Innovations in Recycling

Recycled Content in Paper Production

Hilton Niagara Falls
Niagara Falls, Ontario, Canada
Conference: 23-26 September 2007
Plant Tours: 27 September 2007

This event is co-hosted by TAPPI and PAPTAC

Detailed Technical Information available online at www.tappi.org/07recycle
The 8th Research Forum on Recycling will continue its history of highlighting cutting-edge research results from around the world. This year’s event offers extraordinary opportunities for professional development and personal growth:

- Get the latest updates on recycling research
- Discuss and debate technical and operating issues
- Learn and network with experts and peers
- Identify future research needs of the recycling community.

Esteemed engineers, scientists, and practitioners will lead more than 35 cutting-edge presentations on all aspects of recycling technologies and operations for raw materials—with topics ranging from newsprint to mixed office waste.

SESSION 1 - Panel Discussion: Paper Recovery and Challenges Around the World
Session Chair: Danny Haynes, Eka Chemicals, Ltd.
- Challenges to increase recycled material recovery
- Challenges to decrease contaminants

Participants*:
Kunitaka Toyofuku, Executive Director
JAPAN TAPPI
Dr. Ulrich Höke, Mill Manager of Stora Enso Sachsen Mill in Eilenburg
Chairman of the INGEDE Board
Robert Tucker, Director of Recovered Paper Bowater
*subject to change

SESSION 11 - Panel Discussion: Research Needs and Issues
Session Chair: Giles Dorris, PAPRICAN
Hear industry leaders from around the world present their thoughts on industry research needs in recycling, reflect on the work presented during the conference and how it can help meet the needs of the industry.

Participants*:
Shisei Goto, Nippon Paper
Gérard Galland, Centre Technique du Papier
Mahendra Doshi, Progress in Paper Recycling
*subject to change

Plant Tours
Enjoy two behind-the-scene tours and see these two plants in action:
Thursday, 27 September 2007

Morning Tour: Mill Tour of Recycle Plant-Thorold, Ontario, Canada at the Abitibi-Consolidated recycle plant*

Afternoon Tour: Tour of Recovered Fiber Sorting Facility- Single stream sorting facility in Toronto*
*subject to change

Choose the plant that suits your interests. Transportation is provided, but you must pre-register to participate. Space is limited, so register early! (See registration form for pricing.)

Dinner at “Oh Canada, Eh?”
A night away from the hotel and an entertaining dinner presentation. Relax, mix with fellow attendees and enjoy some local humor. Offered at no charge to full paid conference participants. (Single-day speaker registrants, spouses and guests can attend for a nominal fee. See registration form for pricing).

Table Top Displays of Products and Services
An opportunity to see the latest products and services first hand while meeting face-to-face with suppliers. Table Top Displays offer an opportunity to compare products and technologies side-by-side, ask questions and learn how new products can help you be more efficient, productive and cost-effective.

Sponsorship Opportunities Still Available
Conference participants will be looking for the latest technology and new product introductions. Make sure your company is there to help them. Sponsorship puts your company front and center:
- Reach the top recycling experts in the field
- Network with colleagues, peers and customers
- Create awareness for your products and services

For information about Table Top Displays and Sponsorship, contact Tammi Campbell at +1-770-209-7405 or tcampbell@tappi.org—or simply visit www.tappi.org/07RECYCLE.
**PRE-CONFERENCE WORKSHOP:**

**Management and Control of Stickies Workshop**

23 September 2007 - 12:30 to 15:30

A workshop designed for engineers, scientists and technicians who want to get a handle on stickies and related issues. This workshop should be attended by anyone using recycled pulps, working in recycling mills, or affiliated with companies supplying equipment, chemicals and recovered paper to the recycling industry.

This workshop will provide descriptions for macrostickies, microstickies, colloidal stickies, dissolved stickies, primary stickies and secondary stickies. These stickies cost millions of dollars to the industry, and this workshop offers an excellent overview for managing and controlling stickies:

- Learn the origin and properties of stickies
- Review problems caused by stickies
- Encounter new methods to measure concentration of stickies
- Discover new strategies for removing, pacifying and controlling stickies

Stickies cost millions of dollars to the industry. If you could save just one hour of machine downtime it would pay for the workshop many times over.

The Management and Control of Stickies Workshop will be led by Mahendra R. Doshi, executive editor of a quarterly journal launched in 1991, *Progress in Paper Recycling*. Mr. Doshi has published several books including a four volume series *Paper Recycling Challenge*. He is also the author of *Recent Advances in Paper Recycling – Stickies*. Doshi is a TAPPI Fellow and the recipient of The Pulp Manufacture Division Technical Award, the Johan C. F. C. Richter Prize and The Paper and Board Division Award, and the Harris O. Ware Prize.

The cost of this workshop is $175 if registered before 24 August 2007, and $225 if registered after 24 August 2007. Fees include participant workshop notes and a beverage break. You do not have to be a registered conference attendee to participate, but you must register for the workshop. (See the Registration Form in this brochure.)
Sunday, 23 September 2007

Management and Control of Stickies Workshop
Led by Mahendra Doshi, Progress in Paper Recycling
(separate registration required, see registration form for details)

Monday, 24 September 2007

Program Chair: John Cameron, Western Michigan University

Welcome Address
Conference Chair: Danny Haynes, Eka Chemicals, Ltd.

Session 1: Panel Discussion: Paper Recovery and Challenges Around the World
Session Chair: Danny Haynes, See Program Highlights for session details

Session 2: Paper Recovery and Quality
Session Chair: Bruno Carré, Centre Technique du Papier
The Limits of Paper Recycling - An European Approach to Identify and Extend the Limits of Paper Recycling in Europe, Harald Grossmann, Technische Universität Dresden
Recyclability of Graphic Paper Products, Hans-Joachim Putz, PMV-TU Darmstadt
The New Techpap NIR Spectroscopy for Recycled Bale Inspection, Didier Rech, Techpap
Recovered Paper Yield Estimate Using Laboratory and Mill Accounting Data, Robert DeJong, 2 Fiber Consulting

Session 3: Old Corrugated Containers and Related Issues
Session Chair: Joe Cable, Buckman Laboratories Inc.
EcoFracSmart: A New Stock Preparation Process for Testliner, Karl Johan Grundström and Marco Lucisano, STFI-Packforsk AB
Enzymatic Strength Development in OCC, Rosy Corarrubias and Daniel Glover, Buckman Laboratories
Eliminating a Common OCC “Stickies” Problem, Matt Blazey, CIBA Specialty Chemicals

Session 4: Improving Unit Operations
Session Chair: Terry Bliss, Hercules, Inc.
Superior Tools for Adjustable Screening Process, Minna Puro, Metso Paper
High Performance Foil Rotor Improves De-Ink Pulp Screening, Cameron Pflueger, Advanced Fiber Technologies (AFT)
High-Speed Dispersing Between Two Deinking Loops: Are There Optimisation Possibilities, Bruno Carré and Benjamin Fabry, Centre Technique Du Papier

Tuesday, 25 September 2007

Session 5: Flotation Equipment
Session Chair: Garnet Bremner, Nalco
Analysis of Ink Elimination in Flotator, Junsuke Kawana, Oji Paper Co., Ltd.
First Flotation Column in a Paperboard Recycling Plant, Yuxia Ben, PAPRICAN
Interaction of Flotation Cell Operating Variables, Henry Peters, Abitibi-Consolidated Co.

Session 6: Deinking I
Session Chair: Aanon Røring, Norske Skog
Natural Surfactants in Paper Recycling, Richard Venditti, North Carolina State University
A Comparison Between NaOH, Mg(OH)2 and Na2SO3 in the Deinking of ONP / OMG, Michel Dubreuil, Arkema Inc.
Component Removal in Sequential Deinking Flotation, Mika Körkkö, University of Oulu
Investigation on the Behaviour of Undesirable Constituents, Antje Kersten, Darmstadt University of Technology

Session 7: Deinking II
Session Chair: Yves Dionne, Bowater
Assessment of Deinking Chemistry Performance: From Laboratory Tests to the Simulation of an Industrial Pre-Flotation Line, Davide Beneventi, Ecole Francaise De Papeterie Et Des Inc.
Ink Detachment, Fragmentation and Alkali Darkening During Pulping of ONP/OMG Part II: Effects of Sodium Sulphite, Luc Lapierre, PAPRICAN
Laboratory Study to Evaluate Methods for Deinking Flexographic Newsprint, Akpojotor Shemi, Georgia Institute of Technology

Session 8: Stickies Analysis
Session Chair: Hans-Joachim Putz, PMV-TU Darmstadt
Assessment of Methods for the Measurement of Macrostickies in Recycled Pulps, Bruce Sitholé, PAPRICAN
Properties of Water-borne Pressures Sensitive Adhesive Films During Recycling Operations, Carl Houtman, USDA Forest Products Lab
An Headspace Gas Chromatographic Technique for Measuring Microstickies in Recycling Mill White Water, Junyong Zhu, USDA Forest Products Lab
Wednesday, 26 September 2007

**Session 9: Analysis Development**
Session Chair: Shisei Goto, Nippon Paper Industries Co. Ltd.
An AFM Study of the Surface Properties of Fiber Upon Progressive Recycling, Adam Brancato, IPST at Georgia Institute of Technology
New Approach to Measurement of Effective Residual Ink Concentration of Deinked Papers, Carl Houtman, USDA Forest Products Lab
Analysis of Pulp Components in a DIP Process with Tube Flow Fractionation, Ossi Laitinen, University of Oulu

**Session 10: Fiber and Fines Quality**
Session Chair: John Cameron, Western Michigan University
LbL Nanocoating for Fiber Recycling - Improved Paper Recycling Through Fiber Polycation/Polyanion Multilayer Nanocoating, George Grozdits, Louisiana Technical University, School of Forestry
Fine Particles Separation in Recovered Paper Suspensions, Jörg Wagner, Darmstadt University of Technology, PMV

**Session 11: Panel Discussion: Research Needs and Issues**
Session Chair: Giles Dorris, PAPRICAN
See Program Highlights for session details

**Session 12: Bleaching**
Session Chair: Carl Houtman, USDA Forest Products Lab
Comparison of DIP Bleachability Between Traditional Soap and Reduced Alkaline Chemistries, Jouko Niinimäki, University of Oulu
Improving Deinked Pulp Quality by Oxidation with TEMPO, Julie Leroux, CIPP/Univ. Quebec Trois-Rivieres
TAED Activator for Peroxide Bleaching of Recycled Pulp, Jeffery Hsieh, Georgia Institute of Technology

**Session 13: Recycle Fiber at the Paper Machine**
Session Chair: Yuxia Ben, PAPRICAN
Flotation Column: A Process Unit for Cleaning Up Papermachine Whitewater Circuits, Yves Dionne, Bowater
Effect of High Temperature Drying of Recycled Paper on Heat Transfer Rates and Sheet Properties, Dania Alsaid, Western Michigan University

Thursday, 27 September 2007

**Morning Tour:** Mill Tour of Recycle Plant-Thorold, Ontario, Canada at the Abitibi-Consolidated recycle plant*

**Afternoon Tour:** Tour of Recovered Fiber Sorting Facility- Single stream sorting facility in Toronto*
*subject to change

Choose the plant that suits your interests. Transportation is provided, but you must pre-register to participate. Space is limited, so register early! (See registration form for pricing.)

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**SCHEDULE AT A GLANCE**

**Sunday, 23 September 2007**
12:00 – 18:30 Registration Open
12:30 – 15:30 Management and Control of Stickies Workshop*
15:30 – 16:30 TAPPI Recycling Committee Meeting**
16:30 – 18:30 PAPTAC Recycling Committee Meeting**

**Monday, 24 September 2007**
07:00 – 19:00 Registration Open
07:00 – 08:00 Speaker Breakfast
07:00 – 08:15 Welcome Address
08:15 – 09:30 Session 1: Panel Discussion: Paper Recovery and Challenges Around the World
09:30 – 10:00 Break
10:00 – 12:00 Session 2: Paper Recovery and Quality
12:00 – 13:30 Lunch on own
13:30 – 15:00 Session 3: Old Corrugated Containers and Related Issues
15:00 – 15:30 Break
15:30 – 17:00 Session 4: Improving Unit Operations
18:30 – 19:30 Welcoming and Table Top Display Reception

**Tuesday, 25 September 2007**
07:00 – 17:00 Registration Open
07:00 – 08:00 Speaker Breakfast
08:00 – 09:30 Session 5: Flotation Equipment
09:30 – 10:00 Break
10:00 – 12:00 Session 6: Deinking I
12:00 – 13:30 Lunch on own
13:30 – 15:00 Session 7: Deinking II
15:00 – 15:30 Break
15:30 – 17:30 Session 8: Stickies Analysis
18:00 Buses depart to Dinner at “Oh Canada, Eh?” venue

**Wednesday, 26 September 2007**
07:00 – 17:00 Registration Open
07:00 – 08:00 Speaker Breakfast
08:00 – 09:30 Session 9: Analysis Development
09:30 – 10:00 Break
10:00 – 12:00 Session 10: Fiber and Fines Quality
12:00 – 13:30 Lunch on own
13:30 – 15:00 Session 11: Panel Discussion: Research Needs and Issues
15:00 – 15:30 Break
15:30 – 17:00 Session 12: Bleaching
17:00 Table Top Display Tear Down

**Thursday, 27 September 2007**
Morning Mill Tour of Recycle Plant
Afternoon Tour of Recovered Fiber Sorting Facility (expect tour to end by 17:00)
*separate registration required, see registration form for details
**open to all conference attendees
**Discounted Air Travel**

**Delta**
Delta is the official airline for all TAPPI events. For Special Rates, book your flight online at the conference web page: www.tappi.org/07recycle. Simply scroll to the bottom of the webpage and click on the Delta Logo.

**Ground Transportation**
Niagara Falls is convenient to both the Buffalo, New York airport and the Toronto, Ontario airport.

Niagara Air Bus is offering 2007 Recycling Research Conference attendees discounted ground transportation from both the Toronto and Buffalo Airports. Attendees will save 10% with the conference code and another 10% off on-line with our special web fares. To get the best fares, book at least 24 hours before your arrival.

Online reservations receive an additional 10% discount!

To book a seat, go online, call or fax:
- Go online to www.niagaraairbus.com and follow the reservation instructions. Your airline and flight number (of flight landing in Toronto or Buffalo) and a valid credit card number will be required.
- Or call +1-905-374-8111
- Or fax your flight arrival information and request for your seat (along with your contact information) to: 800-206-7222

Conference Code: 323
Code is valid for transportation between 21 and 28 September, 2007 for travel before and after the Recycling Research Conference

Look for the Ground Transportation Booth on Arrival Level at Toronto or Buffalo Airports. Cancellations must be made 24 hours or more for refunds.

**Hotel Information**
A block of rooms has been reserved for the “TAPPI/ PAPTAC- 2007 Recycling Research Conference” at the Hilton Niagara Falls. To reserve your room at this discounted price, be sure to make your reservations on or before 24 August 2007.

Hilton Niagara Falls
6361 Fallsview Blvd.
Niagara Falls, ON L2G 3V9
Canada
Phone: +1-905-354-7887
Toll Free: 888-370-0325
Fax: +1-905-374-6707
Email: inform@hospitalitymotels.ca

To reserve your room online, go to www.tappi.org/07recycle and follow the link provided to the Hilton Niagara Falls. You can also reserve your room by calling 800-339-5023 ext. 55501, faxing +1-905-353-7132 or by email at lorraine.snihur@hospitalitymotels.ca. Be sure to indicate you’re attending the conference. The group rate code is: TAPI

Discounted Room Rate: Sunday through Friday: Standard City View $149 single/double; Saturday Rate: Standard City View $199 single/double; plus applicable taxes. Falls View rooms may be available, but not at this discounted rate. Note: A $25 per person additional charge for triple or quadruple occupancy, plus applicable taxes. Valid credit card required. To reserve your room at this discounted price, be sure to make your reservations on or before 24 August 2007.

Reservations made after this date cannot be guaranteed the group room rate listed above. Cancellation policy: You can cancel this reservation up to 48 hours prior to your arrival date. If cancellation is received after 48 hours prior to arrival, one night of your stay will be charged to the credit card number on file.

**Forum Registration Cancellation Policy and Refunds**
If you find that you have to cancel, your full registration fee will be refunded if TAPPI’s Registration Department receives written notification (fax acceptable at +1-770-446-6947) by 24 August 2007. Please note: There will be a 50% refund for all written cancellations made between 24 August 2007 and 14 September 2007. Understandably, after this time, no refunds can be issued. Substitutions, however, will be accepted any time without a penalty.
1. WHAT TYPE OF COMPANY DO YOU WORK FOR? (check one)
   □ Pulp and Paper/Paperboard Manufacturing (1)
   □ Consulting Firm or Independent consultant (2)
   □ Woodlands Operations (3)
   □ Paperboard Packaging Headquarters (4A)
   □ Converting Plant-Corrugated Packaging (4A)
   □ Converting Plant-Packaging, Polymers, Laminates (4B)
   □ Converting Plant-Tissue (4C)
   □ Supplier (Manufacturer of Machinery, Equipment, Chemicals & Shipping) (7)
   □ Distributors, Dealers, Exporters, Importers, Mill Supply Houses (8)
   □ Educational Institutions (9)
   □ Press, Library (other than University), Association, Government (10)
   □ Miscellaneous, allied to the field (12)
   □ Retired (13)
   □ Nonwovens (14)
   □ Printing/Graphic Arts (15)
   □ Industry Customer (End User) (16)

2. WHAT IS YOUR PRIMARY JOB FUNCTION? (check one)
   □ Librarians – Corporate (A)
   □ Corporate Management (B)
   □ Production (C)
   □ Technical/Research & Development (D)
   □ Engineering (E)
   □ Purchasing & Stores (F)
   □ Marketing & Sales (G)
   □ Traffic & Shipping (H)
   □ Other Management & Administrative Personnel (I)
   □ Consulting Firm or Independent consultant (J)

3. WHAT IS YOUR PRIMARY INDUSTRY? (check one)
   □ Pulp Mill Only (P)
   □ Paper/Paperboard Mill Only (R)
   □ Integrated Pulp/Paper/Paperboard Mill (D)
   □ Technical/R&D Facility/Headquarters (H)
   □ Independent Operations/Converting Plant (I)

4. HOW DID YOU HEAR ABOUT THE CONFERENCE?
   □ Tappi.org website
   □ Email
   □ Brochure
   □ Newsletter
   □ Colleague/Co-worker

5. WHEN CHOOSING A CONFERENCE THE MOST IMPORTANT FACTOR TO ME IS:
   □ Registration Fee
   □ Travel Costs
   □ Program Content
   □ Meeting Location
   □ Networking/Peer Interactions
   □ Access to new technology
   □ Access to customers
   □ Do you require special accommodations for handicapped access? Yes  No

Do you require special accommodations for handicapped access? Yes  No

By checking and signing below I request a free subscription to Paper360 (monthly; the official magazine of TAPPI and PIMA, free copy)

(All fees must be paid in U.S. Dollars and must accompany registration forms)

** subject to change

METHOD OF PAYMENT (All fees must be paid in U.S. Dollars and must accompany registration forms)

*Member discounts are available to members of TAPPI, PAPTAC, ABTCP, APPITA, JapanTAPPI, KoreaTAPPI, RPTA, SPCI, CTP in good standing. To qualify for member discount, please circle your organization (from above list) and supply your Member Number:
This event is co-hosted by TAPPI and PAPTAC

INNOVATIONS IN RECYCLING

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Norcross, GA 30092, USA

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