Fall 2018
Editor: Brad S. Carlberg, P.E., CSE
Hoodsport, WA USA

In this issue:

- Newsletter Editor’s Message 1
- Calendar of Events 2
- Tuning Tip 2
- PUPID Calendar 2
- Welcome New Members 3
- So Long & Come On Back! 3
- Who’s Doin’ Anything? 4-18
- Technical Conference Papers 18
- PUPID Calendar 19
- Director’s Message 20
- PUPID Scholarship 22
- Global Society Links 23
- Quickies 23
- World Corners/Letters to the Editor 24
- Conferences & Symposia 24
- Answers to Tuning Tip 25
- PUPID Officers 26

On Page 2, Read the “Tuning Tip” sample CSE PE exam question
On Pages 4 – 18, Find out what’s happening around the world of pulp & paper in the “Who’s Doin’ Anything” section
On Page 19 See the 2018 ISA PUPID Calendar
On Page 18, see the PUPID presentations from the ISA@Montreal Symposium
On Page 25, get the answers to the CCST & CAP Questions & Tuning Tip
On Page 26, meet the PUPID officers & become one yourself!

Well, as I write this the second weekend of November, and the weather is getting cold, with American Thanksgiving Day just twelve days away.

I am also pleased to announce that Ronaldo Ribeiro of Cenibra will start immediately as PUPID Director. Welcome Ronaldo!

The bad news is that in the last quarter, PUPID has only had 12 new members and is down 188 regular dues-paying members; and we now have 12 members that are in active grace status.

In this Fall “Logger” newsletter, I am pleased to include the presentations from the ISA@Montreal2018 Symposium held at The Hyatt Regency Montreal this past October 16:

- A practical approach for process control optimization during start-up by Marc Tardif of BBA
- Fiberline Process Optimization Pulp & Paper Industries by Michel R. Dion of Honeywell
- Coming to Terms with PID: A new way to understand PID control Paper Powerpoint by Patrick J. Dixon, P.E., PMP of GPA Inc
- Dahlin Control of a Wood Flake Conveyor Dryer by Robert Spring, P. Eng., CAP of Norboard

You can see these papers by clicking on the link on page 18.

One last reminder to the students and those of you who know some students, don’t forget that the 2019 PUPID $2000 Scholarship application deadline is February 28 (just about 100 days from now).

Please do not hesitate to contact me at Brad S. Carlberg, P.E., CSE or to discuss how you can help PUPID.

I hope to encourage you to become more involved with the Division and to enroll more members.

Do feel free to forward the Newsletter to your friends and colleagues who may have an interest in it.
Natural gas is carried in a 6-inch schedule 40 pipe (IS=6.065). Flowing temperature is 60 °F at 30 psig pressure. A concentric sharp-edged orifice plate, with flange taps, is used to measure the flow. If maximum flow rate is 4,000,000 scf per day; specific gravity $G_f = 0.60$, and the differential head of the flow meter transmitter is 50 inches water. What is the orifice hole bore diameter?

Find the answers to these questions on page 24
WELCOME TO THE 12 NEW ISA PULP & PAPER INDUSTRY DIVISION MEMBERS

Julian Camilo Restrepo Cifuentes, CAP  
Josué Misael Rivera Cruz  
Jason Ballard  
Helden Espinoza  
Michael Leonard  
Tracy Hines  
Sherief El-Deeb  
Chris Orrey  
Rafael Marcelino Pires  
Darryl Forsman  
James E. Stahl  
Tyrone De Wet

HERE’S A REMINDER TO THE 12 ISA PULP & PAPER INDUSTRY DIVISION MEMBERS WHO NEED TO RENEW THEIR MEMBERSHIP

David A. Avery  
Guy A. Nuechterlein  
Luigi L. Tartaglia  
John Gill  
Deepak Sheshagiri Pai  
Rameshkumar Gopalsamy  
Paul Geddes  
Salvador Ernesto Muñoz Ruano  
Abinaya T  
Conner Thurman  
Jaden Piper  
J C Browning

DON’T FORGET TO RENEW!

CCST question

When working with an instrument air system, the ________ of the air is a critical measurement and is dealt with in the ANSI/ISA 7.0 standard.

A. pressure  
B. dew point temperature  
C. source humidity  
D. molecular weight

CAP question

The majority of control and safety system accidents are due to errors in what?

A. Incorrect and incomplete specifications  
B. Installation and commissioning  
C. Operations & maintenance  
D. Changes after commissioning

See page XX for the answers to the CCST and CAP questions
WHO’S DOIN’ ANYTHING?

Stora Enso acquires Swedish cellulose technology company Cellutech

HELSINKI, Oct. 29, 2018 (Press Release) - Stora Enso has increased its ownership up to 100% in the Sweden-based company Cellutech AB. The company specialises in the development of new materials and applications based on cellulose, micro-fibrillated cellulose (MFC) and other wood-based components.

The acquisition of Cellutech supports Stora Enso’s vision of replacing fossil-based materials with renewable ones originating from wood. The acquired company works, among others, in the areas of foams for packaging and hydroponics where the markets are continuously growing. Cellulosic foams can, for example, be used in packaging to replace polystyrenes which are the most widely used plastics.

“The acquisition of Cellutech will add a new dimension to our fibre and cellulose capabilities particularly in lightweight cellulose foams and spheres. We are investing in technologies and expertise that will further broaden application development competence in Stora Enso’s Biomaterials Division,” says Markus Mannström, EVP, Stora Enso Biomaterials.

Established in 2013, Cellutech is an agile team of eight scientists and researchers serving as a link between academia and industry. Cellutech was formed to take world class scientific research developed at SweTree Technologies and Wallenberg Wood Science Center and develop the ideas into commercially successful technologies and products.

The transaction will not have a material financial impact on the Group.

Part of the bioeconomy, Stora Enso is a leading global provider of renewable solutions in packaging, biomaterials, wooden constructions and paper. We believe that everything that is made from fossil-based materials today can be made from a tree tomorrow. Stora Enso has some 26 000 employees in over 30 countries. Our sales in 2017 were EUR 10 billion. Stora Enso shares are listed on Nasdaq Helsinki (STEAV, STERV) and Nasdaq Stockholm (STE A, STE R). In addition, the shares are traded in the USA as ADRs (SEOAY).

Arkhangelsk pulp and paper mill to build new waste containerboard production plant in Russia

NOVODVINSK, Russia, Oct. 30, 2018 (Press Release) - The shareholder of JSC “Arkhangelsk pulp and paper mill” – Pulp Mill Holding – intends to expand the opportunities of the existing synergetic model in the Russian market. According to Vladimir Krupchak, a member of the Board of Directors of APPM, the ultimate goal is to balance the available capacity as much as possible by building of waste containerboard production plant (WCB).

“Today the holding’s enterprises produce 360 million square meters of corrugated products per year, by the end 2019, we expect a figure of 540 million square meters, by 2020 – 850 million square meters, – said Vladimir Krupchak. “The Arkhangelsk pulp and paper mill provides plants with high-quality raw materials for pulp production, and there is no enough volume of recycled pulp of sufficient quality in Russia.”

According to him not a single paper machine for the production of WCB has been installed in our country in recent years. And the existing capacity isn’t enough to meet the dynamically growing demand.

Speaking about the project Vladimir Krupchak noted that the optimal territory for its realization, as in the case of the acquired company Europac, would be one of the regions that are inclined to the south of Russia. “There are a lot of enterprises belonging to the agrarian sector of our economy in the Southern Federal District. They are always in consumer demand (production of canned food, juices, alcohol, meat, etc.),” he said. – And, despite the fact that there are several large competitors in the corrugated packaging market in the Southern Federal District, which
provide up to 80% of production in the region, here, as before, the consumption of these products is almost twice as large as its production, and the deficit is covered by imports or supplies from other regions of the Russian Federation.”

As Vladimir Krupchak summed up, the WCB segment in the product line of the holding will logically complete the formation of the vertically integrated structure of Pulp Mill Holding, which will meet all the challenges and requirements of the Russian corrugated packaging market.

**Smurfit Kappa continues its sustainability journey by setting new goals**

DUBLIN, Ireland, Oct. 25, 2018 (Press Release) - Smurfit Kappa has taken the next step forward in its sustainability journey by rolling out an ambitious new set of goals.

The packaging leader has had a long-term commitment to making real and measurable progress against its five strategic sustainability priorities of forest, climate change, water, waste and people.

Earlier this year, Smurfit Kappa announced that it had met, and in some cases exceeded, its previous sustainability goals in the areas of people, climate change and water with the last two goals achieved three years ahead of their 2020 deadline.

While Smurfit Kappa’s paper-based packaging is renewable, recyclable and biodegradable, the paper production process itself is resource-intensive so a new set of goals has been outlined to build on the progress already made. These are:

- Maintaining >90% chain of custody certification of annual customer deliveries
- Maintaining 100% chain of custody operating system certification
- Assessing energy usage reduction opportunities in converting operations by 2020
- Performing water risk assessments for paper mills not yet assessed by 2020
- Decreasing water discharge intensity by 60% by 2025 compared to 2005
- Decreasing paper mill fossil intensity by 40% by 2030 compared to 2005
- Reducing the amount of waste sent to landfill by 30% by 2025

In the area of ‘People’ a new Health and Safety goal has been set which aims to reduce the Total Recordable Incident Rate (TRIR) by 5% annually.

Speaking about the new goals, Steven Stoffer, VP of Development, said: “This new set of goals has been drawn up to make sure we retain our leadership in the field of sustainability by reflecting the ambitious EU sustainability agenda into the targets for our global operating network and thereby continuing to push for sustainable innovation.

“Over the past few years we have made solid progress in our efforts to contribute to a more sustainable society and we are keen to continue on this journey collaborating with our various groups of stakeholders.”

Smurfit Kappa releases a Sustainable Development Report every year which contains a detailed overview of its sustainability performance, strategic direction and a review of the businesses underpinning its strategy.
WHO’S DOIN’ ANYTHING? (CONTINUED)

Resolute to invest over $40 million at its Northwestern Ontario pulp and sawmill operations, add $13.5 million for major maintenance program in Canada

MONTREAL, Oct. 25, 2018 (CNW) -Resolute Forest Products Inc. today announced $40 million in investments at its Northwestern Ontario operations, in addition to $13.5 million in major maintenance and the creation of 25 new jobs. The announcement was made at a press conference in Thunder Bay attended by Ontario Premier Doug Ford, Ontario Minister of Natural Resources and Forestry Jeff Yurek, and many dignitaries and company employees.

"Resolute has a strong operating presence in the region, and we are committed to investing in our facilities to ensure their profitability and long-term competitiveness," stated Yves Laflamme, president and chief executive officer. "A secure fiber supply and sustainable business environment remain critical to future investments in the province."

The investment plan includes $14.7 million for the company's Thunder Bay pulp and paper mill to improve energy efficiency and reduce greenhouse gas emissions, as well as $14.3 million to improve pulp capacity, reduce costs and maintain assets. Resolute also expects to spend $13.5 million in major maintenance at the facility in 2018.

An additional $5.6 million is earmarked for the modernization of the planer line at the company's Thunder Bay sawmill, located on Fort William First Nation land, as well as $5.4 million to optimize its Atikokan, Ignace and Thunder Bay sawmills. These initiatives are expected to increase the annual production capacity of the facilities by a combined 50 million board feet of lumber. Twenty-five full-time jobs have been created.

"Ontario's forestry sector is a very important part of our economy, it is one of the largest employers in the province. A strong forestry sector is essential for our prosperity, and it has a significant impact on the people living in rural and Northern Ontario," said Ontario Premier Doug Ford. "It is because of productive partnerships like ours with Resolute that the sector continues to thrive, and we will continue working to create more opportunities for the people of Ontario."

"Today is a great day for Resolute, and for the future of Ontario's forestry sector," said Jeff Yurek, Minister of Natural Resources and Forestry. "This investment not only emphasizes the opportunities in this sector, but the real need for a Provincial Forestry Strategy — and we are developing just that. I am confident we can grow our economy, create new jobs and encourage more investments across the province."

"The Fort William/Resolute sawmill partnership is a model of how an Indigenous community and a business can work together to create long-term benefits for both parties," stated Peter Collins, Chief of Fort William First Nation. "We had a vision and invested together to create a cornerstone business on our community lands."

Close to 90% of the new lumber and pulp capacity is destined for export markets. More than half of project expenditures are slated for the last quarter of 2018.

Resolute employs close to 900 workers across its Northwestern Ontario pulp, paper, wood products and woodlands operations. The company has invested approximately $200 million in the region over the past several years.

About Resolute Forest Products

Resolute Forest Products is a global leader in the forest products industry with a diverse range of products, including market pulp, tissue, wood products, newsprint and specialty papers, which are marketed in close to 70 countries. The company owns or operates some 40 manufacturing facilities, as well as power generation assets, in the United States and Canada. Resolute has third-party certified 100% of its managed woodlands to internationally...
WHO’S DOIN’ ANYTHING? (CONTINUED)

recognized sustainable forest management standards. The shares of Resolute Forest Products trade under the stock symbol RFP on both the New York Stock Exchange and the Toronto Stock Exchange.

Resolute has received regional, North American and global recognition for its leadership in corporate social responsibility and sustainable development, as well as for its business practices.

Northern Pulp mill contains effluent leak after Nova Scotia mill takes maintenance outage

HALIFAX, NS, Oct. 22, 2018 (Global News) - The Northern Pulp mill has responded to a leak from one of their effluent pipes, with the company saying they took “immediate action” to stop the leak.

The company says they were first notified of an effluent leak at 9:20 a.m. Sunday, a day after the mill began its annual maintenance shutdown on Saturday.

Kathy Cloutier, director of communications for Northern Pulp’s parent company, Paper Excellence Canada, told Global News in an email that the leak is located downstream of the area where the 2014 leak occurred.

Globalnews.ca - Northern Pulp mill confirms effluent leak near Pictou Landing

CEPI's Paper & Beyond 2018 stages industry’s leadership on Europe’s circular bioeconomy

BRUSSELS, Oct. 18, 2018 (Press Release) - Paper & Beyond, the new event concept where circular bioeconomy leaders meet, took place just a week following the release of the EU’s new Bioeconomy Strategy, which set out a clear path for better linking the bioeconomy and circularity.

“The new European strategy comes at a defining moment for the bioeconomy” says Karl-Henrik Sundström, CEO of Stora Enso and Chairman of CEPI. “Industry’s transformation is gaining pace across the entire forest fibre and paper value chain. As the mainstream renewable and recyclable material industry, we are ready to take the lead on Europe’s circular bioeconomy”.

The first of its kind conference got off to an innovative start with a competition gathering some of Europe’s most promising young researchers. From the engineering of spider silk strong nanocellulose filaments to paper-based electrodes for fuel cells, researchers illustrated the innovativeness and European lead in forest fibre research.

Building on this year’s theme, the “Europe & Beyond – Getting the best from the bioeconomy” session welcomed keynote speaker Peggy Liu, a world-renowned sustainability expert on China who brought a global perspective on the circular bioeconomy. She touched upon recent developments in China, including the country’s waste restrictions, its policy on single-use plastics and its recent investments in Europe under the Belt and Road initiative.

Following the positive trends in production (up 1.5%), exports (up 5.4%) and investment (up 7.5%) seen in the latest market data for 2017, RISI returned to provide insights into circular bioeconomy markets, with, for the first time, a business intelligence session on European nanocellulose markets.

Paper & Beyond also hosted the final conference of the EU-funded Provides project which has confirmed the Deep Eutectic Solvents (DES) technology. This breakthrough aims at achieving a 40% reduction in energy use and a 80% life cycle reduction in CO2 emissions, while also producing high-quality lignin from wood for biochemicals or biocomposite production. The consortium will continue research on a DES pulping pilot and demo, aiming at commercial deployment by 2030.
WHO’S DOIN’ ANYTHING? (CONTINUED)

CEPI is the European association representing the forest fibre and paper industry. Through its 18 national associations CEPI gathers 495 companies operating more than 900 pulp and paper mills across Europe producing paper, cardboard, pulp and other bio-based products. CEPI represents 22% of world production, €82 billion of annual turnover to the European economy and directly employs more than 177,000 people.

From forest fibre technology to advance paper design, the industry currently invests almost 5.5 billion annually in Europe and is a recognised leader of the low-carbon circular bioeconomy transition. CEPI’s 2050 ‘Investment Roadmap’ outlines the industry’s vision to advance this transformation in Europe through value creation and decarbonisation.

Italy’s Sofidel opens new 140,000 tons/yr integrated tissue mill and converting plant in Circleville, OH

CIRCleville, OH, Oct. 3, 2018 (Press Release) - Italian tissue paper manufacturer Sofidel opened today a 280-acre plant, one of its most technologically and environmentally advanced paper plants in the world, with innovative machinery that increases both the quality of its products and the energy efficiency of its operations.

The Circleville, Ohio, plant is Sofidel’s largest worldwide and its first integrated paper mill built from the ground up in the United States. Since expanding to the United States in 2012, Sofidel now has operations in seven states: Florida, Mississippi, Nevada, Ohio, Oklahoma, Pennsylvania and Wisconsin.

“The United States is a crucial market for us and is where we intend to grow,” said Luigi Lazzareschi, CEO of the Sofidel Group. “This plant will help us fuel our growth significantly and further our commitment to sustainable, environmentally responsible development. We are extremely proud of this plant and look forward to being an important part of the Circleville community for decades to come.”

“This is an historic moment for Sofidel,” said Emi Stefani, chairman of the Sofidel Group. “This facility is our largest, most modern and sustainable to date and employs the best technology available in the tissue paper industry.”

Sofidel has invested about $400 million in the site and, once running at full capacity, the facility will employ approximately 700 people.

The plant is an integrated facility that incorporates a paper mill, where pulp is transformed into paper, a converting plant that produces the finished product, and a state-of-the-art warehousing facility. The plant has a total production capacity of 140,000 tons a year.

The facility is equipped with two Advantage New Tissue Technology (NTT) 200 paper mill machines, manufactured by Valmet, a global leader in the development and supply of technologies for the pulp, paper and energy processing industries. Advantage NTT 200 technology allows the production of both standard tissue and textured paper and will enable Sofidel to further increase the quality of its products, reduce water usage, and recycle heat to power driers and fuel the plant. Each machine can produce 2,000 meters of 5.5-meter-wide paper sheets per minute.

The plant has 10 lines for producing the finished products, including three Constellation lines manufactured by Fabio Perini, with advanced reeling technology that preserves the product’s softness while ensuring uniform sheet separation from start to finish of every roll.
WHO’S DOIN’ ANYTHING? (CONTINUED)

The plant features a new system for recovering heat generated by turbines. The heat will be conveyed through extractor hoods and used to dry the rolls of paper, then produce steam. The system will supply almost all the energy needed to dry the paper and, under certain operating conditions, will power the entire machine.

In addition, the plant has adapted techniques from the food and beverage industry to improve logistics. An automated system transfers paper reels from the paper mill to the converting lines using laser guided vehicles (LGVs). An automated Smart Store warehouse is capable of handling more than 50,000 pallets of finished product, creating a space savings of up to 40 percent.

At the grand opening, Lazzareschi and Stefani were joined by Brian Lenihan, acting executive director of SelectUSA, and Kenny McDonald, president and chief economic officer for Columbus 2020. Sofidel clients and suppliers, federal, state and local officials, and other stakeholders also attended the event. The project was made possible through assistance from SelectUSA, JobsOhio, Columbus 2020, the Pickaway Progress Partnership and other public and private partnerships.

Valmet to supply key pulp mill technologies for Arauco's pulp mill in Chile

ESPOO, Finland, Oct. 3, 2018 (Press Release) - Valmet has signed a letter of award (LoA) with ARAUCO to supply key pulp mill technology including pulp drying and baling, a recovery boiler and a biomass boiler. This LoA is part of ARAUCO’s MAPA project, a major investment to expand current production capacity and build a new pulp production line at the Arauco Mill located in the Bio Bio Region in Chile.

The value of the anticipated delivery will not be disclosed. However, a project of this size and scope is typically valued at EUR 250-300 million. The order is expected to be included in Valmet's fourth quarter 2018 orders received.

"With this project ARAUCO continues our long cooperation in the area of boilers and pulp drying. Our cooperation extends over 15 years of successful project deliveries," says Bertel Karlstedt, Business Line President, Pulp and Energy from Valmet.

The delivery of the pulp drying and boilers is agreed to be done on EPS basis including plant engineering, procurement and supervision. The pulp drying line will have a daily capacity of 5,000 air dry tons (Adt). The recovery boiler will have a daily capacity of 6,300 tons dry solids (tDS). The biomass boiler features bubbling fluidized bed technology and has a capacity of 160 MWth.

One of the largest pulp investments in the world

The modernization and extension of Arauco Mill, an initiative that involves a USD 2,350 million investment, is the largest investment in ARAUCO's history. The project includes a new pulp production line, line 3, with an annual capacity of 1,560,000 tons. The new line is estimated to start operation in 2021.

Information about the customer ARAUCO

ARAUCO is a global forest product company. The company operates in the forestry, pulp, lumber, plywood, composite panels, millwork, and renewable energy businesses. The company has a revenue of about USD 5 billion. The company operates altogether 42 sawmills, panel mills and pulp mills in North America, South America, Europe and South Africa.
**WHO’S DOIN’ ANYTHING? (CONTINUED)**

Valmet is the leading global developer and supplier of process technologies, automation and services for the pulp, paper and energy industries. We aim to become the global champion in serving our customers.

Valmet's strong technology offering includes pulp mills, tissue, board and paper production lines, as well as power plants for bioenergy production. Our advanced services and automation solutions improve the reliability and performance of our customers' processes and enhance the effective utilization of raw materials and energy.

Valmet's net sales in 2017 were approximately EUR 3.1 billion. Our more than 12,000 professionals around the world work close to our customers and are committed to moving our customers' performance forward - every day. Valmet's head office is in Espoo, Finland and its shares are listed on the Nasdaq Helsinki.

**Smurfit Kappa starts operating new CHP plant at its Townsend Hook paper mill in Kent, UK**

DUBLIN, Ireland, Sept. 27, 2018 (Press Release) - Smurfit Kappa has begun operating a sophisticated Combined Heat and Power Plant (CHP) to reduce emissions and increase the profitability of its Townsend Hook Paper Mill in Kent.

The new CHP, which provides steam and electricity for the paper machine, will slash the mill’s carbon footprint by at least 15%. Earlier this year, Smurfit Kappa reported reaching its fossil CO2 emission reduction target three years ahead of schedule.

The multi-million pound investment in the mill has also increased the capabilities of the Townsend Hook paper machine to meet the growing demand in the UK and Ireland for lightweight containerboard. This is used to make corrugated packaging which is sought after in a growing number of applications due to its renewable, recyclable and sustainable nature.

Speaking about the enhancements to the mill, Jelte Bouma, CEO of Smurfit Kappa Recycled Paper West, said: “We are delighted to have started operating the new CHP in Townsend Hook a month ahead of schedule.

“The increased capability and efficiencies will help us to deliver an even better service to customers. The environmental benefits associated with the new project are also in line with the wider strategic sustainability priorities of Smurfit Kappa.”

The Townsend Hook Paper Mill is one of a European network of Smurfit Kappa paper mills which are all connected by a single, optimised supply chain system.

**Voith Asia to supply two new XcelLine paper machines for Sun Papers' new site in Laos**

- HEIDENHEIM, Germany, Sept. 27, 2018 (Press Release) -
- Sun Paper has awarded Voith the contract for two more XcelLine paper machines
- First packaging line project for Voith in South East Asia
- New sales record for papermaking equipment in Asia: Voith supplied a total of nine new paper machines to Sun Paper
- With a global footprint and overseas project management experience, Voith serves as a strategic partner for the customer’s business expansion
A new milestone for Voith, another two XcelLine paper machines have been ordered by the company’s longtime partner Sun Paper. This order strengthens the partnership between both companies and brings the total number of Voith paper machines supplied to Sun Paper to nine. In particular, Voith has been the exclusive supplier for a remarkable seven consecutive new machines in the past five years. The two new machines will be located at Sun Papers’ new site in Laos, and they are the first of Voith’s new XcelLine paper machine generation for packaging in South East Asia region.

On June 28, 2018, Voith and Sun Paper held a grand signing ceremony for the new paper machine project at Sun Paper’s Laos site. Kurt Yu, President of Voith Paper Asia, and Li Hongxin, Chairman of Sun Paper, signed the contract on behalf of both parties. Under the contract, Voith will supply two new XcelLine paper machines, as well as deliver the comprehensive services throughout the paper machine life cycle. The two paper machines are packaging grade lines designed for a speed of 1,200 m/min and a width of 6.6 m.

With this order, Voith sets a new record in the sales of papermaking equipment in Asia. The order is not only the first packaging machine project in the South East Asian market; it also increases the number of new machines Sun Paper has ordered from Voith to nine lines. In addition, from 2014 to present, Voith is the only supplier for a remarkable total of seven consecutive machines that Sun Paper has purchased – a historic breakthrough.

Voith has partnered with Sun Paper for many years, and this project success is strong evidence of the trustful and beneficial cooperation. As a global leader in the supply of papermaking systems, Voith provides customers with equipment that ensures operational stability and reliability, and additionally, the optimized product portfolio and resource-saving processes help the customer in achieving world-class efficiency, operational excellence and stronger profitability.

As a technology leader and innovation driver in the paper industry, Voith Paper has always taken a leading role. For example, the machine and quality control automation systems in the projects’ scope of supply are applications from the state-of-the-art Papermaking 4.0 systems, which increase productivity, reduce costs and enable visualization, stabilization and optimization in the whole process and operation.

About the company

Voith Paper is a Group Division of Voith and the leading partner and pioneer in the paper industry. Through constant innovations Voith Paper is optimizing the paper manufacturing process and facilitating resource-conserving production. The company’s Papermaking 4.0 concept ensures that equipment is optimally networked, while the effective and secure use of the generated data enables paper manufacturers to improve their competitiveness. With its Servolution concept, Voith Paper offers its customers tailored service solutions for all sections of the production process.

Voith is a global technology group. With its wide range of plants, products, services and digital applications, Voith sets standards in the markets for energy, oil and gas, paper, raw materials and transport & automotive. Founded in 1867, Voith today has more than 19,000 employees and earns 4.2 billion euros in sales. It has locations in over 60 countries and is one of the largest family-owned companies in Europe.
**WHO’S DOIN’ ANYTHING? (CONTINUED)**

**Canfor Pulp extends maintenance outage at Northwood Pulp mill in BC to 70-80 days and 60,000-70,000 tonnes**

VANCOUVER, BC, Sept. 24, 2018 (CNW) - Canfor Pulp Products Inc. announced today that it will extend its scheduled maintenance outage on one production line at its Northwood Northern Bleached Softwood Kraft ("NBSK") Pulp mill located in Prince George, British Columbia ("BC"). The outage is to enable necessary tube replacements to its No. 5 recovery boiler to rectify damage discovered during routine preventative maintenance inspections.

Based on a preliminary review, the Company currently estimates that the extended downtime will be approximately 70-80 days with a reduction in production of NBSK pulp of 60,000-70,000 tonnes, as well as higher associated maintenance costs. Canfor Pulp will continue to operate the second production line at the Northwood Pulp mill over this period.

Due to the mitigation efforts by Canfor Pulp, the temporary outage is not expected to have a material impact on the financial condition of the Company.

**Stora Enso conducts augmented reality test for mill maintenance in Oulu, Finland**

HELSINKI, Sept. 12, 2018 (Press Release) - Stora Enso has been developing augmented reality (AR) and 5G technology solutions together with Telia. The utilisation of augmented reality was first tested at Stora Enso’s Oulu mill where real-time information is being used in mill maintenance.

The application of augmented reality and virtual models will in the future enable the more rapid use of, for example, maintenance information at Stora Enso mills. Using a virtual model of a machine and real-time data concerning information points, can improve the operational reliability of the mills.

"Stora Enso has an extensive digitalisation programme, which aims to increase sales and boost our operations on our journey to replace fossil-based materials. Through our digitalisation programme, we have become pioneers in our industry in the utilisation of new technology," says Teemu Salmi, Stora Enso’s CIO and Head of Digitalisation.

Through the new technology, all necessary information is easily and visually at the disposal of experts in real-time, regardless of physical location. The nearing introduction of fast 5G technology together with AR- and VR technology and 360° views will enable real-time and rapid utilisation by experts between different units, irrespective of geographical distance.

"With our pilots in Oulu, we have explored the area where IoT (Internet of Things) and 5G solutions will most likely produce the first breakthroughs in introducing new, more effective processes. Solutions based on the collection, transfer and analysis of real-time data are the key to renewing industrial processes”, says Janne Koistinen, Head of 5G program at Telia Finland."

Augmented reality refers to a view that can be augmented by elements produced using computer graphics, which are examined through displays.
WHO’S DOIN’ ANYTHING? (CONTINUED)

Part of the bioeconomy, Stora Enso is a leading provider of renewable solutions in packaging, biomaterials, wooden constructions and paper globally. We believe that everything that is made from fossil-based materials today can be made from a tree tomorrow. Stora Enso has some 26,000 employees in over 30 countries. Our sales in 2017 were EUR 10 billion. Stora Enso shares are listed on Nasdaq Helsinki (STEAV, STERV) and Nasdaq Stockholm (STE A, STE R). In addition, the shares are traded in the USA as ADRs (SEOAY).

Telia Finland is a new generation telco, international and locally strong. We help to create new kinds of connections and want to make the daily life easier for you, your company and your community. Our long history in Finland goes back to 1855. We invest each year about EUR 200 million in connections in Finland and employ directly about 3,500 people and indirectly thousands of others.

We are part of the international Telia Company, which operates in 11 countries from Norway to Turkey. Our global connections enable us to provide you with the best services, wherever you are. At the end of 2017, about 4.2 million subscribers had chosen us as their operator.

Washington State University scientists experimenting with paper mill waste to fight soil disease

ROCKFORD, WA, Sept. 12, 2018 (The Spokesman-Review) - Washington State University professor Tim Murray drove a white truck across a farm field where the winter wheat and rye look sick.

Murray scooped a cup of dirt and used a pH meter to test it. The meter revealed what has become alarming to farmers: The soil was as acidic as a cup of black coffee.

Soil acidification is killing crops at a slow but increasing rate in some places in Eastern Washington. It’s a long-term problem that’s caused by adding nitrogen to the soil to increase crop yield. Acidification causes compounds such as aluminum sulfate to form, which is deadly to crops. In the short term, farmers can’t justify the costs of traditional solutions like spreading limestone on the soil because it costs too much to transport.

The Spokesman-Review - WSU scientists experimenting with paper mill waste to fight soil disease

Pratt Industries’ new Ohio mill will feature Voith BlueLine stock preparation system

APPLETON, WI and WAPAKONETA, OH, Sept. 6, 2018 (Press Release) - Construction is well under way of Pratt Industries new Wapakoneta, Ohio, corrugated packaging mill, which includes a customized BlueLine stock preparation system from Voith. The stock preparation system is designed to handle approximately 425,000 tons of recycled fiber each year when the mill begins operation, planned for the second half of 2019.

As the stock preparation supplier, Voith will provide Pratt Industries with all elements of the system, including reliable material handling with automatic wire cutting, reject compactors, sludge handling, water clarification and effluent treatment. These elements are similar to a previous stock preparation system installation by Voith at the Pratt Industries mill in Valparaiso, Indiana.

“Pratt was very pleased with the Valparaiso installation and the equipment performance there. With those successes, as well as the service and aftermarket support we provide, Pratt was interested in working with us again at Wapakoneta,” said Michael Hmielewski, Vice President of Project Sales, Stock Preparation, Voith Paper North America. “Now we are working beside them to continuously enhance our services based on the raw material quality fluctuations.”
WHO’S DOIN’ ANYTHING? (CONTINUED)

About Voith Paper

Voith Paper is a Group Division of Voith and the leading partner and pioneer in the paper industry. Through constant innovations, the technology group is continually optimizing the paper manufacturing process and paving the way for resource-saving production. Thanks to Papermaking 4.0, paper manufacturers can interconnect their equipment in an optimum way and increase their competitiveness through the effective and secure use of generated data. With Servolution, Voith Paper offers its customers tailored service solutions for all sections of the production process.

About Voith

Voith is a global technology group. With its broad portfolio of systems, products, services and digital applications, Voith sets standards in the markets of energy, oil & gas, paper, raw materials and transport & automotive. Founded in 1867, today Voith has more than 19,000 employees, sales of $4.7 billion and locations in over 60 countries worldwide, and is one of the largest family-owned companies in Europe.

About Pratt Industries

Pratt Industries is America’s 5th largest corrugated box manufacturer and the world’s largest, privately-held 100% recycled paper and packaging company, with more than 7,300 highly-skilled green-collar employees dedicated to the environment and sustainability.

Pratt was founded in the USA some 25 years ago and since then has shown dramatic growth, with more than 100 facilities in 27 states.

The Georgia-based company operates an extensive Recycling Division to supply four of the most modern, cost-effective containerboard mills in the country at our corporate headquarters in Conyers, Georgia and its sister mills in Staten Island, New York, Shreveport, Louisiana, and in Valparaiso, Indiana. Pratt has been honored by environmental leaders such as former Vice President Al Gore, former British Prime Minister Tony Blair, Ted Turner, the Climate Group and Global Green for its recycling practices.

Columbia Pulp mill expects to inject $71 million into local economy in Washington

WALLA WALLA, WA, Sept. 5, 2018 (Local News) - New industry rises on more than 400 acres of winter pasture and a former cattle ranch, below the jagged basalt cliffs of northern Columbia County.

Columbia Pulp is about 30 minutes north of Dayton, stretching into county land between Starbuck — population 130 — and Lyons Ferry Park, on a tiny fraction of the 449-acre spot that could unofficially be described as the middle of nowhere.

When it’s running — likely mid-December — its economic tentacles will reach throughout the Pacific Northwest. But being rooted deep within wheat country is actually kind of perfect.

Union-Bulletin - Columbia Pulp mill expects to inject $71 million into local economy
WHO’S DOIN’ ANYTHING? (CONTINUED)

Kimberly-Clark to invest $150 million in Chester, PA, tissue mill, convert from coal to natural gas

CHESTER, PA, Sept. 4, 2018 (Local News) - Kimberly Clark plans to invest $150 million in its Chester site in transforming its co-generation power plant from a coal-fired one into one fueled by natural gas.

The Chester mill employs more than 800 people in a 1.8-million-square-foot facility on the 61.5-acre campus. There, they primarily manufacture the Scott 1000 toilet paper for North America.

Seven years ago, the company was restructuring other pulp manufacturing facilities and Chester was not included in those plans. Now, company officials have included Chester among those to undergo capital investments, including the three-year project of replacing the co-generation power plant.

Daily Times - Kimberly-Clark invests $150 million in Chester mill

Akso

The Inquirer - Factory aid: Pa. millions help update Kimberly-Clark toilet paper plant; Boeing, too

RISI is not responsible for the reliability or availability of content on external websites.

Kruger Products to invest $575 million to build new, 70,000 tonnes/yr tissue plant in Quebec, to commence production in early 2021

SHERBROOKE, QC, Aug. 16, 2018 (CNW) - KP Tissue Inc. ("KPT") and Kruger Products L.P. ("Kruger Products or "KPLP") today announced its plan for a capital investment of $575 million in the Brompton area of Sherbrooke, Québec, to build a new, state-of-the-art tissue plant featuring Canada's largest and most modern through-air-dry (TAD) machine. The project will create more than 180 new jobs in the region. The announcement of this major project, supported by the Government of Québec, was made in the presence of Dominique Anglade, Quebec Deputy Premier, Minister of Economy, Science and Innovation and Minister of Québec’s Digital Strategy, Luc Fortin, Québec Minister of Families and Minister Responsible for the Estrie Region, and Guy Hardy, MNA for Saint-François, as well as Dino Bianco, Chief Executive Officer, Kruger Products L.P., and Joseph Kruger II, Chairman and Chief Executive Officer, Kruger Inc.

The new plant, which will be adjacent to an existing facility of the Kruger Group, will produce at maturity approximately 70,000 metric tonnes per annum of bathroom tissue and paper towels which will enable Kruger Products to increase its offering of ultra premium and innovative tissue products under the Cashmere, SpongeTowels and Purex brands.

The project is supported by the Government of Québec through Investissement Québec ("IQ"), which has agreed to invest $105 million by way of a convertible debenture. The remaining financing for the project is currently being finalized.

"This project is on an unprecedented scale for Kruger Products and will give us the additional capacity to continue to grow our business into the future. This new facility combined with our Memphis TAD location will allow us to rebalance our ultra premium tissue capacity to better serve our customers across North America. The Brompton site will also be part of a critical manufacturing hub in the region, working with our other locations in Crabtree, Gatineau and Sherbrooke to produce great quality tissue products for our company” said Dino Bianco, Chief Executive Officer, Kruger Products."
WHO’S DOIN’ ANYTHING? (CONTINUED)

Through-air-dry (TAD) technology is the world's most advanced ultra premium tissue products manufacturing technology. It uses less fibre to obtain a plusher, stronger, exceptionally soft and more absorbent product.

While Kruger Products has been operating a TAD machine at its Memphis, Tennessee plant since 2013, its TAD 2 machine will be the first of its kind in Québec.

Significant Construction Project

Construction of the project is expected to begin in early 2019, and the plant is slated to commence production in early 2021. The project will generate major benefits, including over $250 million in direct expenses in Québec and one million person-hours for the construction of the new plant.

Anticipated Capital Structure for the Project

The project is expected to be financed with 40% equity and 60% debt in a newly-created, wholly-owned indirect subsidiary of KPLP ("TAD2Canco"). The equity is expected to be funded by the IQ investment of $105 million by way of subscription to a convertible debenture, and Kruger Products expects to obtain financing for the remaining equity. Long-term construction financing for the debt portion is currently being finalized. The IQ convertible debenture will carry a 3% capitalized fixed interest rate for a term of 10 years, and will be required to be redeemed on a monthly basis by KPLP commencing 36 months from the date of issuance. In the event of a failure to make a monthly redemption in accordance with the terms of the debenture, IQ will have a conversion right in respect of the portion of the balance of the debenture that is not paid on terms of conversion that would provide IQ with a 48.6% equity interest in TAD2Canco if the entirety of the debenture were to be converted.

About KP Tissue Inc.

KPT was created to acquire, and its business is limited to holding, a limited partnership interest in KPLP. KPT currently holds a 15.9% interest in KPLP.

About Kruger Products L.P.

Kruger Products L.P. is Canada’s leading manufacturer of quality tissue products for household, industrial and commercial use. KPLP serves the Canadian consumer market with such well-known brands as Cashmere, Purex, SpongeTowels and Scotties’. In the U.S., KPLP manufactures the White Cloud® brand, as well as many private label products. The Away-From-Home division manufactures and distributes high-quality, cost-effective product solutions to a wide range of commercial and public entities. KPLP has approximately 2,500 employees and operates eight FSC (FSC® C104904) certified plants in North America.

About Kruger Inc.

Kruger Inc., the parent company of Kruger Products L.P., is a third-generation family company headquartered in Montréal since 1904, the year it was established. Kruger Inc. is a major producer of tissue products; 100% recycled containerboard products; corrugated packaging; publication papers; specialty papers; renewable energy; cellulosic biomaterials; and wines and spirits. The Company is also a leader in paper and paperboard recycling in North America. Kruger Inc. has facilities in Québec, Ontario, British Columbia, and Newfoundland and Labrador, as well as in Tennessee, Maine, New York, Virginia and Rhode Island in the United States.
WHO’S DOIN’ ANYTHING? (CONTINUED)

Sappi provides update on capital investments at its Saiccor mill in Umkomaas, South Africa

JOHANNESBURG, July 23, 2018 (Press Release) - Sappi Limited, a leading global producer of dissolving wood pulp, specialities and packaging papers, printing and writing papers and biomaterials headquartered in South Africa, has provided further details regarding capital investments at its Saiccor Mill in Umkomaas, south of Durban. The investments include a R2.7 billion capacity expansion project and a planned R5 billion over five years in various continuous improvement initiatives and upgrade projects.

Explaining the background to the investment decision, Sappi Limited Group CEO Steve Binnie said: “Sappi has seen significant benefits in serving its global customers from its South African operations. Sappi had invested some R4.3 billion from 2012 to 2018 to increase its dissolving pulp capacity in South Africa. This global market has shown such strong growth that Sappi will again increase capacity in South Africa by investing R2.7 billion at Saiccor during 2018 and 2019.”

He concluded by saying: “Sappi, which contributes 1% of South Africa’s total foreign revenue from its South African operations and supplies the fruit export industry with most of their packaging requirements which contributes around 4% to the country’s foreign revenue, is pleased to be able to support President Ramaphosa’s call for significant investment into the South African economy.”

“In addition to expanding capacity” says Alex Thiel, CEO of Sappi Southern Africa “Sappi is planning to invest R5 billion over the next five years through maintenance and upgrade projects to decrease production costs, introduce new technology, optimise processes and future-proof manufacturing systems at Saiccor Mill. These investments will secure the mill’s future by increasing its global cost competitiveness and significant reducing its environmental footprint.”

Thiel confirmed that Sappi was currently in the process of engaging with the relevant authorities and consulting with communities and various other stakeholders to obtain the required support for the planned investments, collectively known as Project Vulindlela; chosen to emphasise that the projects pave the way for additional future investment.

With reference to the cost and environmental benefits, Thiel stated: “The ongoing cost savings we will derive from these projects amount to at least R300m per annum. With reference to the environmental benefits of the projects, CO2 emissions will be cut in half and waste to landfill will reduce by 48%. In addition, SO2 emissions will reduce by 35% and water use efficiency will increase by 17%. All of this while earning more revenue for the province and country and providing a secure future to our workforce, their families and the communities where they live.”

Saiccor Mill and Sappi Forests which sources and supplies the timber required by the mill are already major contributors to the KZN economy through job creation, community investment, local supplier programmes, world-class research and development facilities and training and development programmes. In total Sappi’s KZN operations comprising three mills, forestry operations and sales and export services provides a direct contribution of some R12 billion per annum to the KZN economy. This number rises to R60 billion per annum when reflecting indirect benefits. Project Vulindlela will add a further R1 billion per annum direct benefit to the KZN economy.

“Saiccor produces dissolving wood pulp from which our customers produce items such as textiles, pharmaceutical, beauty and household products” says Thiel.
WHO’S DOIN’ ANYTHING? (CONTINUED)

Vulindlela will increase the mills production from 780 000 tons to 890 000 tons per year, and is expected to create employment opportunities for local job seekers through construction companies and business prospects for entrepreneurs from the local communities around the Mill. During the peak period of the project, there will be between 2,500 and 2,800 contractors working on site at one time. The projects will include a new evaporator, recovery boiler and screening and washing plant, along with upgrades to bleach plant and pulp machines, improved recovery circuits and additional magnesium digesters. Already completed is the upgrade to the woodyard to process increased timber volumes.

In January 2018, Sappi launched its Skills Centre near Saiccor Mill to create training and upskilling opportunities for the workforce and for local youth. As part of Project Vulindlela, all general workers seeking employment through Sappi or its contractors will be required to attend training at the Sappi Skills Centre where they will receive basic skills required for job opportunities during Project Vulindlela. This training from Sappi will provide community members with the necessary skills to become more employable or to start their own businesses.

“The commitment we had made and implemented during our previous expansion remains” says Thiel “The majority of the workforce will be local community residents employed by contractors on the project”. In addition, many other services and products required during the construction phase and beyond will be sourced from local emerging businesses.

SEE THE PUPID SESSION FROM TUESDAY, OCTOBER 16 AT 10:50 AM – 12:30 PM

- **A PRACTICAL APPROACH FOR PROCESS CONTROL OPTIMIZATION DURING START-UP** by **Marc Tardif** of BBA

- **FIBERLINE PROCESS OPTIMIZATION PULP & PAPER INDUSTRIES** by **Michel R. Dion** of Honeywell

- **COMING TO TERMS WITH PID: A NEW WAY TO UNDERSTAND PID CONTROL**
  - **PAPER**
  - **POWERPOINT** by **Patrick J. Dixon, P.E., PMP** of **GPA Inc**

- **DAHLIN CONTROL OF A WOOD FLAKE CONVEYOR DRYER** by **Robert Spring, P. Eng.**, CAP of Norboard
DIRECTOR’S MESSAGE  BY RONALDO RIBEIRO, NOVEMBER 12, 2018

Fibria improves harvest on hills and mountains using "super winch"

Fibria is investing in technology to modernize forest management. Through the Intelligent Forest Project, a series of actions are under way in the company's units. One of the highlights is the T-Winç Project, which makes it possible to harvest eucalyptus trees in areas of greater slope, providing more safety, speed and productivity.

The T-Winç is a fixed external traction winch that helps harvesting machines reach areas with slopes up to 38°. In practice, it remains fixed in a flat area while a steel cable is attached to the forest harvesting machine allowing it to move safely in areas with great slope and harvest. The winch is operated by remote control and guarantees a 20% reduction in operating costs in areas with slopes above 35°.

The Intelligent Forest Project centralizes actions of new technologies for forest digitization, aiming to improve the availability of data for decision making, productivity gains, safety and development of Fibria employees. There are four fronts for the implementation of new technologies: planting (silviculture), harvesting, wood logistics and systemic data analysis. More than 50 projects are being tested and implemented. In addition to T-Winç, Fibria has invested in LIDAR technology - which allows a three-dimensional view of the forest and assists in the measurement of areas, reliefs and trees for inventory - in the acquisition of telemetric trucks, electronic tracking and operations traceability, other initiatives.

Suzano wins education award in recognition of LIDE and Ayrton Senna Institute

Suzano Pulp and Paper was recognized as an incentive for education in Brazil for the 2018 Education and Innovation LIDE Award. Winner in the Education category, the company was honored during the 5th National Forum of Education and Innovation, held in São Paulo (SP).

The company was chosen by the Ayrton Senna Institute and LIDE - Group of Business Leaders, organizers of the event, for its support to several projects in the education area, such as "Suzano na Escola", a partnership with Junior Achievement, which empowers volunteers to share knowledge and experience of the labor market with young people in school; the "Formare Aprendiz", a partnership with the Iochpe Foundation, which offers professional qualification opportunities for young people in situations of social vulnerability; in addition to the "Dolphin Project" in Bahia, and the "Ecofuturo Institute", an organization maintained by Suzano that has the promotion of reading as one of the pillars guiding its performance.

Fibria reduces by 9.5% the consumption of diesel in the wood chopping operation

Fibria, the world leader in the production of eucalyptus pulp from planted forests, focuses its efforts on improving its processes. Through the Intelligent Forest Project, a series of technologies are being applied in all the company's units, resulting in increased productivity, lower costs and conservation of the environment. One of the successful examples was the adoption of a new standard of operation in the wood chopping machines used in Capão Bonito (SP), which generated savings of 9.5% in diesel consumption and reduction of 24 tons per month of greenhouse gases, CO2 (carbon dioxide), which worsens global warming.

"Fibria is committed to finding solutions that can increase productivity and efficiency. The establishment of the new standard of operation of the Chipping line was an idea of the team and brought excellent results, without the need of investment. Besides the economy, it was possible to reduce the impact of the operation on the environment and we should have medium-term benefits in relation to the maintenance of the machines," says Cláudia Steiner, general manager of Forest Operations at Fibria.

The three machines, used to chop the wood, receive the entire logs and turn them into pieces less than three centimeters long, called chips. With some adjustments in the hydraulic system, change in the knife system, among other mechanical interchanges, the machines started to produce more uniform chips, considerably reducing the pieces out of the recommended standard size.

Innovation has attracted attention in the international academic world. Professor Raffaele Spinelli (of the CNR Research Institute - Ivalsa, Italy), one of the world's leading forestry researchers, has published a peer-reviewed article, which, in addition to being written by experts, is reviewed by a number of other area of performance before it is published, guaranteeing the quality of the content - in the "Journal of Clear Production" on the subject. The publication is one of the scientific references on sustainable production.

In addition, Fibria Operational Intelligence specialist Ângelo Conrado Moura presented the innovation at the International Symposium on Forest Mechanization in Romania, highlighting Fibria's technical cooperation agreement with the Italian institution to support statistical analysis and study publications together.
Fibria wins "Best of Agribusiness 2018" award

Fibria has won two more awards in the last week. The company was the Pulp and Paper category winner in the Época Negócios 360º Yearbook, for the sixth consecutive year, and was also announced as the winner of the Globo Rural magazine Best of Agribusiness 2018 in the Reforestation, Pulp and Paper category.

In its seventh edition, the Época Negócios 360º award analyzes the performance of companies considering not only financial data, but also other fundamental dimensions of management, such as corporate governance, sustainability, people management, innovation capacity and vision of the future. The edition counts on the technical partnership of Fundação Dom Cabral, Boa Vista and Economática.

Klabin invests R $ 50 million and increases production capacity in 10% of industrial bags

Klabin has two units in Lages (SC). The one installed on the banks of the BR-116 is the largest industrial bag factory in the world. Every year, Klabin invests approximately R $ 8 million in improvement projects in the municipality. In 2018 an additional R $ 50 million is being invested in the purchase of a complete line of printing and bag production, increasing capacity by 10%. For the next years, the company intends to continue the investments of technological improvement and ascent, according to the growth of the market, according to director of Packaging in Lages, Douglas Dalmasi.

The bag factory is dedicated to the domestic and foreign markets, more than 30 countries, in the segments of civil construction, food, chemicals, agribusiness, among others. Klabin has other units in Santa Catarina - Itajaí (corrugated packaging), Correia Pinto and Otacílio Costa, which produce paper for packaging, as well as the forests that supply these paper mills in the Serra Catarinense.

In 2018, the Brazilian company celebrates 119 years, of these, 49 in Lages and, traditionally in two other municipalities of the Serra, appears among other initiatives of entrepreneurship daring in the region, along with Ambev, JBS Foods, Ekomposit, Sanovo, NDDigital, Havan, Fort Wholesaler and the future Berneck. The city of Lages strongly supports Klabin's operations, environmental and educational initiatives.

Klabin expects strong fourth-quarter performance, looks at consolidation "opportunities"

Klabin reported on Monday that it posted a net profit of R $ 104 million in the third quarter, a 73% decrease compared to the same period of the previous year, impacted by accounting effects generated by the devaluation of the real against the dollar. But the company's adjusted operating income, measured by earnings before interest, taxes, depreciation and amortization (Ebitda), rose 66% to R $ 1.25 billion. The result came at a time when the global pulp and paper market is in a consolidation phase. Asked about this, Klabin's CEO, Cristiano Teixeira, said that the company "sees the possibility of consolidation in the market" and that "is attentive to the movements of the sector." Finance director Gustavo Henrique de Sousa said that any acquisition that Klabin may eventually have "has to be attractive and have a price-return relationship appropriate to make sense" for the company.

Last week, International Paper announced that it is considering the sale of its packaging unit in Brazil. The unit had sales of 263 thousand tons in the accumulated from January to September this year compared to 266 thousand a year earlier. On the organic growth path, Teixeira said that Klabin is still studying a large investment project, which should include new papermaking machines, and that the company will be ready "soon" to submit the project for approval by the board of directors. administration.

In addition to the fourth quarter, the company expects the evolution of the country's construction industry, given the optimism generated in the private sector by the election of Jair Bolsonaro, promising to adopt a liberal stance for the economy. Cement manufacturers are a major customer of Klabin, which sells paper bags for storage. Klabin is working on projects to reduce production bottlenecks if the construction sector is restarted, as the company is currently exporting products with higher margins than the domestic market.

On another front, the company began price negotiations with clients of fluff type pulp, used in products such as diapers. The price adjustment discussion, whose current contracts were based on the value of $ 1,100 per tonne, is expected to start at $ 1,345 by 2019, executives said.
2019 PULP AND PAPER INDUSTRY DIVISION SCHOLARSHIP

The Pulp and Paper Industry Division of The Instrumentation, Systems, and Automation Society (ISA) has established a scholarship to increase interest in the instrumentation and process control components of the pulp and paper industry. One $2000 scholarship, for either an undergraduate or a graduate student, will be offered for the current school year. The winner of the scholarship is eligible to apply again the following year, on an equal basis with all other candidates.

Applications will be evaluated based on a number of factors such as academic record, references, and work history. The ability to demonstrate a significant interest in instrumentation/process control and potential contribution the pulp and paper industry will be of special interest.

To be eligible to apply for the scholarships, a candidate must be:

1. Either a student member, or a dependent of a member of the Instrument Society of America.
2. Enrolled as an undergraduate leading to a bachelor's in an engineering, science, or pulp & paper program or a graduate leading to a master's degree in an engineering, science, or pulp & paper program.

Candidates can download the Application form complete it and return it to Patrick J. Dixon, PUPID/ISA Scholarship, PO Box 5468 Lago Vista, Texas 78645, calling (512) 771-3936, or sending an e-mail to PDixon@Global-Business.NET. To apply, candidates must send the following items to the above address, to arrive no later than February 28:

1. Completed application form. (Download the application)
2. Official transcript from the applicant's university.
3. Three letters of recommendation from persons familiar with the applicant's character, interest in the pulp and paper industry, educational accomplishments, school activities and leadership roles.

Scholarship winners will be notified by April 15. Unsuccessful candidates will be notified at the same time.

Meet The Past Winners

2018 Scholarship Winner - Andrew D. Kathan
2017 Scholarship Winner - Garrett A. Fisher
2016 Scholarship Winner - Garrett A. Fisher
2015 Scholarship Winner - Garrett A. Fisher
2014 Scholarship Winner - Jennifer L. Fink
2013 Scholarship Winner - Kayla L. Young
2012 Scholarship Winner - Danielle C. Valdivia
2011 Scholarship Winner - Ryan W. Schuerger
2010 Scholarship Winner - Thomas T. Forte
2009 Scholarship Winner - Not Awarded
2008 Scholarship Winner - Not Awarded
2007 Scholarship Winner - Kyle D. Hutcheson
2006 Scholarship Winner - Not Awarded
2005 Scholarship Winner - Not Awarded
2004 Scholarship Winner - Michael A. Graff
2003 Scholarship Winner - Michael A. Graff
2002 Scholarship Winners - James A. Stockard & Mark L. Lambert

PUPID Scholarship Endowment Agreement
**LINKS TO RELATED WEBSITES**

**ISA PULP & PAPER WEBSITE**
http://www.isa.org/~pupid/

**ISA PULP & PAPER TECHNICAL DISCUSSION FORUM**
http://www.isa.org/scripts/lyris.pl?enter=pupid&text_mode=&lang=english

**ISA TECHNICAL CONFERENCE SESSION SCHEDULE**
http://www.isa.org/Template.cfm?Section=Conferences_and_Exhibitions&template=/taggedpage/conferencesbydate.cfm&icid=61

**PULP & PAPER RESEARCH INSTITUTE OF CANADA**
http://www.paprican.ca/

**TAPPI**
http://www.tappi.org/

**PIMA**
http://www.pimaweb.com/

**AMERICAN FOREST AND PAPER ASSOCIATION**
http://www.afandpa.org/

**NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS**
http://www.nspe.org/

**SWEDISH ROYAL INSTITUTE OF TECHNOLOGY**
http://www.pmt.kth.se
http://www.hut.fi/English/

**HELSINKI UNIVERSITY OF TECHNOLOGY**
http://www.hut.fi/English/

**TECHNICAL ASSOCIATION OF THE AUSTRALIAN AND NEW ZEALAND PULP &AMP; PAPER INDUSTRY (APPITA)**

**AUSTRALIAN PULP & PAPER INSTITUTE**

**ISO STANDARDS TECHNICAL COMMITTEE LIST**

**ISA STANDARDS COMMITTEES LISTSERVER**
http://www.isa.org/shellcgi/lyris.pl?site=isa&page=topic&topic=standards+committees&text_mode=0&lang=english

---

**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 "Link to the PUPID email LISTSERV" in the pick box, click "Join", and enter you email address and a password.

**ISA MEMBER BENEFITS**
ISA members receive benefits such as the Latest Technical Information, Professional Development Resources, Networking Opportunities, Special Bonus for Student Members, Insurance Program for Independent Contractors and Business Owners, and other personal privileges. Go to http://www.isa.org/membership/membership-benefits/ to see specific benefits.

**ISA PUPID CALENDAR**
Get a quick overview of ISA PUPID events by going to the Calendar at:
https://www.isa.org/division/pupid/events/
WORLD CORNERS

CANADA CORNER

Nothing from anyone there this time!

FAR EAST CORNER

Nothing from anyone there this time!

EUROPEAN CORNER

Nothing from anyone there this time!

FROM THE LAND OF THE MIDNIGHT SUN

Nothing from anyone there this time!

CENTRAL & SOUTH AMERICAN CORNER
BY RONALDO NEVES RIBEIRO

Many new things are happening in the pulp and paper industry worldwide, and in the face of industry 4.0 technologies we need to be prepared for servants to change results.

With this vision recently ABTCP (Brazilian Technical Association of Pulp and Paper) reactivated its Technical Commission of Automation inserting the topics of Information Technology (IT).

This initiative is aligned with ABTCP's strategic objectives, fostering ideas for the Innovation Network created in 2018 to strengthen innovations in the Pulp and Paper sector.

The pulp and paper sector is motivated by the slight increase in the price of short-fiber and long-fiber pulp. This scenario facilitates the possibilities of new investments in the sector.

On November 11, 18, an event will take place at Oji Papéis Especiais SP (Basil) will be the 1st Technical Meeting of ISA - Campinas with a partnership with ABTCP, for our Pulp sector whose theme will be automation technologies for the pulp and paper industries. Paper.

Stay with ISA and follow these developments in the industry and be an agent of these transformations with your active participation.

I count on all the members so that through ISA PUPID we can make a difference in the transformation of competitiveness in the Pulp and Paper sector.

LETTERS TO THE EDITOR

- Send your comments on this newsletter to me at brad.carlberg@bsc-engineering.com or post a message to the ISA PUPID Technical Discussion Forum List Serve & “get something started”!

ISA CONFERENCES / SYMPOSIA
CCST Answer

The correct answer is B, "dew point temperature".

Dew point temperature is a measure of how much water vapor there is in a gas. The more water vapor in the instrument air, the higher the dew point. In instrument air piping, lowering the temperature of the flowing gas to a temperature below the dew point due to ambient temperatures or expansive cooling will cause condensation. Condensation in instruments or actuators that use instrument air can cause those instruments to malfunction or become damaged.

Instrument air systems are usually designed so that the dew point of the air steam is less than -40°C or lower. Instrument air systems are typically outfitted with knock-out drums and dryers to remove as much moisture (water vapor) as possible prior to entering the instrument air header.


CAP Answer

The answer is A: Incorrect and incomplete specifications.

The UK Health and Safety Executive (HSE) found that 44% of accidents involving control and safety systems were due to incorrect & incomplete specifications. Specifications are made up of two parts; the functional specification (what the system is supposed to do), and the integrity specification (how well it is supposed to do it).


---

**Answers to the Tuning Tip**

\[ Q(\text{scfh}) = 218.45T_\text{dew} \frac{P_\text{in}}{P_\text{out}} \times \frac{R_\text{sat}}{R_\text{air}} \]

Change flow from per day to per hour and temperature and pressure to absolute:

\[
\left( \frac{4,000,000 \text{ scf}^3}{\text{day}} \right) \left( \frac{1 \text{ day}}{24 \text{ hour}} \right) = 166,666.7 \text{ scfh} \]

\[
166,666.7 = 218.45 \times \left( \frac{60}{24} \right) \left( \frac{520}{14.7} \sqrt{\frac{50(30 + 14.7)}{(520)(0.60)}} \right)
\]

\[
166,667 = 218.45 \times \left( \frac{520}{14.7} \sqrt{\frac{50(44.7)}{(520)(0.60)}} \right) = 759,216.398(5)
\]

Find the "S" sizing factor:

\[
\frac{166,667}{759,216.398} = 0.2195
\]

From Table 3:

\[
\text{Beta} = 0.575 \quad 5 \leq 0.2144
\]

\[
\text{Beta} = 0.600 \quad 5 \leq 0.2369
\]

This will require interpolation:

\[
\text{Beta} = \left[ \frac{S \text{ desired} - S \text{ lower value}}{S \text{ upper value} - S \text{ lower value}} \right] \text{Beta upper value} + \text{Beta lower value}
\]

\[
\text{Beta} = \left[ \frac{0.2195 - 0.2144}{0.2369 - 0.2144} \right] (0.600 - 0.575) + 0.575 = 0.5807
\]

Find the orifice hole diameter:

\[
d = \text{Beta} \times \text{pipe ID} = \text{hole size}
\]

\[
d = 0.5807 \times 6.065 = 3.522 \text{ inches}
\]

For the calibrated range of the transmitter 0 to 50 inches H₂O, and a flow rate of 166,667 scfh or 4,000,000 scfd, the orifice hole bore diameter = 3.522 inches
2018 Pulp & Paper Industry Division Officers

Director
Ronaldo Ribeiro
Cenibra
ronaldo.ribeiro@cenibra.com.br
55 31 38295235

Past-Director
Brad S. Carlberg, P.E.
Boeing
brad.carlberg@bsc-engineering.com
(251) 454-1200

Past-Director
Rick Van Fleet
Andritz Automation
ryanfle59@hotmail.com
(602) 316-6774

Education Chairman
Patrick J. Dixon
GPA
pdixon@global-business.net

Advisor
Richard E. Britton, P.E.
Retired – International Paper
richardbritton1@comcast.net

Advisor
Larry E. Wells, P.E.
CCSA, LLC
ccsallc@bellsouth.net

Paper Review Coordinator vacant

Environmental Chairman vacant

Secretary / Treasurer:
Past-Director
Brad S. Carlberg, P.E.
Boeing
brad.carlberg@bsc-engineering.com
(251) 454-1200

Advisor
Richard E. Britton, P.E.
Retired – International Paper
richardbritton1@comcast.net

Advisor
Larry E. Wells, P.E.
CCSA, LLC
ccsallc@bellsouth.net

Programs / H&A:
Julian Camilo Restrepo Cifuentes, CAP
Smurfit Kappa Colombia
juliancamilor@gmail.com

Past-Director
Rick Van Fleet
Andritz Automation
ryanfle59@hotmail.com
(602) 316-6774

Advisor
Larry E. Wells, P.E.
CCSA, LLC
ccsallc@bellsouth.net

Staff Contact
Kimberly Belinsky
mailto:kbelinsky@isa.org
(919) 990-9404

Standards & Practices Vacant

ISA Pulp & Paper Industry Division
P.O. Box 12277
Research Triangle Park, NC 27709

ADDRESS CORRECTION REQUESTED