Find out what the bleached pulp customer expects

This presentation will focus on if further improvements in bleach plant effluent quality are needed

Learn what improvements will result from current bleaching research

Session Chair:
Peter Axegard, Innventia AB

"Plenary Session Presentation"
Mark Watkins, MWV

"Are Bleach Plant Effluents Still a Relevant Concern for the Protection of Aquatic Life?"
Paul Wiegand, NCASI

"Transforming the Bleaching Process"
Dominique D. Lachenal, Grenoble INP - Pagora

Learn what improvements will result from current bleaching research

4:00 pm - 5:30 pm
Session: Bleaching and the Biorefinery

"The Impact of Hot Water Extraction of Northern Hardwoods on Conventional Bleach Plant Operations and Potential Cost Savings.”
Thomas E. Amidon, State University of New York
Gopal C. Goyal, International Paper
Christine Chirat, Grenoble INP - Pagora

1:30 pm - 3:30 pm
Weyerhaeuser Longview Mill Tour

8:30 am - 10:00 am
Session: Oxygen & Ozone

"On the Effect of Introducing Ozone in ECF Bleaching of Eucalyptus Kraft Pulp"
Dominique D. Lachenal, Grenoble INP - Pagora

Why ozone bleaching is scarce in North America and widely used elsewhere will be discussed
Session Chair: **Jorge L. Colodette, PhD**, Federal University of Vicsosa

"Environmental Performance of Modern ECF-Bleaching"

**Peter Axegard**, Inventia AB

Hear if further improvements in bleach plant effluent quality are needed

"Effect of Flow Dispersion in a D0 Bleaching Tower Evaluated by a Simplified CFD Model Combined to a Delignification Kinetic Model"

**Gerard Mortha**, Grenoble INP - Pagora

Learn how much will improving D0 tower flow patterns reduce bleaching cost

"The Stoichiometry of Chlorine Dioxide Delignification of Softwood Pulps after Oxidant-Reinforced Extraction"

**Brian N. Brogdon**, FutureBridge Consulting & Training, LLC

What can be done to maximize ClO2 efficiency in the first bleaching stage will be discussed

Session Chair: **Paul Robilliard**, Beca AMEC

"Modern Bleach Plant Advanced Process Control Utilizing Inline Sensors and Model Predictive Control"

**Richard J. Van Fleet**, Honeywell International

**Sandy Beder-Miller**, BTG Americas, Inc

**Michel Dion**, Honeywell International

Learn how your mill can update a bleach plant control system that was designed for chlorine

"Differences in Bleaching Responses from Fungal versus Bacterial Derived Enzymes"

**Peter W. Hart**, MWV

Mill experiences about whether you should try using enzymes will be discussed

"Assessment of Pulp Machine White Water Quality of Market Kraft Pulp Mills"

**Jean Bouchard**, FPInnovations, Pulp and Paper Division

Be here to learn if monitoring white water quality can prevent brightness problems

**Friday, October 7**

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Session: Peroxide

Session Chair: **Brian N. Brogdon**, FutureBridge Consulting & Training, LLC

"Na2CO3 as Alkali in Hydrogen Peroxide Bleaching of Softwood Kraft Pulp"

**Hannu Hamalainen**, Kemira Oyj

**J. Ross Anderson**, Kemira Chemicals Canada Inc.

**Raymond Paquet**, Kemira

Figure out if you can minimize the negative effects of replacing caustic with carbonate

"On the Role of Copper Ions in Alkaline Hydrogen Peroxide Bleaching of Kraft Pulps"

**Pedro Loureiro**, CIEPQPF, University of Coimbra

**Sandrine Duarte**, CIEPQPF, University of Coimbra

**Dmitry Evtuguin**, CICECO, University of Aveiro

**M. Graça Carvalho**, CIEPQPF, University of Coimbra

Learn why copper is a worse contaminant than manganese and what you can do about it

"A Novel Recovery and Recycle Process for Catalytic Molybdate in Acidic Peroxide Delignification"

**Thomas Dietz**, Evonik Industries AG

**Marc Beiser**, Evonik Industries AG

Considering using molybdate as a catalyst? If so, you will not want to miss this presentation

Session: Eucalyptus Pulp Bleaching

Session Chair: **Christine Chirat**, Grenoble INP - Pagora

"The Final Bleaching of Eucalyptus Kraft Pulp with Chlorine Dioxide: What Factors Affecting its Efficiency?"

**Olena Sevastyanova**, The Royal Institute of Technology, KTH

**Ambritt Forsström**, Eka Chemicals AB, Sweden

**Mikael E. Lindström**, The Royal Institute of Technology, KTH, Stockholm

**Eva Wackerberg**, EKA Chemicals AB

Find out what factors limit the effectiveness of the final D stage

"Novel ECF Bleaching Sequence Using Peroacetic Acid – New Possibilities and Gains"

**Jorge L. Colodette, PhD**, Federal University of Vicsosa

**Marcos Costa**, Kemira Chemicals Brazil

**Paulo Henrique Morais**, Kemira Chemicals Brazil

The benefits from using peracetic acid as the first bleaching stage will be discussed

"Reductive Degradation of Residual Chromophores in Kraft Pulp"

**Hélio Carreira**, CICECO, University of Aveiro

**M. Graça Carvalho**, CIEPQPF, University of Coimbra

**Dmitry Evtuguin**, CICECO, University of Aveiro

This presentation answers the question - Why should I consider a final dithionite stage
Determine how modeling can reduce your bleaching costs

"Combining Chlorine Dioxide and Molybdate Catalyzed Hydrogen Peroxide for Improved Delignification of Canadian Hardwood and Softwood Pulp"
Bernd Hopf, Evonik Industries AG
Dan Davies, Degussa Canada Inc.
Marcos de Oliveira
Thomas Dietz, Evonik Industries AG

This presentation will discuss if you can use catalyzed peroxide to cut first-stage ClO2 in half

"Near-Neutral Final Chlorine Dioxide Brightening: Theory and Practice"
Zhi-Hua Jiang, FPInnovations (Paprican)
Richard M. Berry, FPInnovations (Paprican)

Learn how much ClO2 you can save by adding CO2 to the last stage

"Optimization of an ECF Bleach Plant - An Australasian Mill Example"
Paul D. Robilliard, AMEC

One mill used basic bleaching knowledge to reduce bleaching costs by $1 million per year with no capital investment - Learn How

Alan W. Rudie, USDA Forest Products Lab

Hear about a new resource that is available to help you use basic bleaching knowledge to optimize your bleach plant

Poster Session - Posters Available During Conference Reception, Lunch, and All Break Times

"A New Strategy for Metals Management - An Important Tool in Enhancing Bleaching of Pulp and Paper."
David R. Jones, Buckman.

"Optimization of ECF Bleaching: Impact of Process Control Parameters on Delignification and Brightness"
Rosy M. Covarrubias, Buckman.
Michael R. Essex, Buckman.

"Rethinking Pulp Bleaching - A Laboratory Evaluation of Bleaching Concepts and Technologies on Hardwood Kraft Pulp"
Klaus Doelle, SUNY-ESF

"Benefits and Methods of Improved Accuracy of Pulp Mill ISO Brightness Testing"
Sean M. Smith, Rock Tann Company

"TCF bleaching of Soda-anthraquinone Pulp from Oil Palm Frond"
Wang Xiwun, South China University of Technology

"Effects of Final Bleaching Stage Using Hydrogen Peroxide and Peroxyacetic Acid (Eq.) in the ECF Bleaching of Acacia DGEDF21 Kraft Pulp"
Dede Ermawan, APRIL

"Chlorine Dioxide Reduction in Bleaching via Pretreatment without Inter Stage Washing"
Ravikishor Gandl, Georgia Institute of Technology
Jeffery Hsieh, EKA Chemicals Ltd.

"Using a Benchmarking Perspective to Ensure Chlorine Dioxide Availability and Competitiveness"
Kalle Pihl, EKA Chemicals Ltd.

"Comparing Gradual Alkal System and Mg(OH)2-based Process to Conventional Process in Hardwood High Yield Pulp Bleaching"
Farhad Zeinaly, Islamic Azad University

"Multistage Alkal Peroxide Bleaching in Low Kappa Kenaf Bast Pulp"
Farhad Zeinaly, Islamic Azad University

"The Effects of Xylanase and Acid Pretreatments on ECF Bleaching of Tobacco Stalk Soda AQ Pulp"
Jalal Shakhes, jalal.co

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