By Brad S. Carlberg, P.E.

InvenSys Operations Management– Lake Forest, CA

Honorable Members of PUPID,

Well, it is already the third week of February and it’s starting to warm up a bit.

Just like last month, we still need a Director-Elect, and a symposia coordinator. The Director-Elect will train in 2011 and take over as Director for the 2012/2013 biennium. If you can only do it for a single year, then we can look at single terms. In return for the work, you’ll get your ISA Fall Conference registration.

Again this year, I am on the Wireless & Networking Track Committee (this year as chair) for the ISA Automation Week 2011 at the Renaissance Riverview Hotel and the Arthur R. Outlaw Mobile Convention Center in Mobile, Alabama. If you’ve thought about getting involved with a technical conference and/or writing a paper, this is for you. Come on down to the “Redneck Riviera” and see where Mardi Gras started (that’s right, Mobile only loaned Mardi Gras to New Orleans, but had Mardi Gras first!)

Please do not hesitate to contact me at either (251) 454-1200 or brad.carlberg@bsc-engineering.com to discuss how you can help PUPID.

Now, that’s enough of my pitch. I hope you’ll get some info about sootblowing from the following papers from this Fall’s TAPPI Peers conferences last October 17 – 21

- Intelligent Sootblowing Powerpoint Presentation
- Intelligent Sootblowing Paper

There’s some good news regarding the PUPID membership; with 20 new and 2 renewing members, the membership has held constant since last November at 442. Welcome to all of you new members!

I hope it is an encouragement to you to become more involved with the Division and to enroll more members from the great international pulp & paper community.

Do feel free to forward the Newsletter to your friends and colleagues who may have an interest in it.


On pages 5 – 12, see th “Who’s Doin’ Anything?” section to see who’s expanding.

On pages 42 – 49, read the “Letters To The Editor” from around the world.

Please keep sending me more letters telling me what’s happening in you part of the world!
Tuning Tip: Check List to Improve Process On-stream Time, Production Rate, and Efficiency (Composition Measurements Include Conductivity, Dissolved Oxygen, pH, and Turbidity)

BY GREG MCMILLAN

1. Use smart transmitters with the best sensor technology and integration of process and ambient conditions compensation
   a. Avoid older technologies particularly ones with mechanical elements
   b. Seek sensor and transmitter with the best sensitivity and repeatability

2. Pick sensor location and installation method to provide the most representative measurement with no stagnation, best velocity, fastest response, and least noise
   a. For DP and pressure transmitters, avoid impulse lines (sensing lines) by direct mounting transmitters
   b. For DP and vortex flow meters insure uniform velocity profile
   c. For thermowells and electrodes increase velocity to reduce response time and coatings but not so high to cause abrasion, static charge, or vibration
   d. For thermowells and electrodes pick locations with good mixing, minimal transportation delay, and least bubbles, slime, and solids

3. Use real throttle valves with smart positioners
   a. Avoid on-off and isolation valves posing as throttling valves. Go to a control valve manufacturer instead of a piping valve manufacturer
   b. Seek actuator, positioner, and valve type with best sensitivity of installed flow characteristic and signal response with least stick-slip and backlash
   c. Verify positioner feedback measurement is representative of internal closure member (e.g. ball, disk, or plug) and not just actuator position

4. Tune control loop with on-demand auto tuner or adaptive controller to loop objectives. Tuning for set point changes to minimize overshoot, may not work well for maximum rejection of load disturbances (ref 15). Choose tuning speed to:
   a. Insure an exceptionally smooth PV and output response by decreasing transfer of variability from PV to output (increasing Lambda) for:
      i. level loops on surge tanks to minimize feed upsets
      ii. deadtime dominant loops (deadtime >> process time constant)
      iii. interacting loops (e.g. headers)
      iv. loops on piping or equipment with no back mixing (e.g. blenders, heat exchangers, extruders, static mixers, sheets, webs, and yarns)

Calendar of Events

Get a quick overview of the ISA PUPID events for 2011 by going to the Calendar at: http://www.isa.org/~pupid/2011_PUPID_Calendar.htm

2011 TAPPI International Bioenergy & Bioproducts Conference
March 14 - 16, 2011
Atlanta Hilton
Atlanta, GA USA

65th Appita Annual Conference and Exhibition
April 10 - 13, 2011
Energy Events Centre
Rotorua, New Zealand

2011 TAPPI PaperCon Conference
May 1 - 4, 2011
Northern Kentucky Convention Center
Covington, KY USA

IEEE Industry Application Society
57th Annual Pulp and Paper Industry Conference
Downtown Sheraton
Nashville, TN

2011 ISA FALL LEADERS MEETING
SATURDAY, 15 OCT 2011 AND SUNDAY, 16 OCT 2011

ISA AUTOMATION WEEK 2011
MONDAY, 17 OCT 2011 THROUGH THURSDAY, 20 OCT 2011
ARTHUR R. OUTLAW MOBILE CONVENTION CENTER
RENAISSANCE MOBILE RIVERVIEW PLAZA HOTEL
MOBILE, AL
Come meet your leaders & get involved!
**Tuning Tip by Greg McMillan (continued)**

b. Provide good load rejection of moderately fast disturbances by increasing transfer of variability from PV to output (decreasing Lambda) for:
   i. Fed-batch and continuous agitated vessel and column composition, level, pressure, and temperature loops
   c. Provide good load rejection of extremely fast disturbances by setting the gain and reset as a factor of deadtime rather than the time constant for:
      i. Continuous agitated vessel and column composition, pressure, level, and temperature loops
   d. Provide minimal overshoot of setpoints of slow lag dominant loops (process time constant >> loop deadtime and slower than 10 minutes) by tuning the loops as near-integrating processes for:
      i. Fed-batch and continuous agitated vessels and column composition, pressure, and temperature loops (setpoint changes occur at startup or for changes in batch phase and product grade)
   e. Provide minimal peak error by maximizing controller gain even if it requires increasing reset time to maintain robustness for:
      i. Prevention of SIS activation
      ii. Prevention of pressure relief
      iii. Prevention of environmental violation
      iv. Prevention of equipment damage
5. Add DCS signal filter or damping adjustment to keep loop output fluctuations from noise less than the valve deadband to prevent excessive valve packing wear and inflicting disturbances on loop. For wireless transmitters use damping adjustment to reduce keep transmitter output fluctuations from noise less than wireless update “trigger level” to eliminate unnecessary communication and extend battery life.
6. Eliminate on-off actions
   a. Replace on-off control by switches with loops
   b. Eliminate manual actions by adding loops, keeping loops in highest design mode, adding feedforward, and automating and tuning loops to handle startup and abnormal operating conditions
   c. Replace pure batch with fed-batch automation by replacing discrete sequential actions (e.g. stepping feeds) with loops (e.g. throttling feeds)
7. Tune loops that create feed disturbances (e.g. surge level loops) to provide a smooth slow transition in feed rate
8. Add cascade control to compensate for nonlinearities and pressure disturbances (e.g. secondary flow loop and secondary coolant temperature loop)
9. Add feedforward control of measurable fast disturbances not compensated by secondary loop
10. Optimize setpoints by operating closer to constraints for production rate or product quality spec.
   a. Eliminate operating margin imposed by shift’s perceived sweet spot or operating margin caused by process variability from not doing check list items 1-9
   b. Find more efficient operating points based on R&D reports and virtual plant exploration - confirm with process tests
   c. Add model predictive control to optimize setpoints as process conditions and market requirements change.

This Tuning Tip was excerpted from “How to get the Most out of Your PID” by Greg McMillan of CDI Process & Industrial from the ISA Automation Week 2010.

ISA Members can download this paper FOR FREE and it’s powerpoint from the ISA website.
WELCOME TO THE 20 NEW ISA PULP & PAPER INDUSTRY DIVISION MEMBERS SINCE NOVEMBER 2010

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THANKS TO THE MEMBERS WHO RENEWED THEIR MEMBERSHIPS

Mr. Brian D. Merriman
Mr. Jean Simard

HERE’S A REMINDER TO THE 44 ISA PULP & PAPER INDUSTRY DIVISION MEMBERS WHO NEED TO RENEW THEIR MEMBERSHIP

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DON’T FORGET TO RENEW!
New York--(business Wire)-- Minerals Technologies Inc. (NYSE: MTX) announced today that its wholly owned subsidiary, Specialty Minerals Inc., has entered into a long-term agreement with The West Coast Paper Mills Limited to build and operate a satellite precipitated calcium carbonate (PCC) plant at West Coast's flagship pulp and paper mill at Dandeli, India. Dandeli is on the Kali River in the western state of Karnataka. Specialty Minerals will own and operate the facility through its subsidiary company, Minerals Technologies India Private Limited. The plant, which will initially produce about 35,000 tons of PCC, is expected to be operational in the fourth quarter of 2011.

"Minerals Technologies is pleased and excited that West Coast Paper has selected us to provide them with PCC; and, we are looking forward to playing an important part in the growth of this excellent paper company," said Joe Muscari, chairman and chief executive officer. "The Dandeli plant will be our third facility in India, and brings our total number of satellite PCC plants in the region to 11."

Established in 1955, The West Coast Paper Mills Ltd. has grown into one of the largest paper products producers in India and has recently completed the most ambitious expansion project in its history. The centerpiece of the $305 million expansion is a best-in-class technology paper machine that has increased the mill's output from 180,000 to 320,000 metric tons per year and produces high-quality printing and writing and copy papers under the company's Copy Gold and Copy Plus brands. A new 725 ton-per-day elemental chlorine free (ECF) pulp mill and a 75-percent increase in power generation will enable the mill to be self-sufficient in pulp production and will make the company's products more sustainable and environmentally friendly.

In entering this supply relationship, West Coast Paper has recognized the value of Minerals Technologies' long history of technical leadership in the paper business. On-site PCC production will contribute to the sustainability and competitiveness of the Dandeli mill's new paper machine, which, in turn, will provide additional economic and environmental benefits to the company and the local community. A key consideration in the mill's decision process was the recent commercialization of Minerals Technologies' Fulfill™ technology platform. The new PCC-enabling technology allows a papermaker to significantly increase the amount of filler in the paper while maintaining paper performance.

PCC is a specialty pigment for filling and coating high-quality paper. By substituting PCC for more expensive wood fiber, customers like The West Coast Paper Mills are able to produce brighter, higher quality paper at lower cost. Minerals Technologies originated the satellite concept for making and delivering PCC on-site at paper mills and the concept was a major factor in revolutionizing North American papermaking from an acid to an alkaline-based technology. Minerals Technologies constructed its first PCC satellite plant in 1986. Today, the company has a total 55 PCC manufacturing facilities in operation or under construction around the world and continues to lead the industry with consistent quality and technical innovation.

Minerals Technologies Inc. is a global resource- and technology-based growth company that develops, produces and markets worldwide a broad range of specialty mineral, mineral-based and synthetic mineral products and related systems and services. Total sales for the company were nearly $907.3 million for 2009.


About The West Coast Paper Mills Limited

West Coast Paper Mills Ltd (WCPM) is the flagship company of the Kolkata-based S K Bangur group, which also owns Rama Newsprint & Papers Ltd. The company is primarily engaged in manufacturing pulp, paper and paperboard for the domestic India market. Its products include various kinds of paper such as printing, writing and wrapping paper. It also supplies paper for industrial use and also manufactures products such as optical fiber cable and jelly filled telephone cables for the telecom industry. The corporate headquarters are located in Bangalore. Annual sales for the period ended March 31, 2010 were $145 million.

For further information about The West Coast Paper Mills Ltd. contact wcpm@westcoastpaper.com or look on the internet at
Arclin Announces Transition To Using Unbleached Kraft Paper For The Manufacture Of Its High Density Overlays For Concrete Forming
January 27, 2011
Mississauga, ON /PRNewswire/ - Arclin, a leading provider of bonding, surfacing and related products for today's engineered building, industrial materials and natural resources markets announced today their plan to transition the construction of their High Density Overlay (HDO) for concrete forming from bleached to unbleached Kraft paper.

The new line of HDO products will maintain all their superior performance characteristics of existing products but will also bring a new level of sustainability and environmental responsibility to the market. Laminators, distributors and contractors can take pride in using HDO products from Arclin knowing they are using products that take advantage of higher yields and generate fewer waste products during the pulping process as well as eliminate sourcing challenges for bleached paper and help moderate the added costs associated with expensive bleaching agents such as titanium dioxide. The transition will take place over the next 15 months and should bring much needed stability to raw material sourcing.

"We are very excited to lead the industry with this transition," says Ted Arnberg, Business Director Plywood and Commercial Construction. "Offering our HDO line of concrete forming overlays manufactured with natural, unbleached Kraft paper fits in well to our commitment to offer more environment friendly products that still meet or exceed the demands of the market. This will be a collaborative effort involving key players up and down the value chain."

Arclin's E-Gen designated, unbleached HDO products are still manufactured using FSC Chain of Custody certified papers and may contribute to LEED credits as a part of an overall waste reduction strategy.

About Arclin
Based in Mississauga, Ontario, Arclin is a leading producer of innovative bonding, surfacing solutions for the building and construction, industrial materials and natural resource markets. Arclin provides bonding solutions for a number of applications including wood based panels, engineered wood, non-wovens and paper impregnation. As a world leader in paper overlays technology, Arclin provides high value surfacing solutions for decorative panels, building products and industrial specialty applications for North American and export markets. For more information please visit http://www.arclin.com.

SOURCE Arclin

Excellent Packaging & Supply Introduces BPA-Free Cash-Register/POS Paper
January 27, 2011
Retailers and grocers can eliminate toxins from point-of-sale registers with new, 100 percent BPA-free thermal paper for POS printers, now available in the BioMass Packaging® online store.

Richmond, CA (Vocus/PRWEB) - Excellent Packaging & Supply, an innovator and distributor of nature-based packaging for foodservice and other applications, has added a range of BPA-free paper supplies for cash registers and credit-card receipt printers to its comprehensive BioMass Packaging® online store and catalog. The BPA-free paper works exactly like the paper it replaces, and enables retailers to eliminate toxins from the receipts they hand to their customers. Available for the first time, BPA-free thermal paper for POS machines can be ordered direct from biomasspackagingstore.com, for immediate delivery.

"We first learned about the demand for BPA-free thermal paper when a customer asked us if we knew that thermal paper contained BPA and wanted to know if we could provide them with safer, non-toxic replacement. It was the right thing to do and
the solution was out there. We simply had to find it,” said Allen King, president of Excellent Packaging & Supply.

According to Marcelo Mino of The Natural Grocery Company, public awareness about BPA and its associated dangers has been rising, prompting him to avoid using it as much as possible: “Our customers and employees started voicing their concerns about BPA, years ago. We learned that our thermal paper contained BPA, and have since then been looking for an alternative. I was pleasantly surprised to learn that Excellent Packaging started shipping BPA-free paper to us in December, swapping out our old supplies for this new product.”

Bisphenol A (BPA) is commonly found in thermal printer paper, and has been identified as a toxic substance by the United States Food and Drug Administration (FDA), and Health Canada. A recent study by the National Institutes of Health (NIH) has shown that there is some concern about BPA’s effects on fetal and infant brain development and behavior. Another study published in the journal Thyroid concluded that BPA could have selective effects on the functioning of the thyroid gland.

A complete line of BPA-free foodservice disposables In addition to BPA-free thermal-paper rolls, which are made by Ritemade Paper, using Koehler-manufactured BPA-free paper, Excellent Packaging offers a comprehensive range of sustainable foodservice disposables. Its BioMass Packaging® line of products includes more than 450 items, all of which are BPA-free, and most of which are made from renewable, bio-based resources. The complete line is available online at: http://www.biomasspackagingstore.com.

Excellent Packaging & Supply (http://www.excellentpackaging.com) is a wholesale distribution company that specializes in nature-based packaging for foodservice and other applications. The company's range of environmentally sustainable packaging includes compostable, biodegradable and recyclable product lines, as well as traditional packaging solutions. Excellent Packaging & Supply brings decades of experience to assist its customers with mid-level management and inventory-control services, product development, sourcing, quality control, and price negotiation. The company also markets sustainable foodservice packaging solutions for business, restaurant and home on its BioMass Packaging® store: biomasspackagingstore.com. Follow us on Facebook (facebook.com/BioMassPackaging) and Twitter (twitter.com/BioMassPackage).

SOURCE: PRWeb

View original release here: http://www.prweb.com/releases/2011/1/prweb8085162.htm

ASPI Announces 2011 Spring Meeting Program
January 27, 2011

The Association of Suppliers to the Paper Industry (ASPI) cordially invites all ASPI members to reconnect with peers at the 2011 Spring Meeting, scheduled for February 17-18, 2011 in Manalapan, Florida. This meeting delivers meaningful business content while providing a unique forum for senior business leaders to meet and interact with their peers serving the pulp and paper industry supplier community.

A key reason that business leaders attend is that they learn directly from guest speakers who represent their customer base. The speakers are also senior executives who will address pressing issues that affect how participants conduct business today and tomorrow. The connection is direct without any filtering layer of analysts or intermediaries. This meeting's presenters include Michael P. Exner, Senior Vice President and General Manager, Containerboard Mill Division, Smurfit-Stone Container Corporation; William M. "Chip" Shew, Mill Manager - Paper, Packaging & Services, Greif, Inc.; Jim Lane, Editor and Publisher, Biofuels Digest; Tom Stigers, Senior Vice President – Coated Mill Operations, RockTenn; Christer Idhammar, Founder, Executive Vice President and CEO, IDCON Inc; and Rod Young, Chairman, RISI.

The ASPI 2011 Spring Meeting will be held in Manalapan, Florida, USA. There are opportunities for informal networking, an ASPI Golf Tournament on Thursday, February 17, and a Spouse/Guest program.

The Spring Meeting's host venue is The Ritz Carlton Palm Beach. This oceanfront resort is an exquisite welcome to Palm Beach with refined beauty a graceful atmosphere, and impeccable service. ASPI has negotiated preferred hotel registration rates for
WHO’S DOIN’ ANYTHING?: (CONTINUED)

ASPI attendees. This rate expires after January 15, so register today.

Prospective participants are encouraged to make reservations for the ASPI 2011 Spring Meeting. They can visit the ASPI website, www.aspinet.org.

SOURCE: ASPI

Metso To Rebuild Hinton Pulp's Pulp Machine In Canada
December 31, 2010

Helsinki Finland - (Marketwire) -

Metso Corporation's press release on December 8, 2010 at 3:00 p.m. local time

Metso will supply Hinton Pulp with a rebuild of their market pulp machine in Hinton, Alberta, Canada. The project will be delivered and installed in late 2011. The value of the order exceeds EUR 10 million. The order is included in Paper and Fiber Technology's Q4 orders received.

Metso's delivery will include a new top wire former, press section modifications, air borne dryer rebuild, dry end pulper rebuild, and a new high- capacity cutter layboy.

The rebuild will significantly increase the pulp machine's capacity. Brian Grantham, General manager, Hinton Pulp, states: "The upgrade to the pulp machine will allow the mill to produce more green power, reduce its natural gas consumption, and lower its carbon footprint."

Hinton Pulp is a division of West Fraser Timber Co. Ltd. West Fraser is an integrated wood products company producing lumber, wood chips, LVL, MDF, plywood, pulp and newsprint. The Company has operations in western Canada and the southern United States.

Metso is a global supplier of sustainable technology and services for mining, construction, power generation, automation, recycling and the pulp and paper industries. We have about 27,000 employees in more than 50 countries. www.metso.com

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SOURCE: Metso Corporation

Sappi Fine Paper North America Completes Capital Projects Totaling $49M At Its Somerset Mill
December 31, 2010

Projects to Support Increased Pulp Production and Improve Energy Efficiency

Boston, MA /PRNewswire/ - Sappi Fine Paper North America announced today that it has successfully completed capital projects totaling $49 million at its Somerset Mill in Skowhegan, Maine. The investment was comprised of a major capital project that upgraded recovery cycle equipment at the Somerset pulp mill, as well as 17 other related projects that improved manufacturing processes, all of which were completed on time with no interruptions to the mill's paper production.

Through the capital project, upgrades were made to the Somerset pulp mill's recovery boiler and evaporator system which enable the facility to process more black liquor, a renewable carbon neutral fuel that is generated as a byproduct of the pulping process. As a result, the Somerset Mill benefits from increased pulp production while improving energy efficiency and further reducing its carbon footprint. This recent investment ensures that the Somerset Mill continues to be globally competitive, reliable and
WHO’S DOIN’ ANYTHING?: (CONTINUED)

environmentally sound.

The project also reflects Sappi's commitment to the sustainability of the Somerset Mill and the 800 plus jobs it provides in the community.

The Somerset Mill makes coated fine paper -- Opus and Somerset web, and Flo web and sheets, which is used for premium magazines and other high-end print communications, as well as Lusterprint, which is used for packaging.

About Sappi Fine Paper North America

Sappi Fine Paper North America is a preeminent North American producer of coated fine paper used in premium magazines, catalogues, books and high-end print advertising. Headquartered in Boston, Massachusetts, Sappi Fine Paper North America is known for innovation and quality. Its brand names, including McCoy, Opus, Somerset and Flo, are some of the industry's most widely recognized and specified. Sappi's mills in North America are triple chain of custody certified to the Forest Stewardship Council (FSC), Sustainable Forestry Initiative® (SFI), and Programme for the Endorsement of Forest Certification (PEFC). Over 80% of the energy used by Sappi's North American mills comes from renewable resources, resulting in one of the lowest carbon footprints of any major North American coated paper supplier. Sappi Fine Paper North America is a division of Sappi Limited (NYSE and JSE), a global company headquartered in Johannesburg, South Africa, with manufacturing operations on four continents in 10 countries, sales offices in over 40 countries, and customers in over 100 countries around the world. For more information about Sappi Fine Paper North America, visit: www.sappi.com/na. For the press release, visit: http://www.na.sappi.com/aboutus/news/2010-12-16.

SOURCE Sappi Fine Paper North America

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Forest Service Researcher Receives Prestigious Presidential Award

December 15, 2010

The USDA Forest Service's Pacific Northwest (PNW) Research Station officially announced recently that Dr. Lee Cerveny, a research social scientist based at its Pacific Wildland Fire Sciences Laboratory in Seattle, is a recipient of the Presidential Early Career Award for Scientists and Engineers (PECASE). Cerveny will be presented with the award—which is the highest honor bestowed by the U.S. government on science and engineering professionals in the early stages of their research careers—recently at a formal White House ceremony.

"On behalf of the four hundred employees of the Pacific Northwest Research Station, I want to say how proud we are of Dr. Cerveny's accomplishments," said Bov Eav, Station Director. "Her research into the human dimensions of natural resource management provides insights that help guide land managers as they consider options for land use decisions."

Cerveny was recognized for a decade of social science contributions that have elevated understanding of the human dimensions of natural resource management in the Pacific Northwest and beyond. In 1999, the same year she began working for the Forest Service, she launched a creative line of research examining the effects of a variety of social changes—including a sharp increase in cruise ship travel and subsequent explosion in nature-based tourism—on small communities in southeast Alaska. Since that time, her studies have expanded to include investigations of the use of science by recreation and fire managers and the role of partnerships in maintaining the Forest Service's organizational capacity.

Most recently, Cerveny launched a multiyear study to visually map human activities and important places in forests on Washington State's Olympic Peninsula. The community-workshop-based project is identifying the diversity of recreation, cultural, historical, and economic connections residents have to the Olympic Peninsula, information that will help managers and planners there make decisions about the area's lands and resources.

"It is truly an incredible honor to be acknowledged by the White House and by the Department for making research contributions that are meaningful and valuable to others," Cerveny said. "This award helps me to expand work on the Olympic Peninsula, an area that has experienced major economic transformation, with implications for how people relate to forests, parks,
and other lands."

As a PECASE recipient, Cerveny will be receiving a research grant that she will use to complete her regional human ecology mapping project. She also plans to begin studying emerging issues in the forests that surround cities, where land uses are rapidly changing with shifting economic conditions and the growth of new population groups.

The PECASE, established by President Clinton in 1996, is coordinated by the Office of Science and Technology Policy within the Executive Office of the President. Awardees are selected for their pursuit of innovative research at the frontiers of science and technology and their commitment to community service as demonstrated through scientific leadership, public education, or community outreach. This year, the award recognized a total of 85 scientists from 10 government departments or agencies. Cerveny is the Forest Service's only recipient.

The PNW Research Station is headquartered in Portland, Oregon. It has 11 laboratories and centers located in Alaska, Oregon, and Washington and about 425 employees.

SOURCE: USDA Forest Service's Pacific Northwest (PNW) Research Station

The National Center For Pulp And Paper Technology Training Announces New Partnership With Rainy River Community College

December 16, 2010

Thomasville, AL - The National Center for Pulp and Paper Technology Training announced that Rainy River Community College (RRCC), International Falls, Minn., joined The National Network for Pulp and Paper Technology Training (NPT2). The Network is a national partnership of community colleges and industry representatives that arms students with the training and experience necessary to meet the increasing demand for advanced technology workers in the pulp and paper industry.

"We are very excited to add RRCC to our network of community colleges offering Pulp and Paper technology training across the country," said T.J. Murphy, executive director of The National Center for Pulp and Paper Technology Training. "RRCC is recognized by business, government, and community leaders for its outstanding workforce development and training programs."

"Rainy River Community College's partnership with NPT2 and Itasca Community College will make available additional training and experience necessary to meet the increasing demand for advanced technology workers at local paper mill Boise Inc.,” said Tammy Cook, director of Instructional Services at RRCC. “In addition, this partnership will enhance the value of the Industrial Technology program, already offered by RRCC.”

Rainy River Community College was founded in 1967 by a group of dedicated individuals who wanted post-secondary education offered in International Falls at the heart of Minnesota's north woods.

Rainy River fosters learning by surrounding its students with an environment rich in natural wonder. The 80-acre campus has an eight-building complex connected with heated walkways enclosing a courtyard. The grounds feature a softball field, a lighted cross-country skiing and hiking trail, and three ponds edged by decks and walkways. The adjacent residence hall offers furnished apartment-style accommodations for students.

The atmosphere within the college is as inviting as the setting. The faculty and staff get to know and care for students on a first-name basis and provide them with a quality education.

Rainy River's Associate in Arts Degree (AA) prepares students for transfer by completing the liberal arts general education requirements for a Bachelor's Degree. RRCC follows the Minnesota Transfer Curriculum and helps students carefully plan their studies. RRCC guarantees that the AA Degree will transfer to any Minnesota State College or University. Career and technical programs include Certified Nursing Assistant/Home Health Aide, Fitness Specialist, Green and Sustainable Construction Technology, Indigenous Studies, Industrial Technology, and Practical Nursing.

The National Network for Pulp & Paper Technology Training (NPT2) was created to provide the pulp and paper sector of the US forest products industry with a Technologically Advanced Workforce (TAW) by offering exciting and effective education.
and training. The National Network is an alliance of community colleges, universities, industry partners and the National Science Foundation. It offers a proven program for recruiting, training, placing, and retaining future pulp and paper workers by providing technical curriculum, continuing education, scholarships and internships. The National Network for Pulp & Paper Technology Training's scholarships-internships-jobs model succeeds because its partnerships address the complete cycle of worker training and development, from recruitment of new students to retention of existing workers. The National Network is a part of the TAW platform supported as an important technology platform by the American Forest and Paper Association’s special project group, Agenda 2020, and TAPPI.

SOURCE: The National Center for Pulp and Paper Technology Training

Clearwater Paper Completes Acquisition Of Cellu Tissue Holdings, Inc.

December 27, 2010

SPOKANE, WASH.--(BUSINESS WIRE)--
Clearwater Paper Corporation (NYSE:CLW) today announced it has completed its acquisition of Cellu Tissue Holdings, Inc., an Alpharetta, Georgia-based manufacturer of tissue products. Clearwater Paper, headquartered in Spokane, Wash., now has 14 manufacturing locations in the U.S. and Canada, with a fifteenth under construction at Shelby, N.C.

"The acquisition significantly expands our tissue business to serve a broad customer base through a truly national network of sales and management professionals, talented manufacturing employees and strategically located production facilities," said Gordon Jones, chairman, president and CEO. "The acquisition supports our strategy to grow our private label tissue business while providing the opportunity to diversify into new channels."

"We are excited about the opportunities the combined company offers our customers, and are pleased to welcome our new employees to the Clearwater Paper family," said Bob DeVleming, vice president of consumer products. "We are ready to put the combined talents of all of our employees into action to best support Clearwater Paper's existing and new customers."

Clearwater Paper paid $12 per share in cash for Cellu Tissue's outstanding common stock and funded the acquisition using a combination of existing cash on hand and $375 million of debt financing. The purchase price was approximately $530 million, including equity value of approximately $247 million, retired debt of approximately $267 million and assumed debt of approximately $16 million. The retired debt amount included approximately $32.5 million from Cellu Tissue's credit facility.

On December 27, 2010, and in connection with the acquisition of Cellu Tissue, Clearwater Paper also completed its previously announced cash tender offer to purchase any and all of Cellu Tissue's outstanding 11½% Senior Secured Notes due 2014. The tender offer expired at 11:00 a.m., New York City time, on December 27, 2010. Based on the final tabulation provided by D.F. King & Co., Inc., the depositary and information agent for the tender offer, the aggregate principal amount of Cellu Tissue notes that were validly tendered and not validly withdrawn prior to the expiration time was $234,479 million, representing 99.99% in aggregate principal amount of the Cellu Tissue Notes. Clearwater Paper has accepted for purchase all Cellu Tissue Notes validly tendered and not validly withdrawn prior to the expiration time, with settlement occurring today, December 27, 2010.

FORWARD LOOKING STATEMENTS

This press release contains certain forward-looking statements regarding Clearwater Paper and its acquisition of Cellu Tissue, including but not limited to statements regarding the strategic and financial benefits of the acquisition of Cellu Tissue, opportunities for growth with existing customers and new customers in new channels, Clearwater Paper's strategy to grow its private label tissue business, and the construction of a manufacturing facility at Shelby, N.C. Actual events or results may differ materially from those contained in these forward-looking statements. Among the important factors that could cause future events or results to vary from those addressed in the forward-looking statements include, without limitation, risks and uncertainties arising from difficulties with the integration process or the realization of the benefits expected from the acquisition of Cellu Tissue; general economic conditions in the regions and industries in which Clearwater Paper operates; and changes in the cost and availability of wood fiber used in the production of the company's products. In addition, please refer to the documents that Clearwater Paper files with the Securities and Exchange Commission ("SEC") on Forms 10-K, 10-Q and 8-K. The filings by Clearwater Paper identify and address other important factors that could cause events or results to vary from the forward-looking
WHO’S DOIN’ ANYTHING?: (CONTINUED)

statements set forth in this press release. Clearwater Paper is under no duty to update any of the forward-looking statements after the date of this press release to conform to actual results.

ABOUT CLEARWATER PAPER

Clearwater Paper manufactures quality consumer tissue, away-from-home tissue, hard roll tissue, machine glazed tissue, bleached paperboard, pulp and wood products at 14 manufacturing locations in the U.S. and Canada. The company is a premier supplier of private label tissue to major retailers and wholesale distributors. This includes grocery, drug, mass merchants and discount stores. The company also produces bleached paperboard used by quality-conscious printers and packaging converters. Clearwater Paper's 3,700 employees build shareholder value by developing strong customer partnerships through quality and service.

For additional information on Clearwater Paper, please visit our website at www.clearwaterpaper.com.
THE USE OF ENERGY BALANCE AROUND RECOVERY BOILER HEAT EXCHANGERS TO INTELLIGENTLY MANAGE SOOTBLOWER OPERATIONS: A CASE STUDY

DANNY S. TANDRA, ATI MANAY, JOHN EDENFIELD

CLYDE-BERGEMANN, INC.

ATLANTA, GA, USA

THE USE OF ENERGY BALANCE AROUND RECOVERY BOILER HEAT EXCHANGERS TO INTELLIGENTLY MANAGE SOOTBLOWER OPERATIONS: A CASE STUDY

Danny S. Tandra, Ati Manay, John Edenfield

2010 TAPPI PEERS & 9th Research on Recycling Forum
Background

- The success of deposit removal by a sootblower depends on two main important factors:

  ➔ Jet Cleaning Force (lbf)
  ➔ Sootblowing Timing

- Much research on how to improve jet cleaning force (i.e., Nozzle Tech) but little on sootblowing timing
Sootblowing TIMING (1 of 2)

- Excellent Jet power but BAD timing
  - The deposit is still in the very early stage of deposit buildup
  - Wasting valuable high pressure steam
Sootblowing TIMING (2 of 2)

Excellent Jet power but BAD timing

- The deposit has grown to a very large size
- Increasing jet power to remove may result in falling clinker, damaging boiler floors
- Wasting valuable high pressure steam
High Jet Power doesn’t guarantee good cleaning

Sootblowing Timing is also a critical component for controlling deposit accumulation
Good Sootblowing timing: Definition

- Good sootblower operation **controls** deposit accumulation **without** the excessive use of valuable steam.
How sootblowing frequency is typically set

- Most pulp mills run their sootblowers based on a static predetermined sequence.

- This sequence is generally pre-tuned to deal with a fouling condition under the designed black liquor firing load.

- Since the sequence is independent of the real fouling condition inside the boiler (which is a dynamic phenomenon based on how the boiler is run), the sootblowers are always in a high risk of over and/or under cleaning.
Black Liquor Flow Rate (KPPH)

- Black Liquor Firing Rate
- Sootblower Steam Consumption

- Sootblower Events in the 2nd superheater
- Constant steam consumption – Steam is wasted during low load operation
Over and Under Cleaning

- **Over cleaning** leads to costly excessive steam usage – it might also contribute to premature tube failure.

- **Under cleaning** will lead to interruption in recovery boiler operation, unscheduled shutdown due to heavy fouling / plugging.

- **Best Practice** is to devise a sootblowing strategy that prevents both over and under cleaning.

  It can only be achieved if we have online fouling feedback information from the boiler.
Fouling indicators: Reactive & Proactive

- **Reactive** fouling indicators
  - Low attemperator flow
  - High exit gas temperature (Gen Bank, Econ)
  - Decrease in steam temperature
  - Increase in ID fan rpm
  - Increase in gas DP

- **Proactive** fouling indicators
  - Black liquor properties (Flow, Chemistry, % Dry Solid)
Fouling feedback for managing sootblower operation

- Combine the **Reactive** and **Proactive** fouling indicators and develop energy balance around the heat exchangers that acts as the online fouling feedback information for controlling sootblower operation.
Energy balance around each exchanger

\[ \eta = \frac{\text{Actual heat transfer to the water/steam inside the heat exchanger}}{\text{Total available heat input to the heat exchanger}} \]

\[ \eta = \frac{Q_{\text{Actual Heat Absorption}}}{Q_{\text{Heat Input}}} \]
Energy balance around each exchanger

Boiler Centerline

Left Side Right Side

Boiler Roof

Sootblower Sootblower
Energy balance around each exchanger

Boiler Centerline
Left Side Right Side

Boiler Roof

T
Case Study:
Recovery Boiler in West Coast
Recovery Boiler Spec

- Single Drum Recovery Boiler
- Designed to burn 3.7 Million lb/day Black Liquor Dry Solid (BLDS)
- Current Steam Production
  - 643,000 lb/hr
  - 825 psig & 750 °F
- High Sootblower Operating Cost
  - Prior to Sootblower Close Loop Control System installation
    - 26 KPPH sootblower steam consumption
    - At cost of steam $8.9/1000lb, the mill spent \textbf{$2 Million per year} on sootblowing steam
Fouling Indicator
Superheater Section
2nd Superheater Section

![Graph showing CF (Cleanliness Factor) over time, with annotations indicating "Dirty Setpoint is reached" and "Sootblowing initiated" for certain dates.](image-url)
Fouling Indicator
Economizer Section
Economizer

Sootblowing event represented by vertical lines.

Thermodynamic Model

Sootblowing was initiated to bring the cleanliness factor (CF) back to an acceptable level.
10% BL firing rate increase

157 KPPH Black Liquor Firing Rate

140 KPPH Black Liquor Firing Rate

ID FAN speed is maintained at around 610 RPM

28 KPPH Sootblower Steam Consumption

18 KPPH Sootblower Steam Consumption

August 2009 Early 2010 Start the utilization of close loop sootblower control
Summary (1 of 2)

- Jet Cleaning Power and Sootblowing Timing are two crucial components for deposit removal in a boiler.
- The use of static predetermined sootblowing sequence will inevitably lead to Over (excessive use of steam) and Under Cleaning (Heavy fouling/plugging).
Summary (2 of 2)

- Best practice is to devise a sootblowing strategy that prevents both over and under cleaning
  - Develop energy balance around the heat exchanger and use it to detect fouling.
  - Manage sootblower operation by means of close loop control system based on these online fouling detectors
THE USE OF ENERGY BALANCE AROUND RECOVERY BOILER HEAT EXCHANGERS TO INTELLIGENTLY MANAGE SOOTBLOWER OPERATIONS: A CASE STUDY

Danny S. Tandra, Ati Manay, John Edenfield
Clyde-Bergemann, Inc.
Atlanta, GA, USA

ABSTRACT

The success of deposit removal by a sootblower depends on two main factors: (1) the sootblower jet cleaning power and (2) the sootblowing timing. Much research has been dedicated to optimize the sootblower jet cleaning power in a form of an improved sootblower nozzle design, but little has been done to answer the questions of when each sootblower should be optimally run and of what will be the appropriate cleaning intensity. Although many pulp mills have equipped their sootblowers with high efficiency nozzles, most recovery boiler sootblowers are still run without the real-time feedback information of where the fouling may be located. The knowledge of optimum sootblowing timing will not only reduce costly sootblower steam consumption, but also improve the recovery boiler thermal efficiency and prevent sootblower-induced-tube erosion. This paper discusses a case study involving a pulp mill in Northwest USA where mass and energy balances were set around each of the recovery boiler heat exchanger to identify fouling intensity, to measure sootblowing effectiveness, and to intelligently manage the sootblower operation.

INTRODUCTION

The accumulation of fireside deposits on recovery boiler heat transfer surfaces not only creates an insulating barrier that reduces the boiler thermal efficiency, but can also lead to costly unscheduled shutdown due to the plugging of the gas passes. Control of the deposit accumulation is attained by sootblowers, which periodically blast deposit off the tube surfaces with high pressure superheated steam.

The success of deposit removal by a sootblower depends on two main factors: (1) the sootblower jet cleaning power and (2) the sootblowing timing. Much research has been dedicated to optimize the sootblower jet cleaning power in a form of an improved sootblower nozzle design, but little has been done to optimize the sootblowing timing.

Most pulp mills run their sootblowers based on a static predetermined sootblowing sequence. This sequence is generally pre-tuned to deal with a fouling condition under the designed black liquor firing load. The sequence is independent of the real fouling conditions inside the boiler, hence, there is always a high risk of over and/or under cleaning. Over cleaning will lead to high sootblower steam consumption and sootblower-induced-tube erosion, while under cleaning will lead to heavy fouling and plugging.

When a deposit is still in an early stage of development as seen in Figure 1, it is very unlikely that the deposit can be removed by a sootblower jet. This is due to the fact that the jet/deposit contact area is very small to develop any significant removal force. It is true even if the jet has a very high cleaning power. Hence, in this condition, it can be expected that the sootblower operation is ineffective and the valuable sootblower steam is wasted.
Figure 1. Sootblower operation when the deposit is still in an early stage of development (Wasted Steam)

On the other extreme, plugging of the gas passes is inevitable if the sootblower is in idle position for an extended period of time. The deposits can bridge the gap between the tube banks, making it harder to be removed by a sootblower jet (Figure 2).

Figure 2. Sootblower operation when the deposit has grown into a large size

In between these two extremes, there exists optimal sootblowing timing. Since deposit accumulation in recovery boilers is a dynamic event where the rate of accumulation and the stickiness of the deposit depend on many factors, the optimal sootblowing timing can only be achieved through an automated closed loop sootblower control system that uses fouling feedback information gathered online, during normal boiler operations, to intelligently manage the sequence of sootblowing operation.

In this paper, a method to detect the fouling intensity by means of energy balance around heat exchangers will be discussed and how such information can be used to measure the sootblowing effectiveness and optimize the sootblowing timing. A case study involving a pulp mill in the Northwest of USA will also be discussed where the implementation of the system, SmartClean™ Intelligent SootBlowing system, is presented and the benefits are evaluated.

SmartClean™ Intelligent Sootblowing system is the trademark name for the sootblower control system. It will be referred to Intelligent Sootblowing system or ISB throughout this paper.

FOULING DETECTION

Fouling in the heat exchanger tube surfaces will reduce the heat transfer efficiency of the exchanger. The direct relationship between the fouling and the decrease in the heat transfer efficiency is the main tool used by the ISB to measure the sootblowing effectiveness in removing deposits and to detect the location and the severity of the deposit.
The heat transfer efficiency of a heat exchanger is defined as the ratio of the actual heat transferred to the water or steam inside the heat exchanger to the total available heat input to the exchanger.

\[ \eta = \frac{\text{Actual heat transfer to the water/steam inside the heat exchanger}}{\text{Total available heat input to the heat exchanger}} = \frac{Q_{\text{Actual}}}{Q_{\text{Heat Input}}} \]  

(1)

**Actual Heat Transfer to the Water/Steam**

The actual heat transfer to the water or steam inside the heat exchanger is calculated as the difference between the enthalpy of the steam entering and exiting the exchanger. Figure 3 illustrate the control volume used to calculate the heat transferred to the primary superheater section of a recovery boiler.

\[ Q_{\text{Actual}} \text{ (primary superheater)} = (m \ H)_{\text{steam inlet}} - (m \ H)_{\text{steam outlet}} \]

where \( m \) is the mass flow rate and \( H \) is the enthalpy. Note that all of the mass and heat inputs to the steam side of control volume need to be accounted. For the case where the exchanger receives an attemperation flow, the \( Q_{\text{Actual}} \) becomes

\[ Q_{\text{Actual}} = (m \ H)_{\text{Steam inlet}} + (m \ H)_{\text{Attemperator flow}} - (m \ H)_{\text{Steam outlet}} \]

To calculate \( Q_{\text{Actual}} \), the mass and the enthalpy of all flows entering and leaving the control volume have to be known. The mass flow rates of the steam and attemperation flows are generally readily available but the enthalpies are not. The steam temperature and the pressure are the two parameters required to calculate the enthalpy. Although the steam pressure can be reasonably estimated based on the feed water pressure and the pressure drops along the heat exchangers, the steam temperatures have to be directly measured.
Two most common methods of measuring the steam temperatures entering and exiting the control volume are (1) the thermal wells drilled in the tubes entering and leaving the heat exchanger or (2) the thermocouples attached to the skin of the tubes entering and leaving the heat exchanger (Figure 4).

If the sootblowers are not equipped with dual motors, SmartSootblower [1] with the capability to maneuver the transversing and rotating motions of its lance tube independently, the ISB will use the average steam temperatures in the left and the average of the temperature in the right to calculate the \( Q_{\text{actual}} \) in the left and right side of the boiler.

Many recovery boilers have already had these steam temperature measurements as part of the recovery boiler safety initiative to detect the possibility of tube overheating during the startup where the tubes receive the full heat from the boiler without water/steam present inside the tubes. Hence, most of the ISB installation did not require additional purchase of steam temperature measurements.

**Total Available Heat Inputs**

There are four sources of heat inputs to a recovery boiler. They are (1) Heating value of the black liquor solids, (2) Sensible heat of the black liquor, (3) Sensible heat of the air, and (4) Heating value of the auxiliary fuel (if any). The heating value of the black liquor solids is by far the most significant heat input to the boiler, which account for about 90% of the total heat inputs. It is the energy released by the combustion of the black liquor organics. To calculate the total heat inputs and outputs, the overall recovery boiler control volume boundaries as shown in Figure 3 is used. Detailed of the total heat inputs calculation can be found in reference [2].

To calculate the available total heat input supplied to the heat exchangers, we start with the available heat input to the first pass of the superheater (i.e., the first heat exchanger in the convection section of the boiler immediately after the flue gas exiting the furnace section). The heat input to the first pass of the superheater is the total heat inputs to the boiler minus the following heat losses:

1. Moisture in the flue gas sensible heat
2. Latent heat of water in the black liquor
3. Latent heat of water from combustion
4. Heat content of smelt
5. Heat content of sulfide
6. Heat loss to combustibles in flue gas
7. Heat loss due to unburned carbon (carbon in smelt)
8. Radiation loss
9. Unaccountables (assumed to be 1% of the total heat inputs).

The available heat input to the second pass of the superheater is the total heat input available to the first pass of the superheater minus the actual heat transfer to the steam inside the first pass of the superheater, and so on.

Once the actual heat transfer to the water/steam and the total available heat to the exchanger are obtained, the heat transfer efficiency of each of the heat exchanger ($\eta$) can then be calculated using equation 1.

The ISB uses $\eta$ to detect the degree of fouling in the exchanger. Downward trend of $\eta$ indicates that the cleanliness of the heat exchanger is deteriorating. On the other hand, upward trend or upward spike immediately after sootblowing indicates that there is an improvement in the exchanger cleanliness. The effectiveness of the sootblower in removing deposit is measured by how much improvement it can make to the $\eta$.

**CASE STUDY**

In this case study, the discussion is focused on the SmartClean ISB installation on a 1992 ABB CE Single drum recovery boiler designed to burn 3.7 Million lb/day Black Liquor Dry Solids. The boiler produces 650,000 lb/hr steam at 825 psig and 750 °F. Before the installation of the system, the sootblowers consumed 28,000 lb/hr valuable steam. With the cost of steam around US $9/1000lb ($20/ton), the sootblower steam consumption costs the pulp mill around $2 Million / year.

The main motivation of installing the system is to reduce the sootblower steam consumption without the sacrificing the cleanliness of the recovery boiler.

Figure 5 shows the heat transfer efficiency of the primary superheater section. The vertical lines are the sootblowing events. As seen in this Figure, once the heat transfer efficiency dropped to the dirty setpoint, the most effective sootblowers (based on the historical data) are sent to clean the area. The sootblowing in this area will be halted. The sootblowing will be initiated again only if the $\eta$ drops back to the dirty setpoint level. With this strategy, the amount of steam used for sootblowing is directly proportional to the degree of fouling.

![Figure 5. Heat transfer efficiency of the primary superheater section as a function of time](image)

Figure 6 shows the drop in the sootblower steam consumption, constant ID fan speed (i.e., no heavy fouling/plugging was detected) even in the event that the black liquor flow was increased. The steam consumption dropped from 28,000 lb/hr to 18,000 lb/hr, saving 10,000 lb/hr worth around $760,000/yr
The success of deposit removal by a sootblower depends on two main factors: (1) the sootblower jet cleaning power and (2) the sootblowing timing. Since deposit accumulation in recovery boilers is a dynamic event where the rate of accumulation and the stickiness of the deposit depend on many factors, the optimal sootblowing timing can only be achieved through an automated closed loop sootblower control system that uses fouling feedback information gathered online, during normal boiler operations, to intelligently manage the sequence of sootblowing operation.

A method to detect the fouling intensity by means of energy balance around heat exchangers have been discussed and it was shown that how such information can be used to measure the sootblowing effectiveness and optimize the sootblowing timing. A case study involving a pulp mill in the Northwest of USA is presented where the implementation of the system is discussed and the benefits are evaluated.

Intelligent SootBlowing (ISB) using online fouling feedback information has been shown to successfully reduce the sootblower steam consumption without sacrificing the cleanliness of the boiler.

REFERENCES

Dear Brad,

Sorry for the delay to reply. I was on vacation in January that is Summer for us!

Well, telling what is happening in South America regarding Pulp & Paper industry, is that new fiberlines projects are ongoing. One greenfield to be erected in Brazil - Mato Grosso do Sul State - city Tres Lagoas - project name "Eldorado" is for 1,3 million Tons per year and start up planned for 2012. The main contractors are Andritz for Fiberline and Matso for Recovery Boiler and Evaporation Plant.

Other 2 greenfield mills at Northeast of Brazil are in basic engineering phase. belong to Suzano company and will be placed at Maranhão and Piauí states.

Another company that is a join venture with Stora Enso and Arauco decided to build a new greenfield mill at Montes del Plata - Uruguay. Andritz will deliver all Fiberline.

Fibra, the company that I work for, is planning to duplicate the existing mill in Tres Lagoas - Mato Grosso do Sul State - The start-up is estimate to be by 2014.

Best regards,

Atenciosamente,

Maurício Roberto Rodrigues Silva
Presidente Gestão 2011/2012

www.isa-es.org.br

Dear Mr. Carlberg,

Sorry by my delayed answer. Allow introduce myself, nowadays I have been worked as technical salesman for Pulp and Paper in Sao Paulo area at Metso Automation - Flow Control Division. Previously, I worked at Air Products as industrial gas application engineering for Pulp and Paper. During my Master degree I won two awards for best lecture in maintenance and engineering at ABTCP-TAPPI 2004 and ABTCP-PI 2005 with my paper in brownstock washing modeling. I also participate at board of ISA Sao Paulo section. I have a lot to write about ongoing Pulp and Paper projects in South America in for coming decade. How long do I have to write a few lines about the pulp and paper in Latin America?

I don't know how can I help being a ISA Pulp & Paper executive in South America, but it would be a honor to be a team part. Please advice me how can I be useful for ISA. It would be great exchange experience with others Pulp & Paper Instrumentation and Automation people. in Brazil, I participate too at ABTCP as member, it would be possible to promote US ISA member for brazilian P&P companies.
Please feel free to contact me anytime. You can contact me by skype: areynol1138.

Best Regards,
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Dear Brad,

In South America several new projects are going on. See status:

- ELDORADO CELULOSE E PAPEL: greenfield project for a 1,500,00 ADtB/y bleached kraft pulp plant in the municipality of Tres Lagoas, state of Mato Grosso do Sul, Brazil. Main process equipments already purchased in November 2010, Automation Systems scheduled to be purchased on February 2011. Mill start-up scheduled to end of 2012. Owner is J&F holding that controls the JBS Friboi company and the MCL Empreendimentos company.

- MONTES DEL PLATA PROJECT: greenfield project for a 1,300,00 ADtB/y bleached kraft pulp plant in the municipality of Punta Pereira, Uruguay. Board approval issued this week. Main process equipments to be purchased in February 2011. Mill start-up scheduled to beginning of 2013. Owner is a joint-venture between ARAUCO from Chile and STORA ENSO from Sweden.

- RIGESA, CELULOSE, PAPEL E EMBALAGENS LTDA: new 300,000 t/y linerboard machine and OCC plant, and expansion of existing Fiberline and Recovery/Utilities areas, in the in the municipality of Tres Barras, state of Santa Catarina, Brazil. Main process equipments to be purchased in February 2011. Owner is WESTVACO group.

- SUZANO PAPEL E CELULOSE: greenfield project for a 1,500,00 ADtB/y bleached kraft pulp plant in the state of Maranhão, Brazil. Investment study in final phase for Board approval. Main process equipments to be purchased around second quarter of 2011. Other equivalent plant to be build in the state of Pará one year later of the Maranhão project.

Other new project beginning is GUAIBA (new bleached kraft pulp line in the existing mill in the municipality of Guaiba, state of Rio Grande do Sul, Brazil- owner is CMCP company from Chile),

Other new projects under evaluation are: CENIBRA (Belo Oriente, MG state, Brazil - increase of production of existing pulp plant), FIBRIA (Mato Grosso do Sul state, Brazil - new second pulp line), VERACEL (Bahia state, Brazil - new second pulp line), KLABIN, INTERNATIONAL PAPER, etc.

Regards,
Dear Brad,

Thank you for your letter and information provided to me. I would like to join the ISA Pulp & Paper Industry Division Executive Board. Please find attached short report about some event in Australian paper industry.

**Paper Industry in Australia & New Zealand**

There are two major players in Aust& NZ Paper industry, amcor & visy. For Aust&NZ industry in general earnings for the year benefited from the non-recurrence of substantial losses experienced in the second half of the 2008/09 year due to extremely low OCC and export paper prices. In the carton board market the business increased prices in line with regional trends to recover rising wastepaper costs.

Amcor Australasia is significant and diverse packaging business with exciting growth prospects and opportunities to built on recent performance improvement initiatives.

**Amcor Sustainability**

Amcor Sustainability Report outlines their efforts in five domains of sustainability: economy, workplace, marketplace, environment, and community. It provides information about Amcor performance and plans for all amcor stakeholders: customers, investors, regulators, co-workers and suppliers. It helps those stakeholders make decisions about whether to invest in Amcor shares, whether to buy Amcor products and whether to work for Amcor. It’s Amcor public proof that they are a good corporate citizen.

Amcor also buys green electricity when a customer requests it.

Amcor announced $500.0 million investment, a new state of the art mill in Botany, had been given to go ahead. Work has commenced at the site, with completion still scheduled for late 2011.

Further developments, including the building of the B9 Paper Mill at Botany and G3 Furnace in amcor glass business, demonstrate continuing opportunities in this business.

The joining of Amcor Packaging Distribution with Amcor Australasia to help invigorate amcor offering to customers and learn from best practice sales models.

The launch of Sustainability Plus- in internal program that will help renew amcor focus on Sustainability at work and at home.

Construction of the new recycled paper mill in Botany NSW, continues with commissioning expected to commence around the mid of the 2012 calendar year. The new mill will substantially improve the value
proposition for customers by delivering a superior lightweight product. Design machine speed will be 1600.0 (m/min) producing 1100.0t/day depending on “paper grade”.

Main control systems serving paper plants in Aust&NZ are ABB (DCS-AC800xA, QCS-Accuray 1190), Honeywell (DCS+QCS- Measurex, Davinci, Experion, ... etc), Metso (DCS, QCS, ).
Existing Paper Mills, Botany NSW, B7&B8. – Above standards
At the beginning of the 2010 ABB maintenance performed the System tuning task.
The Report outlines the work done at the MXOpen Quality Control System at BM7&8 during the Period Jan 12th to Jan 28th.

Since 2004, ABB Full Service (FS) team at Amcor Botany mill in NSW has consistently met and exceeded targets. Most recently, the site achieved production record. The site achieved a 90.75 percent time efficiency and set new production record by achieving 263,536 tons, which resulted in high performance incentive for ABB. Amcor and ABB has been a big factor on making the paper machines more reliable. The Amcor team launched a process optimisation program to reduce process variability and attain machine stability. This value-added service helps squeeze even more performance from the paper machines, which paid to ABB $/tons for the extra production.
The Maryvale Mill is Australia's largest integrated fine paper-making and packaging papers complex, producing more than 500,000 tonnes of paper every year. At Maryvale they are committed to best practices environmental sustainability - they recycle large amounts of water, use waste products as energy sources and they have some of the best effluent treatment processes in Australia.
The Maryvale Mill has three pulp mills, five paper-making machines, an ECF bleach plant, pulp lapping machine, finishing facility and a waste paper processing plant.
The Shoalhaven Paper Mill in Australia is leading manufacturer of high-quality specialty papers, producing over 1,400 different paper grades. Their range includes:
- Printing paper for letterheads, annual reports
- Boards for greeting cards, business cards
- High wet strength paper for maps, tea tags
- Paper for certificates
- Coloured paper and boards
- Security paper
- Watermarked and Embossed papers

Visy

Visy Pulp & Paper produces virgin kraft and recycled corrugated paper for the packaging & building industries from its seven paper machines in Australia - six 100% recycled machines, located in Melbourne (VP4&5 with ABB AC800Xa, and AccuRay 1190 QCS), Sydney –Smithfield (VP3&6 with ABB AccuRay 1190 QCS), and Brisbane and its new plantation pine kraft pulp and paper mill at Tumut with ABB AC800Xa, and AccuRay 1190 QCS) in New South Wales).
Together these machines produce more than 1.75 million tonnes of packaging paper of which 1.45 million tonnes is 100% recycled testliner, coated liner and plasterboard liner and 320,000 tonnes from virgin unbleached Kraft.
Visy Pulp & Paper also produces plasterboard liner for the building industry for both the domestic and export market with a capacity of 140,000 tonnes per annum.
Visy Pulp & Paper operates an off-line coating operation which applies either clay or barrier coats to Visy's recycled or kraft liners. This added value operation allows Visy Board's preprinting facility to print
sophisticated graphics. This demonstrates Visy's focus on end use application.

**Paper Coatings & Laminates**

**Coatings**
Visy Paper Coatings uses 100% recycled paper and kraft liner to produce a high quality, coated sheet for use in a wide variety of applications.

Visy Paper's unique coated paper offers white, bright and smooth surfaces which enable flexographic and offset lithographic printing of exceptional quality. Coated products, available in a range of grades is suitable for applications including light weight laminating, paperback book covers, plasterboard liners, corrugated and folding cardboard boxes and waxable boxes.

The coating machine offers customers high flexibility not only in coating surfaces, but in board calipers and weights, with a product range of Visycoat papers from 130gsm to 400gsm. It also has the capacity to produce a variety of functional coatings such as water resistant, grease barrier, linerless meat boxes and anti-scuff.

**Laminates**
Visy provide a laminating service, which can create heavy weight boards with a PE insert providing absolute water/humidity resistance for special packaging applications.

**Industrial Automation**
The Visy Pulp & Paper Industrial & Business Automation Department provides strategic solutions and technical support across a wide range of key business functions.

From field sensor to the boardroom, the group works with the Mill operations in seeking out and delivering opportunities in automating the manufacturing and business processes so as to increase their effectiveness and efficiency.

It does so through the focus of Visy specialised groups that come together to provide an end to end solution.

- Industrial Automation
- IT & Communication

Kind Regards,

Sabit I. Milinkich
QCS Engineer
Process Automation Division
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Hi Brad,

I am keen to contribute to the World Comer article and was wondering what type of information would you are looking for. Do you have a copy of the previous World Comer articles that you could send me?

For your information, I have worked in two paper mills in Australia and have involvement in all three mills here in NZ but there are many mills in Australia I have little to do with but may be able to fill in the gaps
through other in my organization who have.

In general, I am relatively new to ISA and still finding my way around the website, discovering what is available, and learning what is most useful to me in the work I perform. I am not sure what LISTSERV is so will have a look and get back to you if I need further assistance.

Is there anyone that you can recommend, who knows ISA well and who would be happy answering my e-mails when I have questions regarding ISA?

Regards,

David.
David.Pugh@Beca.com

Brad,
Good to see you back. Congratulations on a healthy looking Newsletter.

I retired from Endress+Hauser last January where I had been Renewable Industry Marketing Manager. I found an opportunity teaching Process Control Instrumentation at the IUPUI campus here in Indianapolis this past fall. I am now looking at working for a company that makes wireless vibration instruments. Could we have a brief conversation about use of vibration in the Pulp and Paper Industry. Let me know when it would be convenient for you.

Looking forward to the chat.

Best Regards,

Lee
317-313-8814
Lee Saberson
Lecturer, Process Control Instrumentation, ECET 35100 Department of Engineering and Technology, Indiana University, Purdue University at Indianapolis (IUPUI) 799 W. Michigan St. ET209, Indianapolis, IN 46202-5160 http://www.engr.iupui.edu/eet/

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I will try to send you short overview of what is happening in paper mills inside Duropack Group to which Belisce paper mill belongs. I will try also to contact some friends from paper mills in Slovenia and Bosnia and Herzegovina. I hope I will have something for next week.

Thank you very much on offer to join ISA Pulp & Paper Industry Division Executive Board, but I don't feel confident enough to take so much responsibility at the moment.

Regarding scholarship I can contact faculties that belongs to University of Osijek, but none of these, at least
what I know, got lectures related to Pulp&Paper. Let me know what could be targeted profile of student for scholarship.
Best Regards!
Ivan

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Send your comments on this newsletter to the ISA PUPID Technical Discussion Forum & “get something started”!

You can reach the site at http://www.isa.org/scripts/lyris.pl?enter=pupid&text_mode=&lang=english
or by going to the PUPID or the main ISA websites and looking for the “ISA Technical Divisions”
Quickies

ISA Pulp & Paper Technical Discussion Forum

Anybody (not necessarily an ISA or PUPID member) can subscribe to the PUPID Pulp & Paper Technical Discussion Forum. To subscribe, go to the PUPID homepage at http://www.isa.org/~pupid/, select "Pulp & Paper Technical Discussion Forum" in the pick box, click "Go", and enter you email address and a password.

ISA Email address for ALL Members

Any ISA member can register for a free email address and online mailbox. If you set it up, your ISA email address will be yourname@member.ISA.org. To register, go to http://www.isa.org/membership/benefits/, and follow the registration instructions.

ISA PUPID Calendar

Get a quick overview of ISA PUPID events for 2002 by going to the Calendar at:
http://www.isa.org/~pupid/2002_PUPID_Calendar.htm
### WORLD CORNERS

<table>
<thead>
<tr>
<th>Corner</th>
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<tbody>
<tr>
<td><strong>Canada Corner</strong></td>
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<tr>
<td><strong>Central &amp; South American Corner</strong></td>
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<td><strong>Far East Corner</strong></td>
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<td><strong>From the Land of the Midnight Sun</strong></td>
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<tr>
<td><strong>European Corner</strong></td>
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</tr>
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[Image 20x54 to 153x84]

[35x720]Winter 2011  Page 50 of 51

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