:00PM	Bleach Plant Operations Workshop**
8:00AM – 4:00PM	Brown Stock Washing Workshop**
8:00AM – 4:00PM	Project Management Workshop**
8:00AM – 4:00PM	Introduction to Lean Six Sigma (LSS) Workshop**
11:00 am - 1:30 pm	Lunch for Workshop Attendees Only
12:00PM – 1:00PM	Joint Team Review of Conference Logistics*
1:00PM - 4:00PM	Engineering Division & Pulp Manufacture Division Councils*
4:00PM - 5:00PM	Nonwood Fiber Committee Meeting
4:00PM - 5:00PM	Alkaline Pulping & Bleaching Committee Meeting
5:00PM – 7:00PM	Welcome Reception & Exhibit
7:00PM -9:30PM	Awards Dinner*

\* Invitation Only

\*\* Additional registration fee required

\*\*\* Pre-registration required

## Monday, October 28, 2019

6:30AM – 6:30PM	Registration Opens
7:00AM – 8:15AM	Speaker Breakfast
7:30AM-8:30AM	Women in Industry/Young Professionals Breakfast
8:30AM – 10:00AM	<b>Session 1: Opening Session &amp; Keynote ✓</b> <b>Session Chair: Carl J. Houtman, USDA Forest Products Laboratory</b> <b>Keynote: Building Sustainability into the Supply Chain</b> <b>Angie Slaughter, Vice President Sustainability, Anheuser - Busch</b>
10:00AM – 10:30AM	Coffee Break & Exhibit Open
10:30AM – 12:00PM	<b>Session 2: State of the Industry ✓</b> <b>Session Chair: Daniel A. Curry, TRC Environmental Corporation</b>
	AF&PA Sustainability Update - <i>Jerry Schwartz, American Forest &amp; Paper Association</i>  A Closed Loop Fiber Future: A Sustainable, Circular Supply Chain – <i>James Schneider, Sustana Fiber Fox River Facility</i>
10:30AM – 12:00PM	<b>Session 3: Pulping Optimization (co-sponsored by the Engineering, Reliability, Corrosion and Materials)</b> <b>Session Chair: Brian N. Brogdon, Future Bridge Consulting Services, LLC</b>
	Reducing Batch Digester Vessel Wall Degradation Due to Corrosion and Erosion to Optimize Reliability and Productivity – <i>Patrick Fitzgerald, Clark Conley, Integrated Global Services</i>  Impact of Kraft Mill Chemistry on Economics: A Model-Based Approach to Optimizing Mill Profitability - <i>Richard Phillips, North Carolina State University</i>  How Deep Learning Is Used to Increase the Quality Control of Wood Chips by Classification - <i>Brian Mock, Event Capture Systems</i>
10:30AM –12:00PM	<b>Energy, Recovery and Reconst Steering Committee Meeting*</b>
10:30AM –12:00PM	<b>Plant Engineering &amp; Project Management Committee</b>
12:00PM – 1:30PM	Lunch & Exhibit Open
12:00PM – 1:30PM	<b>Session 4: Young Professionals Lunch ✓</b>
2:00PM – 1:20PM	<b>Engineering Division Committee of Chairs Meeting*</b>
1:30PM – 3:00PM	<b>Energy, Recovery and Reconst Main Committee Meeting</b>

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<b>1:30PM – 3:00PM</b>	<b>Session 5: New Technology Showcase ✓</b> <b>Session Chair: Meg Murphy, Felker Brothers</b>
	<p>The Use of Electromagnetic Fluid Filtration to Remove Iron from Condensate - <i>Scott Ray, Milhous Company</i></p> <p>The Convergence of Predictive and Preventative Maintenance with APM Software - <i>Jared Hartness, GE Digital</i></p> <p>New Microwave Consistency Analyzer from Valmet – <i>Stefano Antonacci, Valmet</i></p> <p>CleanFlow Technology for Green and White Liquor Filtration - <i>Rohan Bandekar, NORAM Engineering and Rohan Constructors Ltd.</i></p>
<b>1:30PM – 3:00PM</b>	<b>Session 6: Digester Operations</b> <b>Session Chair: Daniel J. Nicholson, Solenis LLC</b>
	<p>Fluff Pulp Performance Improved by Alternative Pine Species - <i>Maiara Schlusaz, Klabin S.A.</i></p> <p>High KAPPA Process for Eucalyptus Fiberline-The First Industrial Case - <i>Rafael Zaghete Bertochi, Suzano SA</i></p> <p>GPI West Monroe Digester Optimization Project - <i>Kari Lampela, Valmet</i></p>
<b>1:30PM – 2:30PM</b>	<b>Session 7: Bringing Nonwoods to Market – Part I</b> <b>Session Chair: Gary A. Breaux, Solvay Chem US</b>
	<p>Nonwood Lignin Binders in Pet Food - <i>Sabrina Burkhardt, Sustainable Fiber Technologies</i></p> <p>Nonwoods in Molded Fiber – <i>Mark Lewis, Sustainable Fiber Technologies</i></p>

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<b>1:30PM – 3:00PM</b>	<b>Session 8: Project Collaboration for Optimal Results ✓</b> <b>Moderator: Scott Curry, CQ Strategy Ltd.</b>
	<b>Panelists:</b>  Best Practices - <i>David Mead, Independent Project Analysis (IPA)4</i> Mill - <i>Richard Christner, WestRock</i> Engineering - <i>Greg Short, Kiewit</i> Construction - <i>Brent Beguin, Kiewit</i>
<b>1:30PM – 2:30PM</b>	<b>Session 9: Effective Use of Coatings and the Mechanical Support and Maintenance of FRP in Pulp Mill Environments</b> <b>Session Chair: James R. Keiser, Oak Ridge National Laboratory</b>
	Fluoropolymer Welding: Solutions to Improve Corrosion Protection for the Pulp and Paper Industry- <i>Lisa Marrero, Solvay Specialty Polymers</i>  FRP Piping Systems and Pipe Supports for Reliable Performance - <i>Jeff Eisenman, Maverick Applied Science, Inc.</i>
<b>3:00PM – 3:30PM</b>	<b>Refreshment Break &amp; Exhibit Open</b>
<b>3:30PM – 5:00PM</b>	<b>Session 10: Bringing Nonwoods to Market – Part II</b> <b>Session Chair: Tyler Campbell, Sustainable Fiber Technologies</b>
	Review of the Economics, Technologies and Products in the Nonwood Sector - <i>Karthik Raghavan, Sim Agro Inc.</i>  Pulping and TCF Bleaching of Canadian Seed Flax Straw - <i>Robert (Bob) Hurter, HurterConsult Inc.</i>  Columbia Pulp's State-of-the-Art Wheat Straw Pulp Mill - <i>Kristi Kobetich, Columbia Pulp</i>
<b>3:30PM – 5:00PM</b>	<b>Session 11: Brown Stock Washing</b> <b>Session Chair: Robert (Bobby) E. Wilson, AMS – Applied Material Solutions</b>
	Select the Right Brown Stock Defoamer for your Washing Operations - <i>Michael Wang, Solenis LLC</i>  Effect of Defoamer for the Gas Content and the Performance of O <sub>2</sub> Washers-Mill Case Study - <i>Riku Kopra, South-Eastern Finland University of Applied Sciences, Fiber Laboratory</i>  Brownstock Washing Cost Optimization - <i>James Cantrell, Jacobs Engineering</i>

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3:30PM – 5:00PM	<b>Energy, Recovery and Reconst Sub-Committee Meetings</b> <b>Energy Subcommittee (ERR)</b> <b>Lime Kilns &amp; Reconst Subcommittee (ERR)</b> <b>Recovery &amp; Power Boilers Subcommittee (ERR)</b> <b>Water Treatment Subcommittee (ERR)</b>
3:30PM – 5:00PM	<b>Corrosion &amp; Materials Engineering Main Committee</b>
3:30PM – 5:00PM	<b>Environmental &amp; Sustainability Working Group</b>
5:00PM – 6:30PM	Reception & Exhibit Open
7:00PM – 9:00PM	PEERS Conference Networking Dinner** Sponsored by: 
<b>Tuesday, October 29, 2019</b>	
6:30AM – 6:30PM	Registration Open
6:45AM – 8:30AM	Hot Topic Breakfast I***
6:45AM – 8:00AM	PaperChase Fun Run/Walk**
7:00AM – 8:15AM	Speaker Breakfast
8:30AM – 10:00AM	<b>IBBC Session 1: IBBC Keynote</b> <b>Session Chair: Jean-Pierre Bousquet, Valmet USA, Inc.</b> Developing the Cost Effective and Sustainable Biorefinery <i>Jukka Mäkinen, Director, P&amp;E R&amp;D Consolidation, Valmet</i>
8:30AM – 10:00AM	<b>Session 12: Contaminant Removal</b> <b>Session Chair: Lon E. Pschigoda, Western Michigan University</b> 
	Bubble Nucleation to Remove Hydrophobic Contaminants - <i>Salman Aziz, Doshi and Associates</i>  Deposition Characteristics of Model Microstickies Originating from Papermaking Chemicals - <i>Bo Li, South China University of Technology</i>  Stickies Removal in OCC Application - <i>Cesar Basilio, Thiele Kaolin Company</i>

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<b>8:30AM – 10:00AM</b>	<b>Session 13: Reducing Process Variability during Black Liquor Evaporation✓</b> <b>Session Chair: Wei Ren, FPIinnovations</b>
	<p>Soap Removal at Southern Kraft Mill Using Centrifugal Separation - <i>Marc Sabourin, Head Engineering AB</i></p> <p>Solubility of Sodium Oxalate in Kraft Black Liquors - <i>Ahmed Khafhafera, University of Toronto</i></p> <p>Evaporation Plant And Recovery Boiler Optimization Utilizing Model Predictive Control Technology – A Case Study At Suzano Três Lagoas Mill - <i>Vinicius Bassan Sierra, Suzano S/A</i></p>
<b>8:30AM – 10:00AM</b>	<b>Session 14: Process Data &amp; Operator Reliability</b> <b>Session Chair: Qiang Han, International Paper</b>
	<p>How Can I Make Sense of All This Data? - <i>William Nichols, KBR</i></p> <p>Optimizing Mill Effectiveness Through Statistical Process Control (SPC) - <i>Kim “Will” Robinson, Process Solutions Group</i></p> <p>Operator Essential Care - Keys to a Successful Program - <i>Spencer Mays, T5 Group LLC</i></p>
<b>10:00AM – 10:30AM</b>	<b>Coffee Break &amp; Exhibit Open</b>
<b>10:30AM – 12:30PM</b>	<b>Session 15: Novel Approaches to Designing Kiln Burners for the Pulp and Paper Industry Panel Discussion</b> <b>Co-Moderator: Xavier Dhubert, XDH; Peter Gorog, Houghton Cascade Holdings, LLC</b>
	<p>This panel discussion will focus on burners and combustion in other industries that use rotary kilns in their manufacturing process, i.e. cement, pebble lime, alumina, pet coke, titanium dioxide, etc. Burner OEMs will discuss the specific features of their designs, adjustments and experience with fuels other than natural gas, that may be applicable to pulp and paper. Time will be provided for attendees to ask questions and share their experiences.</p> <p><i>Eduardo Tater, Combustion Fives Pillard</i> <i>Markus Pair, Unitherm Cemcon</i> <i>Luiz Felipe de Pinho, Dynamis Engenharia e Comércio Ltda.</i></p>

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<b>10:30AM – 12:30PM</b>	<b>Session 16: Recovered Paper</b> <b>Session Chair: Samuel Schabel, Technische Universität Darmstadt</b> 
	<p>Study on Recovered Paper Quality in Germany and Method for Determining the Composition of Recovered Paper Samples - <i>Tobias Krebs, Technische Universität Darmstadt</i></p> <p>The Application of ATR-IR Method for Distinguishing Easy and Poor Deinkable UV Prints - <i>Hirohiko Koizumi, Nippon Paper Industries Co., Ltd.</i></p> <p>A Method for Analyzing Basis Weight Profile in Recycled Paper Mills - <i>Kim "Will" Robinson, Process Solutions Group</i></p> <p>Refining: Recycled Fiber for Tissue Production - <i>Dylan Schnese, Voith Paper</i></p>
<b>10:30AM – 12:00PM</b>	<b>Session 17: Environmental Performance</b> <b>Session Chair: Heather Jennings, Probiotic Solutions</b>
	<p>Simultaneous Precipitation in an ECF Kraft Pulp Mill: Long-Term Experiences <i>Sakari Toivakainen, Toihan Oy</i></p> <p>Innovative Treatment Technologies to Meet Today's Water Treatment Demands - <i>Jared Alder, Probiotic Solutions</i></p> <p>Utilization of Kraft Pulp Mill Waste - <i>Torsten Meyer, University of Toronto</i></p>
<b>10:30AM – 12:00PM</b>	<b>Session 18: Recovery Boiler Modeling and Control Strategy</b> <b>Session Chair: Pasi H. Miikkulainen, Andritz Inc.</b>
	<p>Water Circulation Modeling of a Recovery Boiler Undergoing a Power Blackout - <i>Juho Kivelä, Andritz Oy</i></p> <p>An Integrated Study of Flue Gas Flow and Superheating Process in Recovery Boiler using Computational Fluid Dynamics and 1D-Process Modelling - <i>Kunal Kumar, Andritz Oy</i></p> <p>Control System Improves Reliability and Safety of Recovery Boilers – <i>Marshall Lewis, Solenis LLC</i></p>

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<b>10:30AM – 11:30AM</b>	<b>Session 2: Product and Operation Valorization</b> <b>Session Chair: Jean-Pierre Bousquet, Valmet USA, Inc.</b>
	Pretreatments of Cellulose to Produce Thermally Stable Nanocellulose for Packaging Applications – <i>Sudhagar Mani, University of Georgia</i>
<b>12:00PM – 1:20PM</b>	<b>2020 PEERS Technical Program Planning Meeting*</b>
<b>12:00PM – 1:30PM</b>	<b>Lunch &amp; Exhibit Open</b>
<b>12:30PM – 1:30PM</b>	<b>Biorefinery Committee</b>
<b>1:30PM – 2:30PM</b>	<b>Fiber Recycling Committee</b>
<b>1:30PM – 3:00PM</b>	<b>Session 19: Bleaching Optimization</b> <b>Session Chair: Mathias Lindström, International Paper</b>
	The Role of Gas Dispersion in the Oxygen Delignification Process - <i>Jari Käyhkö, South-Eastern Finland University of Applied Sciences, Fiber Laboratory</i>  DO Stage Best Practices to Minimize Barium Sulphate and Calcium Oxalate Scale, Down Time and Cost - <i>Michael Wang, Solenis LLC</i>  On-Machine Visible Dirt Measurement on Moving Sheets and the Relationships to Standard Laboratory Methods - <i>David Trepanier, OpTest Equipment Inc.</i>
<b>1:30PM – 3:00PM</b>	<b>Session 20: Identifying Microbially-Influenced Corrosion in the Mill Panel Discussion✓</b> <b>Moderator: W.B.A. (Sandy) Sharp, SharpConsultant</b>
	<b>Panelists:</b>  <i>Margaret Gorog, International Paper</i> <i>Krista Heidersbach, Stress Engineering</i>
<b>1:30PM – 3:00PM</b>	<b>Session 21: Improve Operability and Efficiency of Dissolving Tank and Green Liquor Systems✓</b> <b>Session Chair: Rohan Bandekar, NORAM Engineering and Rohan Constructors Ltd.</b>
	Modeling of the Energy of a Smelt-Water Explosion in the Recovery Boiler Dissolving Tank – <i>Eric Jin, Babcock and Wilcox</i>  Experience of Calcium Carbonate Scale Formation in Green Liquor Handling Systems – <i>Alisha Gialio, University of Toronto</i>  Causes of Poor Dregs Settling in a Green Liquor Clarifier – <i>Torsten Meyer, University of Toronto</i>

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<b>1:30PM – 3:00PM</b>	<b>Session 22: Environmental-Regulatory Development</b> <b>Moderator: Daniel A. Curry, TRC Environmental Corporation</b>
	<b>Panelists:</b>  Homeland Security and Chemicals - <i>Melissa Hart, TRC Company</i>  Introduction to PFAS and Current National Issues - <i>Giffe Johnson, Paul Wiegand, NCASI</i>
<b>1:30PM – 3:00PM</b>	<b>IBBC Session 3: Advances in Forest Biomass Preprocessing and Torrefaction Technologies✓</b> <b>Session Chair: Sudhagar Mani, University of Georgia</b>
	Advances in Biomass Preprocessing Unit Operations: Cost and Quality Impacts - <i>Jayashankar Tumuluru, Idaho National Laboratory (INL)</i>  Impact of Biomass Pretreatment on the Torrefied Biomass Briquettes – <i>Jagannadh Satyavolu, University of Louisville</i>  Why Hasn't Torrefaction Taken Off? - <i>Dan Herren, Advanced Torrefaction Systems LLC</i>
<b>3:00PM – 3:30 PM</b>	<b>Refreshment Break &amp; Exhibit Open</b>
<b>3:30PM – 5:00PM</b>	<b>Session 23: Recycling Tutorial on Pulping &amp; Detrashing</b> <b>Session Chair: Cesar I. Basilio, Thiele Kaolin Company</b>
	 12TH RESEARCH FORUM ON RECYCLING OCTOBER 27-30, 2019 ST. LOUIS, MISSOURI, USA
<b>3:30PM – 5:00PM</b>	<b>CANCELLED - Session 24: Kraft Pulping Panel Discussion</b> <b>Moderator: Sabrina J. Burkhardt, Sustainable Fiber Technologies</b>
<b>3:30PM – 5:00PM</b>	<b>Session 25: Strategies to Optimize Operations at the Lime Kiln ✓</b> <b>Session Chair: Ray Leary, Houghton Cascade Holdings, LLC</b>
Co-sponsored by Environmental Working Group	Reducing GHG Emissions by Co-Firing of Pyrolysis Liquid Biofuel (Bio-Oil) in Lime Kiln - <i>Muhammad Shahzeb Khan, University of Toronto</i>  Phosphorus in the Lime Cycle of Kraft Pulp Mills - <i>Nikolai DeMartini, University of Toronto</i>  Combatting Lime Kiln Ringing Problems at the Arauco Constitución Mill – <i>Honghi Tran, University of Toronto</i>

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<b>3:30PM – 5:00PM</b>	<b>Session 26: Recovery Boiler Cleaning Panel Discussion</b> <b>Moderator: Danny S. Tandra, The Clyde Bergemann Power Group</b>
	<b>Panelists:</b>  <i>Honghi Tran, University of Toronto</i> <i>Andrew K. Jones, International Paper</i> <i>Pasi H. Miikkulainen, Andritz, Inc.</i> <i>Ryan P. Henry, Green Bay Packaging</i>
<b>3:30PM – 5:00PM</b>	<b>Session 27: Using Fitness for Service Assessments and Addressing corrosion Challenges Through Material Selection to Support Extending Time Between Major Outages✓</b> <b>Session Chair: Matthew L. Tunncliffe, FPInnovations</b>
	Sodium Chlorate Transfer Line Corrosion Failure & New Materials Cast Study - <i>Josh Lauer, WestRock</i>  Material Selection: Practical Use of the Kepner Tregode Decision Model - <i>Jason Hinely, Corrosion Probe, Inc.</i>  Corrosion Characteristics of Different Stainless Steels, Austenitic and Duplex, in NaOH Environment – <i>Angela Philipp, Sandvik</i>
<b>5:00PM – 6:30PM</b>	<b>Reception and Exhibit Open</b>
<b>6:30PM – 7:30PM</b>	<b>Young Professionals Mixer</b>
<b>7:00PM – 9:00PM</b>	<b>IBBC Conference Dinner**</b>
<b>Wednesday, October 30, 2019</b>	
<b>6:30AM – 12:00PM</b>	<b>Registration Open</b>
<b>6:45AM – 8:30AM</b>	<b>Hot Topic Breakfast II***</b>
<b>7:00AM – 8:15AM</b>	<b>Speaker Breakfast</b>
<b>8:30AM – 10:00AM</b>	<b>Session 28: Bleaching Chemistry</b> <b>Session Chair: Tom Mullen, Process Innovations</b>
	Peracetate Singlet Oxygen Chemistry as a Safe and Simple Alternative for Peracetic Acid - <i>Howard Kaplan, Kaplan Consulting LLC</i>  TCF Bleaching of Viscose Pulp - <i>Alexis Métais, Xylem</i>  Kraft Pulp Bleaching with a P-Stage Catalyzed by both Bicarbonate and TAED - <i>Raymond Francis, State University of New York</i>

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<b>8:30AM – 10:00AM</b>	<b>Session 29: Using Laboratory Studies and Literature to Anticipate and Address Corrosion Challenges✓</b> <b>Session Chair: Diana Echols, Fatigue Technology</b>
	Performance of Structural Materials in Biomass Liquefaction Environments - <i>James Keiser, Oak Ridge National Laboratory</i>  How Does Black Liquor Corrosivity Change With Decreasing REA - <i>Matthew Tunnicliffe, FPInnovations</i>  Cast High Nickel Containing Austenitic Alloys for Paper and Pulp Industry - <i>Shankar Venkataraman, Schmidt + Clemens GmbH + Co. KG</i>
<b>8:30AM – 10:00AM</b>	<b>IBBC Session 4: Biorefinery Technology</b> <b>Session Chair: Jean-Pierre Bousquet, Valmet USA, Inc.</b>
	Pelleting Characteristics of Blends of Pine Residue and Switchgrass - <i>Jaya Shankar Tumuluru, Idaho National Laboratory</i>  Valorization of Willow Lignin Recovered in a Pilot-scale Biorefinery Based on Hot Water Extraction - <i>Aditi Nagardeolekar, SUNY-ESF</i>  Organosolv fractionation and Flexible Bio-refinery - <i>Ali Manesh, American Science and Technology</i>
<b>8:30AM – 9:30AM</b>	<b>Session 30: New Boiler Designs and Operation Best Practices</b> <b>Session Chair: Danny S. Tandra, Clyde Bergemann Power Group</b>
Co-sponsored by Environmental Working Group	Development of Kraft Recovery Boilers – What Have Been the Main Development Steps - <i>Keijo Salmenoja, Andritz Oy</i>  Combustion Systems Upgrade on CKPI's Biomass-Fired Boiler – <i>J. Stephen Campbell, Jr., Jansen Combustion and Boiler Technologies</i>
<b>10:00AM – 10:30AM</b>	<b>Coffee Break</b>
<b>10:30AM – 11:30AM</b>	<b>IBBC Session 5: Innovative Bioproducts</b> <b>Session Chair: Stéphan Larivière, FPInnovations</b>
	Life Cycle Analysis of Producing Aviation Biofuels - <i>Sudhagar Mani &amp; Nalladurai Kaliyan, University of Georgia</i>  Application of Open Innovations For Biochemicals - <i>R. Daniel Haynes</i>

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<b>10:30AM – 11:30AM</b>	<b>Session 31: Pulping/Bleaching Equipment</b> <b>Session Chair: Ashok Ghosh, WestRock</b>
	Turboscrubber® - Bleach Plant Scrubber Application – <i>Hence Wayne Bucher, NORAM Engineering and Constructors Ltd.</i>  Money for Nothing and Your Chips for Free - <i>Amy Duncan, Dos Santos International</i>
<b>10:30AM – 12:00PM</b>	<b>Session 32: Millwide Water Treatment</b> <b>Session Chair: Subramaniam (Subra) Arasakesari, International Paper</b>
Session Co-sponsored by Environmental Working Group	Pulp Mill Employs Novel Influent Treatment Program to Improve Reliability – <i>Timothy Duncan, Solenis</i>  Use of Ozone for Cooling Towers – <i>Alexis Métais, Xylem</i>  Status of Water Reuse Technologies – <i>Barry Malmberg, NCASI</i>
<b>10:30AM – 12:00PM</b>	<b>Session 33: Troubleshooting Operation and Design Challenges in Pulp Mills</b> <b>Session Chair: Thanh Trung, FITNIR Analyzers Inc.</b>
	Use of NCGs to Produce Concentrated Sulfuric Acid and Steam - <i>Rohan Bandekar, NORAM Engineering and Constructors Ltd.</i>  The Formation Mechanism of Induced Draft Booster Fan Scales in a Sulfite Pulp Mill – <i>Nikolai DeMartini, University of Toronto</i>  Off-Design Performance Modeling of Steam Turbines in Pulp and Paper Mills - Issues and Methodologies - <i>Michael Erbes, Enginomix LLC</i>
<b>10:30AM – 12:00PM</b>	<b>Session 34: Life of a Lime Kiln: Design, Maintenance, and Upgrades</b> <b>Session Chair: Wei Ren, FPIInnovations</b>
	Improved Burner Designs for Optimized Lime Recovery Kiln Performance on Natural Gas Fuel - <i>Martin Beddows, KFS-Metso</i>  Safety Improvements In Cardox Ring Removal Technology <i>Tom Spaits, ATD-PGS</i>  Examining Upgrade Options When Rotary Kiln Tires are Mounted on the Kiln Shell with No Filler Bars – <i>Glenn Hanson, Metso</i>
<b>12:00PM – 1:00PM</b>	<b>19 PEERS Conference Wrap up Meeting*</b>
<b>12:00PM</b>	<b>PEERS &amp; IBBC Conclude</b>
<b>1:00PM – 2:00PM</b>	<b>Corrosion &amp; Materials Engineering Steering Committee Meeting</b>

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