

Learn how to improve operations and increase efficiency

2006 TAPPI Engineering, Pulping & Environmental Conference

November 5-8, 2006
Marriott Marquis
Atlanta, Georgia



Sponsored by TAPPI's Engineering,
Pulp Manufacture & Environmental Divisions

**TAPPI**
people resources solutions

**A Special Thanks
To The Following
Conference Sponsor**



Welcome to Atlanta!

Once again, TAPPI's Engineering, Pulp Manufacture and Environmental Divisions have come together to provide a unique opportunity for sharing, networking, and learning. We are convinced that, in today's challenging business landscape, solutions for many problems need our combined intellect and creativity.

We are proud of this year's technical program. It represents excellent work in too many areas to mention; it is exciting to see the quality of thinking and ingenuity being applied to our industry. Our technical program committees have worked together to identify the latest issues that are emerging and are of high importance to the industry. These issues impact operations, costs, and the environmental footprint. Learning will take place through a variety of methods, including technical sessions, roundtable discussions, workshops, tutorials and a table-top trade fair. New products and services will be presented through the New Technology Showcase.

We also welcome and thank this year's Conference sponsors Metso Paper and our Association Partners; ABTCP, PAPTAC, and PIMA.

We are especially grateful to our keynote speaker, Jim Buzzard, President, MeadWestvaco Corporation, for his willingness to address this year's conference attendees. Please join us in giving him a very warm welcome.

We extend our many thanks to the technical program committees, session chairs, speakers and exhibitors. This is your program and it would not have been possible without your time, commitment, ideas, and energy.

Most of all, thanks for being here. We all know too well how the industry is having to learn to do more with less, and how difficult it is to find time for development and learning. We hope that you will make the most possible out of the conference. Don't just stop with the technical sessions. We encourage you to be sure and look over the table-top exhibits, visit a committee meeting, and take in the Hot Topics Breakfasts where one-on-one discussions on issues of concern to the individual participant can be discussed for ideas on how others are handling the problem or issue.

We hope that you all enjoy the conference and we look forward to seeing you again next year.

Sincerely,

*Paul Tucker, Engineering Division Conference Co-Chair
Gopal Goyal, Pulp Manufacture Division Conference Co-Chair
Mike Corn, Environmental Division Conference Co-Chair*

Table of Contents

Table of Contents

Technical Program at a Glance Committee Meeting Schedule.....	3
Table Top Participants	13
Conference Workshops	15
Opening Session.....	17
Keynote Speaker	17
Awards Presentation	23
Technical Program Committee Rosters	25
Technical Program	29
Hot Topic Breakfast	47
PaperChase	48
Student Lunches.....	48
Award Recognition Dinners.....	49
Spouse/Guest Program	53
Division Officers.....	55
General Information.....	61
Atlanta Marriott Marquis International Level Floor Plan	67

Technical Program at a Glance

Technical Program Schedule

Sunday, November 5, 2006

7:30 am - 8:00 am	Coffee Break
8:00 am - 12:30 pm	Session 1: Eucalyptus Workshop International 4
8:00 am - 9:00 am	PMD Steering Team International C
8:00 am - 4:00 pm	Session 2: Bleach Plant Workshop International 5
9:00 am - 12:00 pm	PMD Council International C
12:00 pm - 1:30 pm	Joint Team Review of Conference Logistics* International A
1:00 pm - 1:30 pm	Coffee Break
1:00 pm - 5:00 pm	Session 3: Valves Design Workshop International 6
1:30 pm - 5:00 pm	Engineering Division Council* International C
2:00 pm - 5:00 pm	Session 4: Recycling Workshop International 7
2:00 pm - 5:00 pm	Nonwood Fibers Committee International 9
3:00 pm - 5:00 pm	Steam & Power/Engineering Management Steering Committee International A
4:00 pm - 6:30 pm	Alkaline Pulping and Bleaching Committee International 8
5:00 pm - 6:00 pm	Process Simulation/Engineering Steering Committee International 10
6:00 pm - 7:00 pm	Welcome Reception
6:00 pm - 7:00 pm	Process Simulation/Engineering Committee International 10
7:00 pm - 9:00 pm	Steam Heated Dryer Subcommittee International 9
7:00 pm - 9:00 pm	Recognition Awards Dinner for Environmental, Pulping & Engineering Award Recipients*

*Invitation Only

Technical Program Schedule

Monday, November 6, 2006

6:50 am - 8:30 pm	Metso Techquest* Quebec
6:00 am - 7:30 pm	Registration
7:30 am - 8:30 am	C&ME Steering Committee International C
7:30 am - 8:30 am	Speaker Ready Room
8:00 am - 8:30 am	Coffee Break
8:30 am - 10:00 am	Opening Session Awards/Keynote Speaker
8:30 am - 10:30 am	Spouse/Guest program
10:00 am - 10:30 am	Coffee Break
10:00 am - 11:00 am	Welding of Duplex Stainless Steels International C
10:00 am - 5:00 pm	Steam & Power/Energy Management International 10
10:00 am - 12:00 pm	C&ME General Committee International 9
10:30 am - 12:30 pm	Session 6: Nonwood Pulping International 8
10:30 am - 12:00 pm	Session 7: The State of the North American Pulp and Paper Industry International 5
10:30 am - 12:30 pm	Session 8: Recycling-Stickies International 7
10:30 am - 12:00 pm	Session 9: Bill Babbington Maintenance Roundtable Lubrication Systems Subcommittee International 6
10:30 am - 12:00 pm	Session 10: Alkaline Pulping International 4
10:30 am - 12:00 pm	Lubrication Systems Subcommittee International 6
12:00 pm - 1:30 pm	Student Lunch
12:30 pm - 2:30 pm	Asset Management Committee International C
1:15 pm - 4:00 pm	Steam & Power Energy Subcommittee International 10
1:15 pm - 4:00 pm	Steam & Power Water Treatment Subcommittee International 10 Corridor
1:30 pm - 3:00 pm	Session 11: Understanding Materials Performance - How to Save Your Mill Millions of Dollars Panel International 4

1:30 pm - 3:00 pm	Session 12: Nonwoods in Papermaking Cancelled
1:30 pm - 3:00 pm	Session 13: Trends in Global Paper Demand & Industry Innovation International 6
1:30 pm - 3:00 pm	Session 14: Optimizing Chip and Fiber Quality International 7
1:30 pm - 3:00 pm	Session 15: Process Simulation / Engineering International 8
1:30 pm - 3:00 pm	Session 16: What to Do with the Sludge (Joint Session with Environmental and Fiber Recycling) International 9
3:00 pm - 3:30 pm	Coffee Break
3:30 pm - 5:30 pm	Session 17: Recycling - Deinking International 4
3:30 pm - 5:00 pm	Session 18: Bleach Plant Operations International 5
3:30 pm - 5:30 pm	Session 19: Nonwood Processing and the Biorefinery International 6
3:30 pm - 5:00 pm	Session 20: Engineering / Pulping / Environmental New Technology Showcase International 7
3:30 pm - 5:00 pm	Session 21 Cancelled
4:30 pm - 5:30 pm	TIP 0402-23 Review Meeting International C
5:30 pm - 7:30 pm	Table Top Trade Fair & Reception

*Invitation only

Technical Program Schedule Tuesday, November 7, 2006

6:00 am - 7:30 pm	Registration
7:00 am - 8:00 am	Session 22: Hot Topics Breakfast International Foyer
7:00 am	PaperChase Run
7:30 am - 8:30 am	Speaker Ready Room
8:30 am - 11:00 am	Spouse/Guest Program
8:30 am - 10:00 am	Session 23: Water Quality International 4

8:30 am - 10:00 am	Session 24: Project Management Fundamentals Tutorial Part 1 International 5
8:30 am - 10:00 am	Session 25: Recycling Tutorial: Using Optical Properties to Measure Fiber International 6
8:30 am - 10:00 am	Session 26: Cracking Issues in Kraft Pulp Mills International 7
8:30 am - 10:00 am	Session 27: Process Simulation of Kraft Pulping International 8
8:30 am - 10:00 am	Session 28: Recovery Boiler Emissions International 9
10:00 am - 10:30 am	Coffee Break
10:30 am - 11:30 am	C&ME Metals Subcommittee International C
10:30 am - 12:00 pm	Session 29: Combustion Process: An Environmental Perspective Tutorial International 4
10:30 am - 12:00 pm	Session 30: Project Management Fundamentals Tutorial Part II International 5
10:30 am - 12:00 pm	Session 31 rescheduled to 1:30pm
10:30 am - 12:30 pm	Session 32: Low Temperature Black Liquor Gasification International 7
10:30 am - 12:00 pm	Session 33: Bleaching: Minimizing Scaling and Improving Fiber Properties International 8
10:30 am - 12:00 pm	Session 34: Recycling-Fiber Processing International 9
11:30 am - 12:00 pm	Pickling in Fabrication Maintenance Committee International 6
12:00 pm - 1:30 pm	Student Lunch
12:00 pm - 1:30 pm	Engineering Division Committee of Chairs* International 10
1:30 pm - 3:00 pm	Session 35: Recycled Paper Fundamentals International 4
1:30 pm - 3:00 pm	Session 36: The Wonderful World of Contracts International 5
1:30 pm - 3:00 pm	Session 37: Evaporators International 6
1:30 pm - 3:00 pm	Session 38: Energy International 7
1:30 pm - 3:00 pm	Session 39: Assessing Kraft Pulp Bleachability International 8

1:30 pm - 3:00 pm	Session 40 (Combined with Session 29) International 4
1:30 pm - 3:00 pm	Session 31 (rescheduled from 10:30am) International 9
1:30 pm - 3:00 pm	C&ME Equipment R & I Subcommittee International C
3:00 pm - 3:30 pm	Coffee Break
3:30 pm - 5:00 pm	Fiber Recycling Committee International A
3:30 pm - 5:30 pm	Session 41: In Mill Pollution Reduction International 4
3:30 pm - 5:00 pm	Session 42: Current Topics in Asset Management International 5
3:30 pm - 5:00 pm	Session 43: Experience With State of the Art Fiber Lines Panel International 6
3:30 pm - 5:30 pm	Session 44: Recovery Cycle International 7
3:30 pm - 5:30 pm	Session 45: Determining the Benefits of the Biorefinery Panel International 8
3:30 pm - 5:30 pm	Session 46: Equipment Inspection and Repair Strategies International 9
5:30 pm - 6:30 pm	Technical Program Committee Reception* International 10
5:30 pm - 7:00 pm	AF&PA Recovery Boiler Program Subcommittee International C
5:30 pm - 7:30 pm	Table Top Trade Fair & Reception

*Invitation only

Technical Program Schedule

Wednesday, November 8, 2006

6:00 am - 4:00 pm	Registration
7:00 am - 8:00 am	Session 47: Hot Topics Breakfast International Foyer
7:30 am - 8:30 am	Speaker Ready Room
8:00 am - 8:30 am	Coffee Break
8:00 am - 11:30 am	Yankee Dryer Safety Committee International 9
8:30 am - 10:00 am	Session 48: Improving Pulping with Additives International 4
8:30 am - 10:00 am	Session 49: 02 Delignification & Enzymes International 5
8:30 am - 10:00 am	Session 50: Workshop on Nitrogen Chemistry in Recovery Cycle (Joint Environmental / Engineering) International 6
8:30 am - 10:00 am	Session 51: Gulf Coast Hurricanes - Preparation and Response in the Pulp and Paper Industry International 7
8:30 am - 10:00 am	C&ME Non Metals Subcommittee International 8
9:00 am - 11:00 am	Spouse/Guest Program
10:00 am - 10:30 am	Coffee Break
10:30 am - 12:00 pm	Session 52: Controlling Pulp Yield and Composition International 4
10:30 am - 12:00 pm	Session 53: High Temperature Black Liquor Gasification International 5
10:30 am - 12:00 pm	Session 54: Lime Kilns (Joint Environmental/Engineering) International 6
10:30 am - 12:00 pm	Session 55: Environmental Management System Panel International 7
10:30 am - 12:00 pm	TIP 0402-30 Review International 8
12:00 pm - 1:30 pm	07 EPE Planning International C
1:30 pm - 3:00 pm	Session 56: Sootblowing International 4
1:30 pm - 4:00 pm	Session 57: Implementing the Biorefinery International 5
1:30 pm - 3:30 pm	Session 58: Process Issues in Corrosion Problems International 6
1:30 pm - 3:00 pm	Session 59: Making Functional Modifications to Pulp International 7
4:00 pm - 5:30 pm	Joint Conference Critique* International C
5:00 pm - 6:00 pm	Engineering Division Council Wrap-up* International 8

*Invitation only

Committee Meeting Schedule

Committee Meeting Schedule at a Glance

Committee Meetings (except those noted) are open to ALL conference registrants. This is your opportunity to find people of common professional interests and to participate in what the association is all about.

Sunday, November 5, 2006

8:00 am - 9:00 am	PMD Steering Team International C
9:00 am - 12:00 pm	PMD Council International C
12:00 pm - 1:30 pm	Joint Team Review of Conference Logistics* International A
1:30 pm - 5:00 pm	Engineering Division Council* International C
2:00 pm - 5:00 pm	Nonwood Fibers Committee International 9
3:00 pm - 5:00 pm	Steam & Power/Engineering Management Steering Committee International A
4:00 pm - 6:30 pm	Alkaline Pulping and Bleaching Committee International 8
5:00 pm - 6:00 pm	Process Simulation/Engineering Steering Committee International 10
6:00 pm - 7:00 pm	Process Simulation/Engineering Committee International 10
7:00 pm - 9:00 pm	Steam Heated Dryer Subcommittee International 9

*Invitation only

Committee Meeting Schedule at a Glance

Monday, November 6, 2006

7:30 am - 8:30 am	C&ME Steering Committee International C
10:00 am - 11:00 am	Welding of Duplex Stainless Steels International C
10:00 am - 5:00 pm	Steam & Power/Energy Management International 10
10:00 am - 12:00 pm	C&ME General Committee International 9
10:30 am - 12:00 pm	Lubrication Systems Subcommittee International 6
12:30 pm - 2:30 pm	Asset Management Committee International C
1:15 pm - 4:00 pm	Steam & Power Energy Subcommittee International 10
1:15 pm - 4:00 pm	Steam & Power Water Treatment Subcommittee International 10 Corridor
4:30 pm - 5:30 pm	TIP 0402-23 Review Meeting International C

Committee Meeting Schedule at a Glance

Tuesday, November 7, 2006

10:30 am - 11:30 am	C&ME Metals Subcommittee International C
11:30 am - 12:00 pm	Pickling in Fabrication Maintenance Committee International 6
12:00 pm - 1:30 pm	Engineering Division Committee of Chairs* International 10
1:30 pm - 3:00 pm	C&ME Equipment R & I Subcommittee International C
3:30 pm - 5:00 pm	Fiber Recycling Committee International A
5:30 pm -6:30 pm	Technical Program Committee Reception* International 10
5:30 pm - 7:00 pm	AF&PA Recovery Boiler Program Subcommittee International C

*Invitation only

Table Top Participants

2006 Table Top Participants:

ABTCP

Aeration Industries

American Process Group

Buckman Laboratories

COMANCO Construction Corporation

Diamond Power International

Diversa

Ecovation

HPD, LLC

Insituform Technologies

JPS Industries, Inc.

Martin Marietta Magnesia Specialties LLC

2006 Table Top Participants:

McGill AirClean

METSO Mineral

OMI Industries

PAPTAC

Pell City Industrial Services

Schreiber LC

Southern Environmental, Inc.

Stainless Valve Co.

Sonisys

STI Coms Services

Techpap

Turbosonic, Inc

Vincent Corporation

Conference Workshops

Pre-Conference Workshops

Eucalyptus Workshop*

Session 1: Sunday, November 5, 2006

8:00 am - 12:30 pm

Learn the ins and outs of Eucalyptus in this four-part tutorial. Part 1: Plantation Forestry with Eucalyptus, led by Celso Foelkel, will explore how Eucalyptus plantations in South America are world leaders in forest growth. A description of the steps that have been taken to develop these fast-yield plantation forests will be discussed. Part 2: Eucalyptus Wood Characteristics, Pulping and Bleaching, led by José Lívio Gomide, will cover Eucalyptus wood characteristics and how these can affect pulping, paper manufacture and bleaching. Part 3: Environmental Issues Related to the Pulp and Paper Production with Eucalyptus, led by Celso Foelkel, will explore eco-efficiency in Brazil and will include case studies in wastewater, air and solid residue treatments. Part 4: Criteria to Establish Eucalyptus Wood Quality for Pulping, led by José Lívio Gomide, will cover the technological quality of the latest generation of Eucalyptus clones used by the major Brazilian bleached kraft pulp mills.

Bleach Plant Workshop*

Session 2: Sunday, November 5, 2006

8:00 am - 4:00 pm

This one day workshop will provide participants with a broad, basic understanding of kraft pulp bleaching technology. Led by Tom McDonough, IPST (ret.), participants will hear directly from the leading experts on bleaching technology, including Richard Berry of Paprican and Doug Pryke of the Alliance for Environmental Technology. The workshop is designed for bleach plant operators or engineers; paper company environmental engineers; research, technical sales, and service personnel from paper companies, chemical suppliers or equipment suppliers. Achieve a basic understanding of pulp bleaching technology and its implications for pulp properties and environmental management. Enjoy the opportunity to discuss bleach plant operating problems with experts in the field, and walk away from the workshop with information and materials to help you on your job immediately.

*Additional Registration fee to attend

Pre-Conference Workshops

Valves Design Workshop*

Session 3: Sunday, November 5, 2006

1:00 pm - 5:00 pm

Learn how to select an appropriate control valve for a particular application, and what needs to be considered in selecting the style of valve to be used, along with special considerations for applying valves in liquid and gas service. The course, taught by Dan Parker, Parker, Messana & Associates, Inc. includes coverage of solving problems associated with high noise levels and the potential for cavitation damage. Methods for selecting a valve that will provide the best quality of control based on an analysis of the valve's installed gain are presented, along with the proper method of determining the pressure drop to be used in the valve sizing calculation.

Recycling Workshop*

Session 4: Sunday, November 5, 2006

2:00 pm - 5:00 pm

Led by Bill Moore of Moore & Associates in Atlanta, this comprehensive workshop will cover a wide range of topics in the worldwide, US, and Canadian recovered paper markets for all the major grade groups. Some of the areas covered in the presentation include: Worldwide OCC, ONP, Mixed Paper, Office Papers supply and demand balance; characterization of US domestic mill demand and procurement practices; status of US collection activities; the Asian export market, its effect on the US market and offshore buying characteristics; and yield and quality issues.

*Additional Registration fee to attend

Opening Session, Keynote & Awards Presentation

Keynote Address / Opening Session

Monday, November 6, 2006

8:30 a.m. - 10:00 a.m. • Marquis Salon I

Jim Buzzard



Mr. Buzzard, 51, is president of MeadWestvaco Corporation with responsibility for the company's operations, including Packaging, Consumer and Office Products, Specialty Chemicals, Specialty Papers, Forestry, Technology, and Supply Chain.

Mr. Buzzard began his career with Westvaco in 1978 and completed several assignments in the Controller's department and the former Kraft Division. In 1982, he was named purchasing manager for the Kraft Division. In 1984, he was named administration manager for the former Container Division. He became area sales manager for the Eaton, Ohio, container plant in 1986. He was promoted to corporate marketing manager in marketing services in 1988 and became manager of marketing services in 1990, responsible for corporate market research, the company's Marketing Personnel Development Program, and working with the company's divisions to develop their new products and services. In 1991, he was named manager of business planning and analysis for the Envelope Division, and, in 1992, he was named manager of the Envelope Division and elected vice president of Westvaco. In 1994, he became interim marketing and sales manager of the Fine Papers Division and became sales and marketing manager in 1995. In 1998, he was named assistant division manager of the Fine Papers Division. In 1999, he was elected senior vice president of Westvaco and manager of the Fine Papers Division. In 2000, he assumed responsibility for the Envelope Division, and, later that year, he was named executive vice president of Westvaco. He was named executive vice president for MeadWestvaco Corporation in 2002 with responsibility for merger integration and the Consumer & Office Products Group.

Thomas McDonough

Pulp Manufacture Division Leadership & Service Award



Dr. McDonough retired in 2002 from the Institute of Paper Science and Technology (IPST), where he was Professor of Engineering and Director of the Center for Paper Business and Industry Studies (CPBIS). He earned the Ph.D. in Chemical Engineering at the University of Toronto and spent ten years in the paper and allied industries before joining IPST in 1978. While at IPST, he directed research in the science and

technology of pulp manufacture, with emphasis on the technology, chemistry, kinetics and environmental implications of pulping and bleaching processes. He taught courses in reaction engineering, experimental design and bleaching technology and directed the research of many Ph.D. and M.S. students. He has authored or co-authored numerous publications, patents and book chapters, including approximately 50 refereed journal articles and book chapters. Dr. McDonough has served as Associate Vice President of IPST and Associate Scientific Editor for the Journal of Pulp and Paper Science. He was Program Chairman for the 1996 International Pulp Bleaching Conference and Conference Chairman for the 1998 International Pulp Bleaching Conference. He received the Technical Award and Johan C.F.C. Richter Prize of the Pulp Manufacture Division of the Technical Association of the Pulp and Paper Industry (TAPPI) in 1996 and was named a TAPPI Fellow, also in 1996.

Evan Beach

2006 Environmental Division Scholarship



Evan Beach, a graduate student in Chemistry at Carnegie Mellon University (CMU) in Pittsburgh, PA, has been awarded the 2006 Environmental Division Scholarship Award. The Environmental Division established its scholarship program to encourage talented engineering students to pursue careers in the pulp and paper industry.

Beach earned his B.S. in Chemistry from CMU, and his M.S. in Chemistry from University of North Carolina at Chapel Hill. He holds a 4.0 GPA (out of 4.0) for his current studies at CMU. Beach's previous awards include the National Science Foundation Pre-Doctoral Fellowship (2003), the Gates Foundation Millennium Scholar (2000-2001), and the Warner Award from the CMU Department of Chemistry.

As an undergraduate, Beach was involved in research testing a catalyst for hydrogen peroxide delignification; as a graduate student, he has been involved in a bleach plant wastewater treatment plant. He is currently designing a project for treatment of sulfur compounds and other volatile chemicals that contribute to mill odor and interfere with biotreatment.

In his free time, Beach enjoys marathon running, backpacking, and trail maintenance.

Honghi Tran

2006 Engineering Division Technical Award and Beloit Prize



In recognition of his important contributions to the pulp and paper industry, the TAPPI Engineering Division is pleased to award Honghi Tran its 2006 Engineering Division Technical Award and Beloit Prize. Tran is Director of the Pulp & Paper Centre, and a Professor in the Department of Chemical Engineering and Applied Chemistry at the University of Toronto in Ontario, Canada.

Tran obtained his Bachelor's and Master's degrees in Ceramic Engineering from Shizuoka University in Japan, and received his PhD in Chemical Engineering from the University of Toronto in 1982. He worked as a Senior Research Scientist for Douglas Reeve & Associates in Toronto for 5 years before returning to the University of Toronto in 1987. He has also served as an Adjunct Professor at the Institute of Paper Science and Technology in Atlanta.

Tran has made numerous contributions to the industry in the area of kraft chemical recovery, through his application of fundamental research results to the solutions of practical problems. He has led six large research consortia at the University of Toronto and has received many grants from the Natural Science & Engineering Research Council of Canada (NSERC) for chemical recovery technology research. He has authored or co-authored more than 110 publications and holds eight U.S. patents. Through his company, Tran Industrial Research, Inc, Tran has served as a technical consultant to many companies and mills on problems related to recovery boilers, lime kilns and borate autocausticizing technology.

A TAPPI member since 1980, Tran received a Certificate of Outstanding Merit from the TAPPI Engineering Division in 1997 and was named a TAPPI Fellow in 2000. He has been a member of the Steam and Power Committee as well as the Recovery Boiler Subcommittee. He has instructed the annual TAPPI Kraft Recovery Operations Short Course since 1986, presented many papers at TAPPI Conferences, and received the TAPPI Engineering Conference Best Paper award in 1997, 1998, 2000, 2001 and 2002.

Kelley Spence

2006 Engineering Division Scholarship Award



Kelley Lynn Spence, a senior at North Carolina State University in Raleigh, N.C., USA, has been selected to receive the 2006 Engineering Division Scholarship. She is currently studying Paper Science & Engineering and Chemical & Biomolecular Engineering, and plans to graduate in May, 2007.

Spence is a member of both the TAPPI and PIMA chapters at NCSU, and also a member of AIChE. She has received the Undergraduate Research Symposium Poster Presentation Award, and the Undergraduate Research Award, among other honors. She has been on the Dean's List for all six semesters of her NCSU studies.

During her internship at Novozymes, Spence worked in the Forest Products Research Division, experimenting with enzymes to improve the disposal of sludge from the kraft pulping process. She has also worked on two co-op projects with Kimberly-Clark Corp. in the area of tissue manufacturing and non-wovens.

Spence says that her family history is what initially attracted her to studies in paper science: her grandfather, father, uncle, and brother were all employees at the paper mill near her home.

Martha Quinlin and Ed Robie

2006 Engineering Division Leadership and Service Award

Martha Quinlin and Ed Robie are the co-winners of the 2006 Engineering Division Leadership and Service Award. The award honors outstanding contributions to TAPPI's Engineering Division. Both Quinlin and Robie served the Division for several years in their positions as TAPPI staff members.



Quinlin joined TAPPI in 1989 and had soon taken in active role in event planning and Learning Center support for the Association. In 2001 she was named Technical Program Planner/Technical Program Coordinator. In that role, Quinlin handled a full range of event planning and programming activities; led TAPPI division and committees in the design of conference technical programs and educational courses; and served as principal staff liaison for association division councils and committees. She is also a member of the

Professional Convention Management Association (PCMA). Quinlin retired from TAPPI in August 2006, and currently resides in Suwanee, GA.



Robie graduated from the University of Georgia, Athens, Georgia in 1971 with a BS degree in forest resource management. His career in association management began when he joined the staff of the Society of American Foresters, Washington, DC, in 1974. In 1984 Robie joined the TAPPI staff as a meeting administrator. He served as manager of meetings from 1988-1991 and then as director, meetings and exhibits from 1991-1994. He retired from TAPPI in June 2006 as event project manager. Robie

is a member of PCMA, and served as a board member for the PCMA Southeast Chapter in 2005. Also a member of the Georgia Society of Association Executives (GSAE), Robie became a certified meeting professional (CMP) in 1986. He is active as an adult leader in Troop 463, Boy Scouts of America, and lives in Sandy Springs, GA.

Awards to be Presented During the 2006 Fall Technical Conference

Engineering, Pulp Manufacture, and Environmental Divisions

2005 TAPPI OUTSTANDING RESEARCH PAPER AWARD

ERIK DAHLQUIST

Malardalen University

ANDREW JONES

International Paper

"Presentation of a Dry Gasification Process with Direct Causticization"

2006 ENGINEERING DIVISION TECHNICAL AWARD AND БЕЛОIT PRIZE

HONGHI TRAN

University of Toronto

2006 ENGINEERING DIVISION LEADERSHIP AND SERVICE AWARD

MARTHA QUINLIN and EDWARD F. ROBIE

SPECIAL CERTIFICATES OF APPRECIATION

JOHN "JACK" L. CLEMENT, JR.

... for contributions to TAPPI and the Steam
and Power/Energy Management Committee

ENGINEERING DIVISION SPECIAL CERTIFICATES OF RECOGNITION

ANGELA WENSLEY

Angela Wensley Eng. Inc.

...in recognition of enduring and outstanding contributions to TAPPI and
the Corrosion and Materials Engineering Committee for Leadership of
the Digester Information Task Group
1986 - 2006

2006 ENGINEERING DIVISION SCHOLARSHIP AWARD

CERTIFICATE OF RECOGNITION

KELLEY L. SPENCE

North Carolina State University

2006 PULP MANUFACTURE DIVISION TECHNICAL AWARD
AND JOHAN C.F.C. RICHTER PRIZE

*To Be Presented on Alternate Year of PMD Leadership & Service Award

2006 PULP MANUFACTURE DIVISION LEADERSHIP & SERVICE AWARD
AND JOSEPH K. PERKINS AWARD
THOMAS J. McDONOUGH
IPST

2005 FALL TECHNICAL CONFERENCE HIGH IMPACT PAPER
"Evaporator Fouling 101 - Sodium Salt Crystallization and Soluble-Scale Fouling"
CHRISTOPHER L. VERRILL and WILLIAM J. "Jim" FREDERICK, Jr.
IPST at Georgia Tech

2006 DAVID WETHERHORN AWARD
"Determining the Heat of Reaction of Kraft Pulping"
CHARLES E. COURCHENE, THOMAS J. McDONOUGH,
and BLAIR R. CARTER
IPST at Georgia Tech

EARL W. MALCOLM
IPST at Georgia Tech

PETER W. HART
MeadWestvaco Corporation

WAYNE CARR BEST PAPER AWARD
WILLIAM K. SACIA and JAY SIMMONS
Weyerhaeuser Company

... recipient of the 2005 Wayne Carr Best Paper Award from the Fiber Recycling Committee in recognition of your presentation at the 2005 Engineering, Pulping, and Environmental Conference
"The Impact of Changing ONP Quality on a Newsprint Mill"

2006 ENVIRONMENTAL DIVISION SCHOLARSHIP AWARD
EVAN S. BEACH
Carnegie Mellon University

Technical Program Committee Rosters

2006 EPE Conference Technical Program Committee

Engineering Technical Program Committee

Technical Program Chairman

DAVID E. WHITE

IPST at Georgia Tech

Corrosion and Materials Engineering Technical Program Chairman

JOSEPH R. KISH

PAPRICAN

Asset Management Technical Program Chairman

JERRY D. KAHN

JK Consulting

Process Simulation / Process Engineering Technical Program Chairman

LUC LAPERRIÈRE

UQTR

Steam & Power/Energy Management Technical Program Chairman

ANDREW K. JONES

International Paper

New Technology Showcase/Hot Topics

DON R. SORENSON

AMEC

2006 EPE Conference Technical Program Committee

Pulp Manufacture Technical Program Committee

Division Vice Chairman and Technical Program Chairman

CHARLES E. COURCHENE

IPST at Georgia Tech

High Impact Paper & Awards

RICHARD M. BERRY

PAPRICAN

Alkaline Pulping & Bleaching Technical Program Co-Chairmen

PETER W. HART

MeadWestvaco

THOMAS J. McDONOUGH

IPST

Fiber Raw Material Supply Technical Program Chairman

WILLIAM S. FULLER

FRM Consulting

Nonwood Plant Fibers Technical Program Chairman

JAIRO H. LORA

GreenValue S.A.

Fiber Recycling Technical Program Chairman

JOHN H. CAMERON

Western Michigan University

Supplier Technical Program Chairman

DIRK A. LINDENBECK

Stainless Valve Company

CPBIS Technical Program Chairman

COLLEEN WALKER

CPBIS at Georgia Tech

2006 EPE Conference Technical Program Committee

2006 Environmental Division Working Group

Conference Chairman

MICHAEL R. CORN

AquaAeTer Inc.

Technical Program Chairman

KARIN M. GREENACRE

RMT Inc.

Division Co-Chairs

PATRICIA FLEISCHAUER

ENSR International

DANIEL S. DIEHL

Bowater Inc.

Environmental Working Group Members

WILLIAM M. JERNIGAN

Georgia-Pacific Corporation

REID A. MINER

NCASI

ROBERT M. STEIN

Aware Environmental Inc.

MICHAEL H. FOSTER

Env. Bus. Specialists L.L.C.

TAMMY R. WYLES

Georgia-Pacific Corporation

SAUL J. FURSTEIN

Georgia-Pacific Corporation

DALE K. PHENICIE

Env. Affairs Consulting

CAROLE J. STAPPER

URS Corporation

Technical Program

Sunday, November 5, 2006

8:00 am - 12:30 pm
INTERNATIONAL 4

SESSION 1
Eucalyptus Workshop
José Livio Gomide, Celso Foelkel

8:00 am - 4:00 pm
INTERNATIONAL 5

SESSION 2
Bleach Plant Workshop
Tom McDonough, retired

1:00 pm - 5:00 pm
INTERNATIONAL 6

SESSION 3
Valves Design Workshop
Dan Parker, Parker, Messana & Associates, Inc.

2:00 pm - 5:00 pm
INTERNATIONAL 7

SESSION 4
Recycling Workshop
Bill Moore, Moore & Associates

Monday, November 6, 2006

8:00 am - 8:30 am
MARQUIS SALON I

COFFEE BREAK

8:30 am - 10:30 am
MARQUIS SALON I

OPENING AWARDS & KEYNOTE SPEAKER
Jim Buzzard, President, MeadWestvaco

10:00 am - 10:30 am
INTERNATIONAL FOYER

COFFEE BREAK

10:30 am - 12:30 pm
INTERNATIONAL 8

SESSION 6
Nonwood Pulping
Session Chair: Jairo Lora, GreenValue S.A.

6-1 • 10:30 am Chemical and Pulping Characteristics of Corn Stalk Fractions
*Wesley Johnson, Sean Warby, Med Byrd, Hasan Jameel,
North Carolina State University*

6-2 • 11:00 am Refining Response of Wheat Straw Pulp and Wood Pulp Blends
Wade Chute, Alberta Research Council, Inc.

6-3 • 11:30 am Two-Step Straw Processing - A New Concept of
Silica Problem Solution
*Jan Pekarovic, Alexandra Pekarovicova, Paul Dan Fleming III,
Western Michigan University*

6-4 • 12:00 pm Mixed Hardwood CMP Pulp Reinforcement by Wheat
Straw Chemical Pulps
*Hossein Resalati,
University of Agric. Sciences and Natural Resources, Gorgan*

10:30 am - 12:00 pm
INTERNATIONAL 5

SESSION 7
**The State of the North American Pulp
and Paper Industry**

Session Chair: Tom McDonough, retired

- 7-1 • 10:30 am Industry Competitiveness and Transform to Survive and Dominate
James McNutt, Center for Paper Business and Industry Studies
Dan Cenatempo, Value Resolution Group

10:30 am - 12:30 pm
INTERNATIONAL 7

SESSION 8
Recycling-Stickies

Session Chair: Mahendra Doshi,
Progress in Paper Recycling

- 8-1 • 10:30 am Establishing the Techniques to Relate Paper Machine
Issues To Colloidal Microstickies
R. Daniel Haynes, Eka Chemicals
- 8-2 • 11:00 am Addressing the Nature of Stickies in Deinked Pulp
Tiina Sarja, Kemira Oyj, Oulu Research Centre
Donald MacNeil, Åbo Akademi University
Ulf Künzel, UPM-Kymmene Papier GmbH and Co. KG
- 8-3 • 11:30 am Determination of Macro and Microstickies in the Same
Stock and Water Samples
Robert de Jong, 2 Fiber Consulting
Salman Aziz Integrated Paper Services, Inc
Mahendra Doshi, Progress in Paper Recycling

10:30 am - 12:00 pm
INTERNATIONAL 6

SESSION 9
Bill Babbington Maintenance Roundtable

Session Chair: Jerry Kahn, JK Consulting

10:30 am - 12:00 pm
INTERNATIONAL 4

SESSION 10
Alkaline Pulpig

Session Chair: Bruce Archibald, International Paper

- 10-1 • 10:30 am The Possibility of Controlling Formation and Cleavage
Reactions of HexA During Kraft Pulpig
Koki Kisara, OJI Paper Co. LTD
Sverker Danielsson, Mikael Lindstrom,
Royal Institute of Technology, KTH
- 10-2 • 11:00 am The Effect of Alkali Charge on Eucalyptus spp. Kraft Pulpig
Ana Gabriela Monnerat Carvalho Bassa,
Francismara A. Sanches Duarte, Francides Gomes da Silva, Jr,
University of São Paulo - Brazil
Vera M. Sacon, Votorantim Celulose and Papel - Brazil
- 10-3 • 11:30 am How Fiber Dimensions Influence Refining Response and Paper
Properties - Using Acacia and Eucalypt as Examples
Ulla-Britt Mohlin, STFI-Packforsk
Ann Burman, Susie Soetanto, PT. Riau Andalan Pulp and Paper

1:30 pm - 3:00 pm
INTERNATIONAL 4

SESSION 11
Understanding Materials Performance - How to Save Your Mill Millions of Dollars Panel
Session Chair: Chris Thompson, PAPERCAN

Panelists:

Equipment Reliability & Integrity Sub-Committee
Nancy Hoffman, M&M Engineering

Non-Metals Knowledge: Saving Your Mill Big Dollars
Randy A. Nixon, Corrosion Probe, Inc

Metals Subcommittee
John Grocki, Advantage Resources Consulting

1:30 pm - 3:00 pm

SESSION 12
Nonwoods in Papermaking
Session Cancelled

1:30 pm - 3:00 pm
INTERNATIONAL 6

SESSION 13
Trends in Global Paper Demand & Industry Innovation
Session Chair: Colleen Walker, CPBIS at Georgia Tech

13-1 • 1:30 pm Shifts in Regional Consumption for the Paper and Pulp Industry
Patrick McCarthy, Lei Lei, Georgia Institute of Technology

13-2 • 2:00 pm The Role and Value of Innovation in the Pulp and Paper Industry
Vivek Ghosal, Usha Nair-Reichert, Georgia Institute of Technology

1:30 pm - 3:00 pm
INTERNATIONAL 7

SESSION 14
Optimizing Chip and Fiber Quality
Session Chair: Bill Fuller, FRM Consulting

14-1 • 1:30 pm Utilization of Optical Wood Chip Analyzer in Pulping and Chipping Process
Ari Havu, Tommi Honkanen, Toni Hämäläinen, Metso Paper

14-2 • 2:00 pm Chip Quality Scorecard 'Moving Forward, But Still in Need of Improvement'
Alastair Twaddle, International Paper Company

1:30 pm - 3:00 pm
INTERNATIONAL 8

SESSION 15
Process Simulation / Engineering
Session Chair: Luc Laperriere, Université du Québec à Trois-Rivières

15-1 • 1:30 pm Strategies to Improve Pump Efficiency and Life Cycle Performance
Mike Pemberton, ITT IBG/Pump Start Control Solutions

- 15-2 • 2:00 pm An Outline of Sensor-Based Condition Monitoring Techniques for Hydraulic and Lubricating Systems in Pulp & Paper Applications
John K. Duchowski, Hydac Technology Corporation
Michel Lepitre, Groupe LTI
- 15-3 • 2:30 pm Effects of Process Variability on Ring Formation In Lime Kilns
Teresa D'Souza, Honghi Tran, Joe Repka, University of Toronto

1:30 pm - 3:00 pm
INTERNATIONAL 9

SESSION 16
What to Do with the Sludge
(Joint Session with Environmental and Fiber Recycling)
Session Chair: Terry Bliss, Hercules Inc.

- 16-1 • 1:30 pm Improved Sludge Dewatering with Cyclodextrins
Bradley H. Hartong, Malyuba Abu-Daabes, Tuan Le, Sujit Banerjee, Georgia Institute of Technology
- 16-2 • 2:00 pm Evaluation of Treatment Methods for De-inking Mill Sludge
Akpajotor Shemi, Jeffery S. Hsieh, Georgia Institute of Technology

3:00 pm - 3:30 pm
INTERNATIONAL FOYER

COFFEE BREAK

3:30 pm - 5:30 pm
INTERNATIONAL 4

SESSION 17
Recycling - Deinking
Session Chair: R. Daniel Haynes, Eka Chemical

- 17-1 • 3:30 pm A New Flotation System for High Efficiency at Low Energy Input
Marco Pescantini, Comer SpA
- 17-2 • 4:00 pm Visualization of Toner Ink Adsorption at Bubble Surfaces
Zachery I Emerson, Gopal A. Krishnagopalan, Steve R. Duke, Auburn University
- 17-3 • 4:30 pm Global Application of Sulphite Based Neutral Deinking Technology
R. Daniel Haynes, Jim Merza, Akzo Nobel, Eka Chemicals, Inc
- 17-4 • 5:00 pm On-line Measurement of Air Content in Pulp and Papermaking Systems. Application to Ink Flotation
Gilles Dorris, Natalie Pagé, Sylvain Gendron, Terry Murray, Yuxia Ben, Pulp and Paper Research Institute of Canada

3:30 pm - 5:00 pm
INTERNATIONAL 5

SESSION 18
Bleach Plant Operations

Session Chair: Wayne Bucher, WB Consulting Inc.

- 18-1 • 3:30 pm Final Chlorine Dioxide Bleaching in Multi-stage Bleaching as an Option for the Production of Very High Brightness and Optically Balanced Pulps- Comparison of DD Versus DP Bleaching Sequences in the Bleaching of Kraft Pulps
V.R Parthasarathy, Gary Brooks, Canexus NA Limited
- 18-2 • 4:00 pm Progress Towards “Best in Class”: A Summary of Bleaching Chemical Consumption Reduction and Optimization
Douglas C. Pryke, Ken Nysten, Catalyst Paper, Elk Falls Division
- 18-3 • 4:30 pm Use of Hydrochloric Acid or Sulfuric Acid in the Pre-Acidification of Pulps Prior to Chlorine Dioxide Delignification and Multistage Bleaching
V.R. Parthasarathy, Gary Brooks, Canexus NA Limited

3:30 pm - 5:30 pm
INTERNATIONAL 6

SESSION 19
Nonwood Processing and the Biorefinery

Session Chair: Robert Hurter, Hurter Consulting Inc.

- 19-1 • 3:30 pm Observations on Using Wheat Straw Pulp on Papermachines
Mark Lewis, William McKean, William Pan, Washington State University
- 19-2 • 4:00 pm BioRegional MiniMill Technology - Report on UK Demonstration Mill
Sue Riddlestone, Bio Regional Mini Mills UK Ltd
- 19-3 • 4:30 pm A Novel Biorefinery - Production of Pulp, Bioenergy and Green Chemicals From Nonwood Materials
Pasi Rousu, Päivi P. Rousu, Juha R. Anttila, Juha P. Tanskanen, University of Oulu
- 19-4 • 5:00 pm Chemical Recovery in Nonwood Pulping Based on Formic Acid
Juha R. Anttila, Päivi P. Rousu, Chempolis Oy, Juha P. Tanskanen, University of Oulu

3:30 pm - 5:00 pm
INTERNATIONAL 7

SESSION 20
Engineering / Pulping / Environmental
New Technology Showcase

Improval Nutrient Removal Control Using On-line
Nitrate and Organics Analysis
Vickie Olson, Hach Company

Using Real-Time Microbial Monitoring to Optimize
Pulp & Paper Water and Wastewater Processes
Patrick Whalen, LuminUltra Technologies Ltd.
Optimizing Wastewater Treatment by On-line Dissolved
Oxygen and Suspended Solids Analysis
Vickie Olson, Hach Company

Producing Syngas from Hog Fuel with Nexterra Gasifier
to displace Natural Gas in Boilers and Lime Kilns and
Reduce Energy and Production Costs
Virginia Balcom, Nexterra Energy

Condenser - Stripper
Axel Rosenblad, Rosenblad Design Group Inc.

Membrane WESP-The Lowest Cost Technology for Fine
Particulate Control to Meet New Boiler MACT
Hardik Shah, Southern Environmental Inc.

Anthony-Ross Company Introduces Automatic
Smelt Spout Cleaner
Ken Pingel, Anthony-Ross Co.

Converting Environmental Emissions Into Profits
Andrew Gibson

Dissolve Lignin Module Measures Black Liquor
Carryover For Bleach Plant Control
Thomas Biazzo, BTG Americas Inc.

Application of a Pulsed Electro-Coagulation System on
Industrial Paper Mill Process Wastewater
Yuan-Shing Perng, Da-Yeh University

The New Techpap NIR Spectroscopy for Recycled
Bale Inspection
Joseph O'Leary, Techpap, Inc.

Introducing "OPUS": Out-of-Plane Ultrasonic System
Kerin Lester, SoniSys, Inc.

3:30 pm - 5:00 pm

SESSION 21 Cancelled

Tuesday, November 7, 2006

7:00 am - 8:00 am **SESSION 22**
INTERNATIONAL **Hot Topics Breakfast**
FOYER

8:00 am - 8:30 am **COFFEE BREAK**
INTERNATIONAL FOYER

8:30 am - 10:00 am **SESSION 23**
INTERNATIONAL 4 **Water Quality**
Session Chair: Bill Jernigan, Georgia-Pacific Corporation

23-1 • 8:30 am A Detailed Study of the Zone of Initial Dilution to Evaluate Temperature Exposure and Fish Entrainment-Fort James Operating Company's Wauna Mill Outfall
Sreenivasa Chopakarla, Tarang Khangaonkar, Battelle - Marine Sciences Laboratory Thor Sorenson, Ft. James - Wauna Mill

23-2 • 9:00 am Findings from Long-Term Studies in Four US Rivers Receiving Pulp and Paper Mill Effluent
C.A Flinders, T.J Hall, W.J. Arthurs, J. Ikoma, R.L Ragsdale, National Council for Air and Stream Improvement

23-3 • 9:30 am Determining Labile and Recalcitrant Organic Nitrogen for TMDL Projections
Stephanie Kilgore, Tim Jones, Kim Grantham, Robert Sackellares, Bill Jernigan, Georgia Pacific John Michael Corn, AquaAeTer

8:30 am - 10:00 am **SESSION 24**
INTERNATIONAL 5 **Project Management Fundamentals Tutorial Part 1**
Session Chair: Steve Dowe, Jacobs Engineering Group Inc.

8:30 am - 10:00 am **SESSION 25**
INTERNATIONAL 6 **Recycling Tutorial: Using Optical Properties to Measure Fiber**
Session Chair: Carl Houtman, USDA Forest Service

25-1 • 8:30 am Online Measurement of Dirt Specks in Sheets
Kenneth W. Corscadden, Roland J. Trepanier, OpTest Equipment Inc.

25-2 • 9:00 am Properties of Pressure Sensitive Adhesives Found in Paper Recycling Operations
Ryan Verhulst, Steven Severtson, Jihui Guo, University of Minnesota Carl Houtman, USDA Forest Service

8:30 am - 10:00 am
INTERNATIONAL 7

SESSION 26
Cracking Issues in Kraft Pulp Mills
Session Chair: Sandy Sharp,
MeadWestvaco Corporation

- 26-1 • 8:30 am Mechanism of Stress Assisted Corrosion on Carbon Steel Boiler Tubes
Doug Yang, Richard Neu, Preet Singh,
Georgia Institute of Technology
- 26-2 • 9:00 am Stress Corrosion Cracking of Different Duplex Stainless Steel Grades in Pulping Liquor
Ananya Bhattacharya, Georgia Institute of Technology
Heikki Leinonen, VTT Technical Research Center of Finland;
Preet Singh, Georgia Institute of Technology
- 26-3 • 9:30 am Digester Outlet Device Scraper Arm Cracking
Margaret Gorog, Weyerhaeuser

8:30 am - 10:00 am
INTERNATIONAL 8

SESSION 27
Process Simulation of Kraft Pulping
Session Chair: Cal Clark, BE&K, Inc.

- 27-1 • 8:30 am Long Feedback Compensated Kappa Factor Control: Part II of Process Optimization at Rock-Tenn Company, Demopolis Alabama Mill
Sean Smith, Keith Shuttlesworth, Marty Wells,
Rock-Tenn Mill Company, LLC
Alison Rowat, Metso Automation

8:30 am - 10:00 am
INTERNATIONAL 9

SESSION 28
Recovery Boiler Emissions
Session Chair: Alarick Tavares, Diamond Power

- 28-1 • 8:30 am Effects of SO₂ on Superheater Fouling in Kraft Recovery Boilers
Honghi Tran, Christian Brown, Andrew Jones,
University of Toronto
- 28-2 • 9:00 am Black Liquor Enrichment with Petroleum Coke
Christopher Dietel, DTE Energy Services
Jeff Empie, Georgia Institute of Technology
- 28-3 • 9:30 am Investigation and Analysis of the Causes of Recovery Boiler Economizer Failures
J.L. Clement, Clement Consulting Inc.
T.M. Grace, T.M. Grace Company

10:00 am - 10:30 am
INTERNATIONAL FOYER

COFFEE BREAK

10:30 am - 12:00 pm
INTERNATIONAL 4

SESSION 29 (COMBINED WITH SESSION 40)

Combustion Process:

An Environmental Perspective Tutorial

Session Chair: Ashkok Jain, NCASI

Tammy Wyles, G-P: Regulatory Overview

Daryl Whitt, RMT: Permitting Overview

Arun Someshwar, NCASI: Emissions Control Overview

Reid Miner, NCASI: Greenhouse Gases

Greenhouse Gas and Carbon Profile of the

Global Forest Products Industry

Reid Miner, NCASI

John Perez-Garcia, University of Washington

10:30 am - 12:00 pm
INTERNATIONAL 5

SESSION 30

Project Management Fundamentals Tutorial Part II

Session Chair: Steve Dowe,

Jacobs Engineering Group Inc.

10:30 am - 12:30 pm
INTERNATIONAL 7

SESSION 32

Low Temperature Black Liquor Gasification

Session Chair: Reyhaneh Shenassa, Kvaerner Power Inc.

32-1 • 10:30 am Performance of a Small Scale Fluidized Bed Black
Liquor Steam Reformer

Kevin Whitty, Mauricio Naranjo, Carolina Rubiano,

The University of Utah

32-2 • 11:00 am Measurement of Tars Produced During Low-Temperature
Black Liquor Gasification

Kristina Iisa, Scott Sinquefield, Mike Buchanan, Jim Frederick,

Georgia Institute of Technology

Kevin Whitty, Carolina Rubiano, University of Utah

32-3 • 11:30 am AF&PA Recovery Boiler Program Update

Thomas Grant, American Forest & Paper Association

10:30 am - 12:00 pm
INTERNATIONAL 8

SESSION 33

**Bleaching: Minimizing Scaling and Improving
Fiber Properties**

Session Chair: Peter Hart, MeadWestvaco Corporation

33-1 • 10:30 am Modeling and Minimization of Barium Sulfate Scale

Alan Rudie, USDA Forest Service

Peter Hart, MeadWestvaco Corporation

33-2 • 11:00 am Chemical Modification of ECF Softwood Kraft Pulp by
Alkaline Peroxide Treatment

Zheng Dang, Arthur Ragauskas, Georgia Institute of Technology

Thomas Elder, USDA-Forest Service

33-3 • 11:30 am The Effect of Sequential Bleaching on Total Fiber Charge of SW Kraft Pulp Fibers
Dong Cheng Zhang, Charles Courchene, Xinsheng Chai, Arthur Ragauskas, Georgia Institute of Technology

10:30 am - 12:00 pm
INTERNATIONAL 9

SESSION 34
Recycling-Fiber Processing

Session Chair: Terry Bliss, Hercules Inc.

34-1 • 10:30 am Defibering OCC in High Dry Content
Pirjo Yli-Viitala, Ari Ammala, Jouko Ninnimäki, University of Oulu, Finland

34-2 • 11:00 am Pressure Screen Capacity - Current Findings on the Role of Wire Width and Height
Hanna Jokinen, Ari Ammala, Kati Lindroos, Jouko Ninnimäki, University of Oulu, Finland
Jukka Virtanen, Metso Paper

34-3 • 11:30 am Pressurized Tail Screen - Improved Fiber Recovery Using Intermediate Dilution
Johan Carlsson, Metso Paper
Fredrik Broman, Korsnäs AB

1:30 pm - 3:00 pm
INTERNATIONAL 4

SESSION 35
Recycled Paper Fundamentals

Session Chair: Garnet Bremner, Madison Paper Company

35-1 • 1:30 pm Drying Characteristics of Fractionated Fiber Using Thermo-gravimetric Analysis and Paper Drying Simulator
Hussam Alkhasawneh, John Cameron, Said Abubakar, Western Michigan University

35-2 • 2:00 pm New Measurements of Bonding Potential and Hornification of Recycled Fibers
Frances Walsh, Adam Brancato, Sujit Banerjee, Georgia Institute of Technology

35-3 • 2:30 pm Chemical Reduction and Energy Savings of Flotation Deinking Aided with Electric Field
Akpajotor Shemi, Jeffery Hsieh, Georgia Institute of Technology

1:30 pm - 3:00 pm
INTERNATIONAL 5

SESSION 36
The Wonderful World of Contracts

Session Chair: Charles Anderson, QBM Management Inc.

The Wonderful World of Contracts
Charles Anderson, Mike Lemke, QBM Management

1:30 pm - 3:00 pm
INTERNATIONAL 6

SESSION 37
Evaporators

Session Chair: David Clay, Jacobs Engineering Group Inc.

- 37-1 • 1:30 pm Evaporator Boilout Guidelines
*Christopher Verrill, Nikolai DeMartini,
Georgia Institute of Technology*
- 37-2 • 2:00 pm Stability of Sodium Sulfate Dicarboxylate
in Black Liquor Concentrators
*Cosmas Bayuadri, Christopher Verrill, Ronald Rousseau,
Georgia Institute of Technology*
- 37-3 • 2:30 pm Evaporation System Solutions - Energy and the Environment
*Randy Stern, Fredrik Anängen, Anders Wernqvist,
Kvaerner Power*

1:30 pm - 3:00 pm
INTERNATIONAL 7

SESSION 38
Energy

*Session Chair: Tom Hariz,
Jacobs Engineering Group Inc.*

- 38-1 • 1:30 pm Conservation Through Energy Supply Optimization
*Chuck Davis, Georgia-Pacific
Theodora Retsina, Steven Rutherford, American Process Inc.*
- 38-2 • 2:00 pm Purchased Power Optimization in an Energy Management
System At a Paper Mill
*Jonathan Rodin, Emerson Performance Solutions
Elliott Bell, MeadWestvaco Corporation*
- 38-3 • 2:30 pm Pulp and Paper Industry Energy Bandwidth Study
*Robert Kinstrey, Jacobs
David White, Georgia Institute of Technology*

1:30 pm - 3:00 pm
INTERNATIONAL 8

SESSION 39
Assessing Kraft Pulp Bleachability

Session Chair: Michael Schofield, Hercules Inc.

- 39-1 • 1:30 pm An Attempt at Quantifying Bleachability of Hardwood
Chemical Pulps
*R.C Francis, Lavrykova Abdoulmoumine, S.K Bose,
The State University of New York*
- 39-2 • 2:00 pm Relationship Between the Pulp Yield, Bleachability
and Cooking Conditions of Loblolly Pine
*Daniel Connell, Magnus Björklund, Annbritt Forsström,
Eka Chemicals AB*

39-3 • 2:30 pm Optimization of ECF Bleaching of Kraft Pulp: I. Optimal Bleaching of Hardwood Pulps Made with Different Alkali Charges
Thomas McDonough, Shunichiro Uno, Alan Rudie, Charles Courchene, IPST

1:30 pm - 3:00 pm
INTERNATIONAL 9

SESSION 31 (Rescheduled Time)
TMDL Panel

Session Chair: Bob Stein, FiberMark Inc.
Panelists: Wilson Gautreaux, Mead Westvaco
Martin Lebo, Weyerhaeuser
Robert Sackellaes, Georgia Pacific

1:30 pm - 3:00 pm
INTERNATIONAL 4

SESSION 40
Sustainability/Climate Change
(Combined with Session 29)

3:00 pm - 3:30 pm
INTERNATIONAL FOYER

COFFEE BREAK

3:30 pm - 5:30 pm
INTERNATIONAL 4

SESSION 41
In Mill Pollution Reduction

Session Chair: John Sparapan, Nalco Company

41-1 • 3:30 pm Environmental Development of Kraft Pulping Technology
Helena Wessman, KCL

41-2 • 4:00 pm Refiner Bleaching With Magnesium Hydroxide (Mg(OH)₂)
And Hydrogen Peroxide
Ray Harrison, Tony Parrish,
North Pacific Paper Corporation (NORPAC)
Aileen Gibson, Mark Wajer, Martin Marietta Magnesia Specialties

41-3 • 4:30 pm Resource Recovery and Pollution Prevention at Source
Talat Mahmood, Paprican

41-4 • 5:00 pm Application of Methane Fermentation Technology in Pulp and
Paper Industry - Treatment of a Mixture of Hardwood and
Softwood Kraft Pulp Mill Evaporate Condensate
Isao Onodera, Reiko Oshima, Hitoshi Nagao, Yuko Iijima,
Hideaki Fujita, Nippon Paper Industries Co., Ltd

3:30 pm- 5:00 pm
INTERNATIONAL 5

SESSION 42
Current Topics in Asset Management

Session Chair: Jerry Kahn, JK Consulting

42-1 • 3:30 pm Achieving World Class Lubrication at SAPPI Fine Paper
David Kolstad, Porous Media Corporation
Mike Lofald, SAPPI Fine Paper

42-2 • 4:00 pm Chip Quality Optimization and Chipper Condition
Monitoring Concept
Seppo Silenius, Andritz Oy

3:30 pm - 5:00 pm
INTERNATIONAL 6

SESSION 43

Experience With State of the Art Fiber Lines Panel

Session Chair: Tom McDonough

Panelists:

Celso Foelkel, Celsius Degree

Bertil Stromberg, Andritz

Perti Winter, Poyry

Finn Oulie, Aker Kvaerner

3:30 pm - 5:30 pm
INTERNATIONAL 7

SESSION 44

Recovery Cycle

Session Chair: Jim Dickinson,

Babcock & Wilcox Company

44-1 • 3:30 pm Determination of Sulfate Ions in Kraft Black Liquors
by a Turbidity Method
Xin-Sheng Chai, C.L Verrill, Georgia Institute of Technology

44-2 • 4:00 pm NOx Control Using Quaternary Air - Mill Experience
John A. Kulig, The Babcock & Wilcox Co

44-3 • 4:30 pm Extended Recovery Boiler Runtime Using Smart Sootblower
Danny Tandra, Sandeep Shah, Clyde-Bergemann, Inc.

44-4 • 5:00 pm State of the Art Evaporation System
John Rauscher, Jarmo Kaila, Heikki Jaakkola, Andritz Oy

3:30 pm - 5:30 pm
INTERNATIONAL 8

SESSION 45

Determining the Benefits of the Biorefinery Panel

Session Chair: Kristiina Iisa,

Georgia Institute of Technology

Panelists:

Industrial Symbiosis as a Model for BioRefineries

Jim Frederick, Jr, Kristiina Iisa, ChBE and IPST at Georgia Tech

Biomass and Spent liquor Gasification

Eric Connor, TRI Inc.

Cost-Benefit Analysis of Gasification-Based Biorefining
at U.S. Kraft Pulp Mills

Eric Larson, Princeton University

3:30 pm - 5:30 pm
INTERNATIONAL 9

SESSION 46

Equipment Inspection and Repair Strategies

Session Chair: David Crowe,

David N French Metallurgists

46-1 • 3:30 pm Inspection and Repair of Kraft Steaming Vessels
Angela Wensley, Wendi Kaiser, Angela Wensley Engineering, Inc.

- 46-2 • 4:00 pm Appropriate Use of Tank and Pressure Vessel "In Service" Codes When Assessing Localized Corrosion and Cracking Damage
Jeremy Orr, Applied Technical Services, Inc.
Douglas Sherman, Corrosion Probe, Inc.
- 46-3 • 4:30 pm Best Practice for Inspecting and Repairing Brick & Tile Linings - Protecting Equipment and the Bottom Line
David Bennett, R.A Nixon, Corrosion Probe, Inc
- 46-4 • 5:00 pm Life Extension Strategies, Condition or Risk Based Assessment; A Pulp & Paper Industry Material Engineer's Point of View
Ronald Lansing, M&M Engineering

Wednesday, November 8, 2006

7:00 am - 8:00 am **SESSION 47**
INTERNATIONAL **Hot Topics Breakfast**
FOYER

8:00 am - 8:30 am **COFFEE BREAK**
INTERNATIONAL FOYER

8:30 am - 10:00 am **SESSION 48**
INTERNATIONAL 4 **Improving Pulping with Additives**
Session Chair: Joe Wilson, Star Technologies

48-1 • 8:30 am The Effect of Integrating Polysulfide Pulping and Black Liquor Gasification on Pulp Yield and Delignification
Mathias Lindström, Ved Naithani, Hasan Jameel, Andrianna Kirkman, North Carolina State University

48-2 • 9:00 am New Process of Producing Highly Concentrated Polysulfide Liquor by Electrolysis of White Liquor (IV) - Utilization of Cathode Cell Liquor
Keigo Watanabe, Shinichi Onogi, Nippon Paper Industries Co., Ltd, Yasunori Nanri, Japan Pulp and Paper Research Institute, Inc., Tastyuya Ando, Kawasaki Kasei Chemicals Ltd, Yoshitsugu Shinomiya, Chlorine Engineers Corp., Ltd.

48-3 • 9:30 am Seasonal Impacts on the Performance of AQ/Penetrants.
John Ransdell, Peter Hart, MeadWestvaco Corporation

8:30 am - 10:00 am **SESSION 49**
INTERNATIONAL 5 **02 Delignification & Enzymes**
Session Chair: Richard Berry, PAPRICAN

- 49-1 • 8:30 am Enzyme Prebleaching of Kraft Pulp -
A Success Story in Indian Paper Industry
*R.K.Jain, R.M. Mathur, Vasanta Thakur, A.G Kulkarni,
Central Pulp & Paper Research Institute, India*
- 49-2 • 9:00 am Oxygen Delignification of Southern Softwood Kraft Pulp
With High Lignin Content
L. Tao, J.M. Genco, B.J. Cole, R. Fort, University of Maine
- 49-3 • 9:30 am A New White Liquor Oxidation Technology:
Experience from a Recent Start up at Metsa-Botnia Kaskinen
*Michel Epiney, Gordon Homer, Air Liquide Canada Inc. ;
Michel Muguet, Air Liquide S.A
Kari Ala Kaila, Thomas Fant, Metsa Botnia*

8:30 am - 10:00 am
INTERNATIONAL 6

Session 50
Workshop on Nitrogen Chemistry in Recovery
Cycle (Joint Environmental / Engineering)

Session Chair: Andrew Jones, International Paper

- 50-1 • 8:30 am Nitrogen Oxide Emissions from the Kraft Recovery Cycle-
"Do We Know Enough?"
Mikko Hupa, Mikael Forssen, Åbo Akademi University
- 50-2 • 9:00 am Cyanate and Ammonia in the Kraft Recovery Process
*Nikolai DeMartini, Georgia Institute of Technology
Mikko Hupa, Åbo Akademi University*
- 50-3 • 9:30 am Nitrogen Balances in Recovery Boilers
Kari Saviharju, Kaisa Aho, Andritz Oy

8:30 am - 10:00 am
INTERNATIONAL 7

SESSION 51
Gulf Coast Hurricanes - Preparation and
Response in the Pulp and Paper Industry

Session Chair: Mike Foster, Nalco Company

*Panelists: Jeff Hilleke,
International Paper Company, Pensacola, FL
Acker Smith, Georgia-Pacific Corporation,
New Augusta, MS
Brian Smith, Temple Inland, Bogalusa, LA*

10:00 am - 10:30 am
INTERNATIONAL FOYER

COFFEE BREAK

10:30 am - 12:00 pm
INTERNATIONAL 4

SESSION 52
Controlling Pulp Yield and Composition

*Session Chair: John Ransdell
MeadWestvaco Corporation*

- 52-1 • 10:30 am Seasonal Variation in Wood: Perceived and Real
Impacts on Pulp Yield
Peter Hart, MeadWestvaco Corporation

52-2 • 11:00 am A Kinetic Study of Softwood Kraft Cooking - Carbohydrate Dissolution as a Function of the Cooking Conditions
D. Johansson, U. Germgård, Karlstad University, Sweden

52-3 • 11:30 am Influence of Fiber Scale Heterogeneity on Softwood Kraft Pulp Kappa Uniformity
Ming Qiao, Richard Gustafson, University of Washington, Seattle

10:30 am - 12:00 pm
INTERNATIONAL 5

SESSION 53
High Temperature Black Liquor Gasification
Session Chair: Kevin Whitty, University of Utah

53-1 • 10:30 am On Pressurized High-Temperature Black Liquor Gasification Kinetics
C.A Young, W.J Frederick Jr., Georgia Institute of Technology

53-2 • 11:00 am Studies and Selection of Containment Materials for High-Temperature Black Liquor Gasification
*James Keiser, James Hemrick, Roberta Peascoe-Meisner, Camden Hubbard, Oak Ridge National Laboratory
J. Peter Gorog, Weyerhaeuser Company*

53-3 • 11:30 am Status of the Swedish National Black Liquor Gasification (BLG) Development Program
Mats Lindblom, Ingvar Landälv, Chemrec AB

10:30 am - 12:00 pm
INTERNATIONAL 6

SESSION 54
Lime Kilns (joint Environmental / Engineering)
Session Chair: Venki Venkatesh, International Paper

54-1 • 10:30 am Flame Length in Lime Kilns with Separate NCG Burner
Arafat Aloqaily, David Kuhn, Pierre Sullivan, Honghi Tran, University of Toronto

54-2 • 11:00 am Successful Experience of Firing of Petroelum Coke (Petcoke) in Lime Recovering Kilns
Richard Manning, Cliff Rennie, Sam Cooper, Kiln Flame Systems

54-3 • 11:30 am Air Permitting Considerations Related to Firing Petroleum Coke in Lime Kilns
Michelle Kolozsvary, DTE Energy Services

10:30 am - 12:00 pm
INTERNATIONAL 7

SESSION 55
Environmental Management System Panel
Session Chair: Dale Phenicie, Env. Affairs Consulting
Panelists:
Bill Jernigan, Georgia-Pacific
Saul Furstein, Georgia-Pacific
Dale Phenicie, Environmental Affairs Consulting
Ashley Wittan, Marsh Consulting

1:30 pm - 3:00 pm
INTERNATIONAL 4

SESSION 56
Sootblowing

Session Chair: Danny Tandra, Clyde Bergemann Inc.

- 56-1 • 1:30 pm Retrofitting Existing Sootblower Systems To Use a Lower Pressure Steam Source
Alarick Tavares, Simon Youssef, Diamond Power International
- 56-2 • 2:00 pm Replacing Sootblower Control System with Open Control Solutions
Bruce Marling, Emerson Process Management
- 56-3 • 2:30 pm Intelligent Recovery Boiler Cleaning Management - A Tiered Approach to Saving Steam while Improving Boiler Cleanliness
Jason Moore, Alarick Tavares, Diamond Power International, Inc.

1:30 pm - 4:00 pm
INTERNATIONAL 5

SESSION 57
Implementing the Biorefinery

Session Chair: Tom Amidon, State University of New York

- 57-1 • 1:30 pm Co-Production of Ethanol and Cellulose Fiber from Southern Pine: A Technical and Economic Assessment
W.J Fredrick, S.J. Lien, C.Courchene, A.J Ragauskas, K. Iisa, Georgia Institute of Technology
- 57-2 • 2:00 pm Effect of Hot Water Pre-Extraction on Alkaline Pulping of Hardwoods
T.E Amidon, T.S Bolton, R.C Francis, K. Gratien, State University of New York
- 57-3 • 2:30 pm Pre-Extraction of Southern Pine Chips with Hot Water followed by Kraft Cooking
Sung-Hoon Yoon, Kimberly MacEwan, Adriann van Heiningen, University of Maine
- 57-4 • 3:00 pm Evaluating Biorefinery Options in a Pulp and Paper Mill: Carbon Balances
Farminder Anand, Matthew Realff, Kristiina Iisa, Charles Courchene, Georgia Institute of Technology
- 57-5 • 3:30 pm Downstream Process Effects Related to Wood Chip Pre-Extractions
Patrick Hazlewood, Preet Singh, Jeffery Hsieh, Georgia Institute of Technology

1:30 pm - 3:30 pm
INTERNATIONAL 6

SESSION 58
Process Issues in Corrosion Problems

Session Chair: Steve Lukezich
Diamond Power Specialty Co.

- 58-1 • 1:30 pm Corrosion in Waste-Water Treatment Plants at Pulp and Paper Mills
Robert Nixon, David Bennett, Corrosion Probe, Inc.
- 58-2 • 2:00 pm Biogenic H₂S₀₄ Corrosion of Concrete in Pure Oxygen Activated Sludge Bioreactors
Joseph Kish, D.L. Singbeil, Paprican
- 58-3 • 2:30 pm Pulp Mill Corrosion and Wood Chip Extractives
Patrick Hazlewood, Preet Singh, Jeffery Hsieh, Georgia Institute of Technology
- 58-4 • 3:00 pm Insitu Study of the Effects of Anthraquinone, White Liquor Concentration and Temperature on Lower Zone Digester Corrosion
Winston Shim, Corrosion Service Co. Ltd
Darvin Mattila, Georgia Pacific Corp.

1:30 pm - 3:00 pm
INTERNATIONAL 7

SESSION 59
Making Functional Modifications to Pulp

Session Chair: Brian Brogdon

- 59-1 • 1:30 pm Caustic Treatment of the Pulp: Caustic Recovery by Reverse Osmosis
Miro Suchy, John Cameron, Jan Pekarovic, Peter Parker, Western Michigan University
- 59-2 • 2:00 pm The Influence of Wood and Dissolving Pulp Properties on the Carboxymethyl Cellulose Reaction
Ulf Germgård, Alexander Hedlund, Karlstad University, Sweden

Hot Topic Breakfast & Paper Chase

Hot Topic Breakfast

Tuesday, November 7, 2006 &
Wednesday, November 8, 2006
7:00 a.m. - 8:00 a.m.
International Foyer



Join us Tuesday and Wednesday mornings for a complimentary continental breakfast and some hot discussion with your peers. This breakfast is designed to provide an opportunity for people with similar interests to get together and talk about them.



The breakfast is open to all conference attendees. Reservations must be made for the topics of your choice. Sign-up sheets are located at the registration area. Each topic will have table(s) hosted by discussion facilitators.

**Run or Walk in the...
24th Annual Paper Chase
Tuesday, November 7, 2006
7:00 a.m.**



Join your fellow attendees for a 5K run/1.5 mile walk through the city of Atlanta.

Registration is required, so please stop by and visit Bo Gilbert at the TAPPI Registration Desk. On race day meet in hotel lobby at 7:00 a.m. Prizes will be awarded to the top runners.

**Student Lunches
Monday, November 6, 2006
Tuesday, November 7, 2006
12:00 pm - 1:30 pm**

This is a great opportunity for students to meet informally with engineers and scientists working in the pulp and paper industry. During these lunches, led by Don Sorenson, AMEC, Peter Hart, MeadWestvaco Corporation and Bill Jernigan, Georgia-Pacific Corporation, students can learn the challenges they face, why they work in this industry, and their likes and dislikes about the industry. The engineers and scientists can in turn learn what would encourage future engineers and scientists to work in the pulp and paper industry.

Awards Recognition Dinners

Awards To Be Presented During The Award Winners/Officers Recognition Dinners, 2006 Engineering, Pulping & Environmental Conference

ENGINEERING

Outgoing Engineering Division Chairman

WILLIAM S. BUTTERFIELD

2004 - 2006

ENGINEERING DIVISION CERTIFICATES OF
APPRECIATION FOR RETIRING COMMITTEE CHAIRMAN

Bo O. Oscarsson

Steam & Power / Energy Management Committee

2004 - 2006

Christian B. Thompson

Corrosion & Materials Engineering Committee

2004 - 2006

Junyong Zhu

Fluid Mechanics Committee

2003 - 2006

Jeffrey R. Reese

Honors & Awards Committee

2004 - 2006

ENGINEERING DIVISION SPECIAL CERTIFICATES OF RECOGNITION

JEFFREY R. REESE

International Paper

...in recognition of continued and dedicated service to the Engineering Division
Council and contributions to the development of the Spring Conferences

1997 - 2006

ALFRED C. LI

USG Corporation

...in recognition of continued and dedicated service to the Engineering Division
Council and contributions to the development of the Spring Conferences

1999 - 2006

Awards To Be Presented During The Award Winners/Officers Recognition Dinners, 2006 Engineering, Pulping & Environmental Conference

PULP MANUFACTURE

PULP MANUFACTURE DIVISION CERTIFICATES OF
APPRECIATION FOR RETIRING COMMITTEE CHAIRMAN

Peter L. Gleadow, AMEC

Alkaline Pulping and Bleaching Committee
2003 - 2006

ENVIRONMENTAL

Outgoing Environmental Division Co-Chair

PATRICIA FLEISCHAUER

2004 - 2006

Outgoing Environmental Division Co-Chair

DANIEL S. DIEHL

2005 - 2006

Awards To Be Presented During The Award Winners/Officers Recognition Dinners, 2006 Engineering, Pulping & Environmental Conference

PULP MANUFACTURE

Pulp Manufacture Division Chairman

GOPAL C. GOYAL

International Paper

Pulp Manufacture Division Vice Chairman and Technical Program Chairman

CHARLES E. COURCHENE

IPST at Ga. Tech

Pulp Manufacture Division High Impact Paper & Awards Chairman

RICHARD BERRY

PAPRICAN

Alkaline Pulping & Bleaching Technical Program Co-Chairmen

PETER W. HART

MeadWestvaco

THOMAS J. MCDONOUGH

IPST

Fiber Raw Material Supply Technical Program Chairman

WILLIAM S. FULLER

FRM Consulting

Nonwood Plant Fibers Technical Program Chairman

JAIRO H. LORA

GreenValue S.A.

Fiber Recycling Technical Program Chairman

JOHN H. CAMERON

Western Michigan University

Supplier Representative

DIRK A. LINDENBECK

Stainless Valve Company

CPBIS Technical Program Chairman

COLLEEN WALKER

CPBIS at Ga. Tech

Awards To Be Presented During The Award Winners/Officers Recognition Dinners, 2006 Engineering, Pulping & Environmental Conference

ENVIRONMENTAL

Environmental Division Co-Chairmen

PATRICIA FLEISCHAUER

ENSR International

and

DANIEL S. DIEHL

Bowater Inc.

Environmental Conference Chairman

MICHAEL R. CORN

AquAeTer Inc.

Environmental Technical Program Chairman

KARIN M. GREENACRE

RMT Inc.

Environmental Working Group

WILLIAM M. JERNIGAN

Georgia-Pacific Corporation

REID A. MINER

NCASI

ROBERT M. STEIN

Aware Environmental Inc.

MICHAEL H. FOSTER

Env. Bus. Specialists L.L.C.

TAMMY R. WYLES

Georgia-Pacific Corporation

SAUL J. FURSTEIN

Georgia-Pacific Corporation

DALE K. PHENICIE

Env. Affairs Consulting

CAROLE J. STAPPER

URS Corporation

Spouse/Guest Program

Spouse/Guest Program and Events

A great way to meet new friends.

Registering as a Spouse/Guest includes several coordinated activities along with all receptions and continental breakfasts.

Monday, November 6, 2006

“Traditional My Home Town Gift Exchange”

Bring a small gift from your home city, state to exchange with another Guest/Spouse. Gifts to be exchanged following the Welcome to Atlanta presentation.

Shopping in Elegant Buckhead*

Transportation leaves for Phipps Plaza at 10:30 am and returns at 3:00 pm. Stores include Nordstrom, Parisian, and Sak's Fifth Avenue.

Tuesday, November 7, 2006

Tour of historic Roswell*

Transportation leaves at 9:30 am and returns at 3:00 pm

Shopping at Dawsonville Outlet Center*

Transportation leaves at 9:00 am and returns by 4:00 pm

Wednesday, November 8, 2006

Foundation for Hospital Art (10:00 - 11:30 am)

Become one of over 50,000 FHA volunteers as you offer your master works for this worthy cause. Guests will be provided paint-by-numbers style canvases, paint and all supplies.

Registration for the full Spouse/Guest Program:

Adults (18 and older) \$70.00

Children (Ages 6 - 17) \$30.00

Breakfast only (Monday, Tuesday and Wednesday) cost is \$10.00 each day - tickets can be purchased at registration.

*The cost of the transportation and gratuity will be divided up between those whom take advantage of the transportation.

You can contact Jo Eva Parker on site at breakfast for questions regarding each event.

See Atlanta!

From the new Georgia Aquarium to historic Stone Mountain, Atlanta has a wide variety of fun and exciting things to do and see - something to fit every schedule or budget.

For more info about Atlanta, visit www.atlanta.net or inquire at the guest services desk at the Marriott Marquis upon your check-in.



Division Officers

Engineering Division Officers

Chairman

WILLIAM S. BUTTERFIELD
Stowe Woodward/Mount Hope

Vice Chairman/Fall Conference Chairman

PAUL M. TUCKER
International Paper

Fall Technical Program Chairman

DAVID E. WHITE
IPST at Georgia Tech

Spring Conference Chairman

ALFRED C. LI
USG Corporation

Spring Technical Program Chairman

DANIEL PARKER
Parker Messana & Assoc. Inc.

Secretary

JAY A. SHANDS
Johnson Foils

Past Chairman

FRANK SUTMAN
Hercules Inc.

Awards & Scholarship Chairman

JEFFREY R. REESE
International Paper

NTS & Hot Topic Breakfast Chairman

DON R. SORENSON
AMEC

Corrosion and Materials Engineering Committee

Chairman

CHRISTIAN B. THOMPSON
PAPRICAN

Vice Chairman

STEPHEN J. LUKEZICH
Diamond Power International

Secretary

NANCY HOFFMAN
Mechanical and Materials Engineering LLC

Engineering Division Officers

Water Removal

Chairman

MARY M. TONEY

Albany International

Vice Chairman

BRADY PATTERSON

AstenJohnson

Secretary

TIMOTHY F. PATTERSON

IPST at Georgia Tech

Fluid Mechanics Committee

Chairman

JUNYONG ZHU

USDA Forest Products Lab

Secretary

SCOTT B. PANTALEO

Weyerhaeuser Company

Steam & Power / Energy Management Committee

Chairman

BO O. OSCARSSON

Fluor Daniel Forest Products

Vice Chairman

K. PAUL CONNER

Southern Company

Secretary

NORRIS N. JOHNSTON

Hercules Pulp & Paper Division

Membership Chairman

JAMES A. DICKINSON

Babcock and Wilcox

Asset Management Committee

Chairman

GEORGE "STEVE" DOWE

Jacobs Engineering Group Inc.

Vice Chairman

DENNIS W. HAIRE

Bowater Inc.

Engineering Division Officers

Secretary

H. C. ANDERSON

QBM Management Inc.

Yankee Dryer Safety Committee

Chairman

BRIAN W. THOLKE

Procter & Gamble Company

Vice Chairman

PETER COSTELLO

Kimberly-Clark Corporation

Process Simulation / Process Engineering Committee

Chairman

LOREN E. EUHUS

Vice Chairman

LUC LAPERRIÈRE

CIPP at UQTR

Membership Chairman

RAMI ABDALLAH

Jedson Engineering

TAPPI Staff

Vice President, Supplier Business Unit

ERIC T. FLETTY

Account Manager

RICH LAPIN

Member Group Specialist

VERANDA EDMONDSON

Pulp Manufacture Division Officers

Chairman and Conference Chairman

GOPAL C. GOYAL

International Paper

Vice Chairman and Technical Program Chairman

CHARLES E. COURCHENE

IPST at Georgia Tech

Secretary

R. DANIEL HAYNES, SR.

Eka Chemical

Past Chairman

EARL W. MALCOLM

IPST

High Impact Paper and Awards & Scholarship Chairman

RICHARD M. BERRY

PAPRICAN

Pulp Manufacture Committee Officers

Fiber Raw Material Supply Committee

Chairman

WILLIAM S. FULLER

FRM Consulting

Vice Chairman

JAMES G. COBLE

Georgia-Pacific Corporation

Fiber Recycling Committee

Chairman

TERRY L. BLISS

Hercules Inc.

1st Vice Chairman and Technical Program Chairman

JOHN H. CAMERON

Western Michigan University

2nd Vice Chairman

JOSEPH R. CABLE

Buckman Laboratories Inc.

Secretary

GARNET L. BREMNER

Madison Paper Company

Pulp Manufacture Committee Officers

Past Chairman
R. DANIEL HAYNES, SR.
Eka Chemicals Inc.

Awards Chairman
JOHN H. KLUNGNESS
USDA Forest Products Lab

Alkaline Pulping and Bleaching Committee

Chairman
PETER L. GLEADOW
Procylic Consulting Ltd.

Vice Chairman and Technical Program Co-Chairman

PETER W. HART
MeadWestvaco

Secretary
BRIAN N. BROGDON
Kemira Chemicals

Technical Program Co-Chairman

THOMAS J. MCDONOUGH
IPST, Retired

Nonwood Plant Fibers Committee

Chairman
ROBERT W. HURTER
HurterConsult Incorporated

Vice Chairman and Technical Program Chairman

JAIRO H. LORA
GreenValue S.A.

Secretary
SHIJIE LIU
SUNY College of Envr. Science & Forestry

Supplier Committee
Chairman
DIRK A. LINDENBECK
Stainless Valve Company

Sulfite and Semicemical Pulping Committee

Chairman
DOUGLAS W. WYNN
Smurfit-Stone Container Corp.

Pulp Manufacture Committee Officers

Wood Chemistry & Biotechnology Committee

Chairman

MASOOD AKHTAR

Center for Technology Transfer

TAPPI Staff

Vice President, Supplier Business Unit

ERIC FLETTY

Account Manager

RICH LAPIN

Member Group Specialist

VERANDA EDMONDSON

Environmental Division Officers

Co-Chairman

PATRICIA FLEISCHAUER

ENSR International

Co-Chairman

DANIEL S. DIEHL

Bowater Inc.

Conference Chairman

MICHAEL R. CORN

AquAeTer Inc.

Past Conference Chairman

TAMMY R. WYLES

Georgia-Pacific Corporation

Technical Program Chairman

KARIN M. GREENACRE

RMT Inc.

TAPPI Staff

Account Manager

RICH LAPIN

Member Group Specialist

VERANDA EDMONDSON

General Information



ADA Assistance

Attendees with special needs that TAPPI can address to make participation more enjoyable and meaningful are encouraged to call the TAPPI Registration Desk.

Antitrust Policy Statement

TAPPI is a professional and scientific association organized to further the application of science, engineering, and the technology in the pulp and paper, packaging and converting, and allied industries. Its aim is to promote research and education, and to arrange for the collection, dissemination and interchange of technical concepts and information in fields of interest to its members. TAPPI is not intended to, and may not, play any role in the competitive decision of its members or their employers, or in any way restrict competition among companies.

Badges

Please wear your badge on your right lapel. It is important that the official badge supplied at the time of registration be worn at all times. This practice is a courtesy to your fellow registrants. It also indicates that you have completed registration and may participate in the events scheduled. Admission to technical sessions and workshops will be badge only.

TAPPI's Policy Regarding Equipment at Non-Exhibit Events

TAPPI prohibits the unauthorized physical display or demonstration of equipment in sessions, workshops, or committee meetings held during TAPPI seminars, short courses, conferences, or other meetings. This prohibition does not preclude the graphic non-commercial depiction of equipment via slides, pictures, or video tape. This prohibition is intended to preclude commercialism and to minimize attendee exposure to potentially dangerous equipment and to avoid conflicts with contractual and governmental requirements regarding the use of meeting facilities. All inquiries should be directed through the sponsoring division of TAPPI administration.



Survival Plans

Familiarize yourself with your new surroundings by checking the emergency exit and escape routes. Ensure that doors are unlocked and exit routes are free of obstructions. Study the room you are staying in (do the windows open, what is the distance to the ground, etc.). Avoid elevators in emergency situations. Count the number of doors and walls between your room and the emergency exits. Smoke could obscure lighted signs.

Fire Survival

When you reach your hotel room, ask yourself: Can I close my eyes, hold my breath, and go directly to the nearest fire exit WITHOUT LOOKING in 15 seconds?

You may have to do just that:

- Under emergency conditions
- In smoke
- In darkness
- At 3:00 a.m.

Because panic is the main problem in unfamiliar surroundings, you should prepare for emergencies when you travel. The following information is provided to help you prepare for the hotel fire emergency. Remember that by-products of fire (gas, smoke, etc.) kill more people than fire itself.

Before and After Leaving the Room

When the alarm sounds, slowly feel the surrounding walls and doors with the back of your hand. If the door is warm, stay as low as possible (to avoid smoke) and open it slowly. If the door and walls are not warm, proceed toward the emergency exit using the most direct route. If the smoke is too heavy, remain in the room.

Take the key with you. You might find it safer to return to your room. If the smoke thickens as you go down the escape stairs, go up one flight and cross over to an alternate staircase. If access to the alternate staircase is blocked, proceed to your room and wait for assistance.

Avoid breaking windows. Broken windows can allow fire and smoke into the room. If a window must be broken or opened, dangle a bed sheet from the window as a signal to fireman. Don't jump if the fall is more than two stories.

If You Cannot Leave the Room

Place towels and bedclothes around the door areas. Keep them soaked with water. Fill the bathtub and use it as a reservoir for wetting down the entire room. Placing yourself in a filled tub will not offer protection.

Hold a wet towel around your face to filter smoke.

Dial the hotel emergency number (0) to tell rescue personnel where you are.

Note: After any emergency, contact you home and office so all can be assured of your safety.

General Safety Tips

To make your conference experience a safe and enjoyable one, please keep the following safety tips in mind.

While you are out of the hotel, please know that, like all cities, awareness and caution are certain to help ensure your safety. A common crime is pickpocketing, with women's purses being prime target. Some simple precautions you can take are:

- Never carry all of your valuables in the same place. Keep them secured in a safe deposit box.
- Never walk alone at night, especially to off property locations; there really is safety in numbers!
- Do not leave purses, briefcases or other personal property unattended in public locations. Use hotel services such as coat check or luggage storage.
- Remove your name badge while out of the hotel. They identify you as an out-of-towner.
- Women: Carry your purse with the strap over your shoulder and across your chest, keeping it closed or latched with the bag portion in front of you. For added protection in crowds, you can rest your hand on top. Be particularly watchful of distractions in revolving doors, elevators or in the public.
- Men: Wrap a heavy rubber band around your wallet to prevent it from being easily slipped out of your pocket or carry it in your front pants pocket.
- If you find that you have become victim, report the crime to the police.
- Report any suspicious persons or behavior in the hotel or convention center to the management.

Hosted Events

All companies hosting extracurricular events may not conduct group functions which compete with scheduled TAPPI activities, such as technical sessions, committee meetings, receptions, award ceremonies, group meals and trade fairs or exhibits.

If you are planning to host a group event, please check with the TAPPI Events Project Manager to avoid conflict.

Information Desk and Message Center

Please consult this service when attempting to locate individuals registered at the meeting. Notices of telephone calls and other messages will be posted in the Registration Area. Notices of special meetings or meeting time changes will also be posted here. All notices to be posted must be submitted in writing.

Lost and Found

Articles which are found should be brought to the Registration Area. Please note the room in which the article was found for the purpose of tracing it to the appropriate owner.

Membership and Publication Counters

TAPPI membership dues, membership applications (TAPPI and committee), and requests for TAPPI publications may be presented to the information desk.

Nonmembers of TAPPI

If you apply for membership in TAPPI while at this meeting, you will be able to register at member rate.

Please take advantage of this opportunity to join TAPPI and save money.

Photographic Consent

Photographs may be taken during this meeting for TAPPI to use for publicity purposes. A registrant's presence at the meeting constitutes consent for TAPPI to use the photographs in which he or she may appear.

Registration

Registration will be located on the International Level.

Hours

Sunday, November 5	7:00 a.m. - 7:00 p.m.
Monday, November 6	6:00 a.m. - 7:30 p.m.
Tuesday, November 7	6:00 a.m. - 7:00 p.m.
Wednesday, November 8	6:00 a.m. - 4:00 p.m.

Ribbons

Association, technical division, and committee officers are requested to pick up their ribbons at the registration desk. Session chairmen and speaker ribbons will also be available at the registration desk.

Use of Tape Recorders at Technical Sessions

TAPPI has no objection to the use of tape recorders by registrants who are covering technical sessions and panel discussions for their personal use. However, if the tape recording is to be utilized for publication of remarks which speakers make, it is mandatory that each contributing individual have an opportunity to edit his or her transcript prior to publication.

Use of Personal Video Recorders at Technical Sessions

The use of personal camcorders to record technical sessions at TAPPI conferences is strictly prohibited. Only TAPPI's official designee is authorized to video tape sessions.

Should a company and/or individual seek to violate this prohibition, that company and individual will be barred from giving technical presentations at TAPPI sponsored events for a period of two years, that period starting from the date of infraction. TAPPI staff is authorized to have equipment in violation of this policy immediately removed upon detection and shipped to the owner's principle location at the owner's expense.

Inquiries on this policy should be directed to the TAPPI Meetings Department, c/o TAPPI headquarters.

Please turn off all cellular phones and beepers while attending sessions.

Tax Deduction for Educational Expenses

U.S. Treasury regulation paragraph 1.162.5 permits an income tax deduction for educational expenses (registration fees and cost of travel, meals, and lodging) undertaken to: (1) maintain or improve skills required in one's employment or other trade or business, or (2) meet express requirements of an employer or a law imposed as condition to retention of employment, job status, or rate of compensation.

Under the Tax Reform Act of 1993, however, unreimbursed employment-related educational expenses are deductible only to the extent that they exceed 2% of adjusted gross income. In addition, the new tax law limits the deduction for otherwise allowable business meals and business entertainment of 50% of cost.

To get more out of the conference visit the TAPPI Bookstore to pick up these great resources!

Suggested Reading and Resources

Engineering

- Kraft Recovery Boilers
- The Lubrication Engineer's Manual
- A Modern Alloy Primer - The Essentials for Pulp and Paper Mill Engineers
Virtual Seminar Archive CD-ROM
- Maintenance Painting of Steel Structures in Pulp & Paper Mills
- Paper Machine Steam and Condensate Systems
- Paper Machine Wet Press Manual, Fourth Edition

Pulping

- Kraft Pulping
- Kraft Pulp Yield Anthology CD-ROM
- The World of Market Pulp CD-ROM
- Chemical Recovery in the Alkaline Pulping Process
- Pulp Bleaching: Principles and Practice

Environmental

- Industrial Environmental Control - Pulp and Paper Industry, 3rd Edition
- Sustaining Environmental Management Success: Best Business Practice
from Industry Leaders
- Water Use Reduction in the Pulp & Paper Industry, Second Edition
- Forest Resources and Sustainable Management

TAPPI BOOKSTORE DISCOUNT COUPON

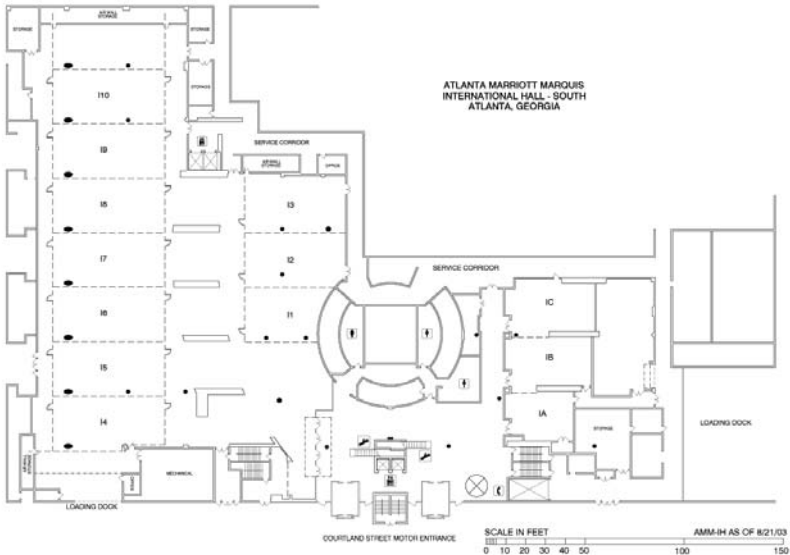
Receive 15% off TAPPI PRESS publications
when you bring this coupon to the bookstore

Offer only applies to
purchases made at the
EPE Conference. Coupon
expires after 11/8/2006

The logo for TAPPI PRESS features the word "TAPPI" in a large, bold, sans-serif font. A thick, black, curved swoosh starts under the "T" and arches over the "P"s. Below "TAPPI", the word "PRESS" is written in a smaller, bold, sans-serif font.

Atlanta Marriott Marquis International Level Floor Plan

2006 EPE Conference
November 5-8, 2006



	8:00 AM	8:30 AM	9:00 AM	9:30 AM	10:00 AM	10:30 AM	11:00 AM	11:30 AM	12:00 PM	12:30 PM	1:00 PM	1:30 PM	2:00 PM	2:30 PM	3:00 PM	3:30 PM	4:00 PM	4:30 PM	5:00 PM	5:30 PM	6:00 PM	6:30 PM	
SUNDAY NOVEMBER 5	Session 1: Eucalyptus Workshop*												Session 4: Recycling Workshop*										
	Session 2: Bleach Plant Workshop*																			Welcome Reception			
												Session 3: Process Simulation/Engineering Valves Design Workshop*											
*supplemental fee - see registration form for more information.																							
	8:30 AM	9:00 AM	9:30 AM	10:00 AM	10:30 AM	11:00 AM	11:30 AM	12:00 PM	12:30 PM	1:00 PM	1:30 PM	2:00 PM	2:30 PM	3:00 PM	3:30 PM	4:00 PM	4:30 PM	5:00 PM	5:30 PM	6:00 PM	6:30 PM	7:00 PM	
MONDAY NOVEMBER 6	Session 5: Opening Session - Awards/Keynote Speaker			BREAK	Session 6: Nonwoods Pulping				LUNCH on own	Session 11: Understanding Materials Performance - How to Save Your Mill Millions of Dollars Panel				Session 17: Recycling-Deinking				5:30 - 7:30 Reception and Table Top Trade Fair					
					Session 7: The State of the American Pulp and Paper Industry			Session 12: Nonwoods in Papermaking				Session 18: Bleach Plant Operations											
					Session 8: Recycling - Stickies					Session 13: Trends in Global Paper Demand & Industry Innovation				Session 19: Nonwood Processing and the Biorefinery									
					Session 9: Bill Babbington Maintenance Roundtable					Session 14: Optimizing Chip and Fiber Quality				Session 20: Engineering/Pulping/Environmental NTS									
					Session 10: Alkaline Pulping					Session 15: Process Simulation/Engineering I				Session 21: Process Simulation/Engineering II									
										Session 16: What To Do With the Sludge													
	7:00-8:00 AM	8:30 AM	9:00 AM	9:30 AM	10:00 AM	10:30 AM	11:00 AM	11:30 AM	12:00 PM	12:30 PM	1:00 PM	1:30 PM	2:00 PM	2:30 PM	3:00 PM	3:30 PM	4:00 PM	4:30 PM	5:00 PM	5:30 PM	6:00 PM	6:30 PM	7:00 PM
TUESDAY NOVEMBER 7	Session 22: Hot Topics Breakfast	Session 23: Water Quality			BREAK	Session 29: Combustion Process: An Environmental Perspective Tutorial				LUNCH on own	Session 35: Recycled Paper Fundamentals				Session 41: In Mill Pollution Reduction				5:30 - 7:30 Reception and Table Top Trade Fair				
		Session 24: Project Management Fundamentals Tutorial - Part I				Session 30: Project Management Fundamentals Tutorial - Part II					Session 36: Implications of Contracting Strategy on Project Management Workshop				Session 42: Current Topics in Asset Management								
		Session 25: Recycling Tutorial: Using Optical Properties to Measure Fiber				Session 31: TMDL Panel					Session 37: Evaporators				Session 43: Bleaching Panel								
		Session 26: Cracking Issues in Kraft Pulp Mills				Session 32: Low Temperature Black Liquor Gasification					Session 38: Energy				Session 44: Recovery Cycle								
		Session 27: Process Simulation of Kraft Pulping				Session 33: Bleaching: Minimizing Scaling and Improving Fiber Properties					Session 39: Assessing Kraft Pulp Bleachability				Session 45: Determining the Benefits of the Biorefinery								
		Session 28: Recovery Boiler Emissions				Session 34: Recycling - Fiber Processing					Session 40: Sustainability/Climate Change				Session 46: Equipment Inspection & Repair Strategies								
	7:00-8:00 AM	8:30 AM	9:00 AM	9:30 AM	10:00 AM	10:30 AM	11:00 AM	11:30 AM	12:00 PM	12:30 PM	1:00 PM	1:30 PM	2:00 PM	2:30 PM	3:00 PM	3:30 PM	4:00 PM	4:30 PM	5:00 PM	5:30 PM	6:00 PM	6:30 PM	7:00 PM
WEDNESDAY NOVEMBER 8	Session 47: Hot Topics Breakfast	Session 48: Improving Pulping with Additives			BREAK	Session 52: Controlling Pulp Yield and Composition				LUNCH on own	Session 56: Sootblowing												
		Session 49: O2 Delignification & Enzymes				Session 53: High Temperature Black Liquor Gasification					Session 57: Implementing the Biorefinery												
		Session 50: Workshop on Nitrogen Chemistry in Recovery Cycle (joint Envr/Engrg)				Session 54: Lime Kilns (joint Environmental/Engineering)					Session 58: Process Issues in Corrosion Problems												
		Session 51: Gulf Coast Hurricanes-Preparation and Response in the Pulp and Paper Industry				Session 55: Environmental Management System Panel					Session 59: Making Functional Modifications to Pulp												

Save the Date **EPE 2007**

October 21 - 24, 2007

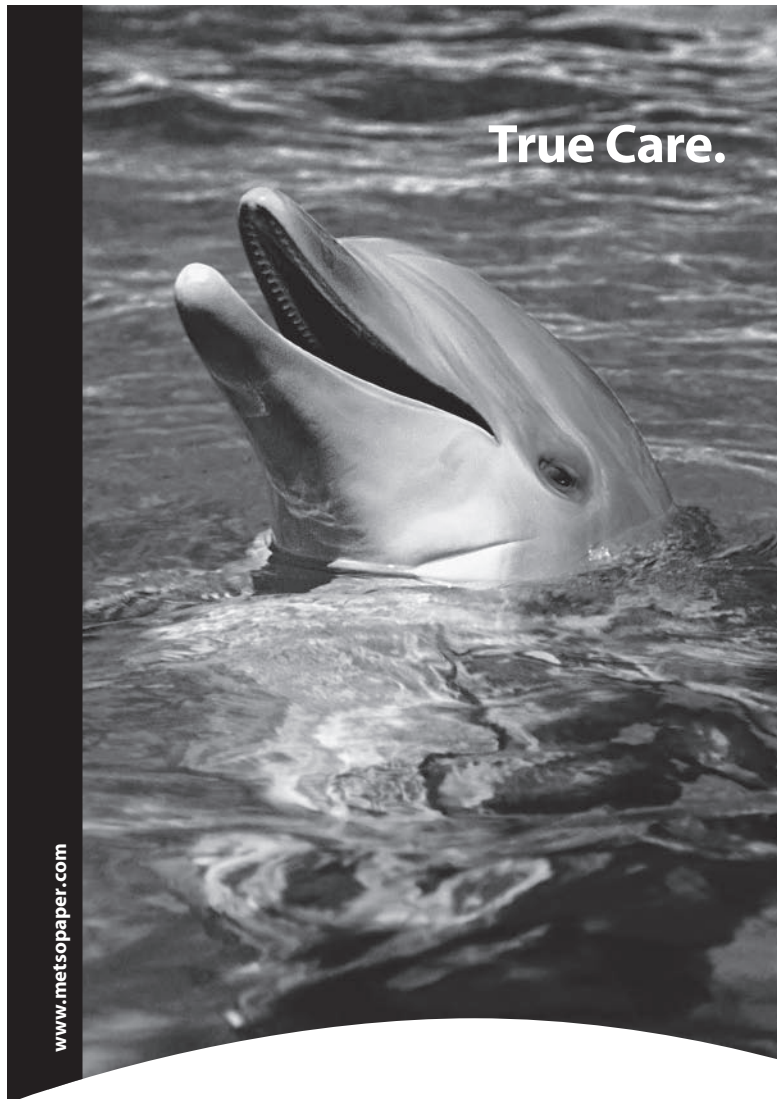
**Hyatt Regency Jacksonville Riverfront
Jacksonville, Florida**



**225 Coast Line Drive East
Jacksonville, FL 32202
Phone: 904-588-1234
Fax: 904-633-9988**

TAPPI
people resources solutions®

www.tappi.org



Bottlenose Dolphins are some of the most intelligent and compassionate animals in the sea. At the faintest sign of distress they will rush to the aid of an endangered calf or pod member.

At **Metso Paper** we have a similar sense of responsibility and work closely with you throughout the entire life cycle of your products - from new machines, to rebuilds to process services.

This close cooperation has helped extend the life and improve process efficiency of such mills as Votorantim (VCP), in Jacarei Brazil, and UPM Nordland Papier, in Dorpen, Germany.

Long term care and support...
that's the Nature of Caring.

